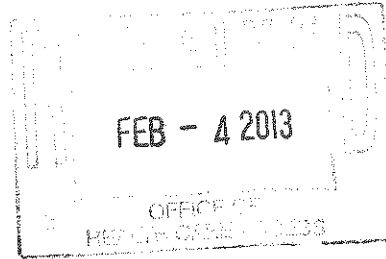


**BRISTOL**  
HOSPITAL



PO Box 977  
Bristol, CT 06011-0977  
860.585.3000  
bristolhospital.org

February 1, 2013

Lisa Davis, MBA,BSN, RN  
Deputy Commissioner  
State of Connecticut  
Department of Public Health  
Office of Health Care Access Division  
410 Capital Avenue  
MS#13HCA  
P.O. Box 340308  
Hartford, CT 06134

RE: Certificate of Need Application to Acquire and Operate a 40 Slice CT Scanner at Bristol Hospital in Bristol CT.


Dear Deputy Commissioner Davis,

Enclosed is the original Certificate of Need Application for the acquisition and operation of a 40 Slice CT Scanner at Bristol Hospital in Bristol, CT. Also enclosed are four copies of the application and a CD of the scanned application and documents in MS format.

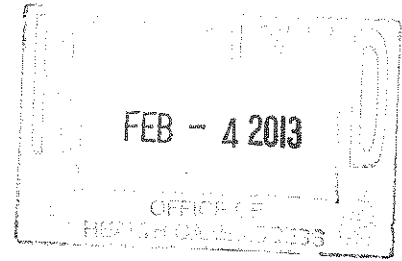
Please do not hesitate to contact me at (860) 585-3041 if you have any questions regarding this application.

I look forward to working with you during the review process.

Sincerely,

  
Sheila Kempf, RN, PhD

## Application Checklist



### Instructions:

1. Please check each box below, as appropriate; and
2. The completed checklist *must* be submitted as the first page of the CON application.

- X Attached is the CON application filing fee in the form of a certified, cashier or business check made out to the "Treasurer State of Connecticut" in the amount of \$500.

### For OHCA Use Only:

Docket No.: 13-31821-CON Check No.: 620245  
OHCA Verified by: X. R. [Signature] Date: 2-4-13

- X Attached is evidence demonstrating that public notice has been published in a suitable newspaper that relates to the location of the proposal, 3 days in a row, at least 20 days prior to the submission of the CON application to OHCA. (OHCA requests that the Applicant fax a courtesy copy to OHCA (860) 428-7053, at the time of the publication)
- X Attached is a paginated hard copy of the CON application including a completed affidavit, signed and notarized by the appropriate individuals.
- X Attached are completed Financial Attachments I and II.
- X Submission includes one (1) original and four (4) hard copies with each set placed in 3-ring binders.

Note: A CON application may be filed with OHCA electronically through email, if the total number of pages submitted is 50 pages or less. In this case, the CON Application must be emailed to [ohca@ct.gov](mailto:ohca@ct.gov).

Important: For CON applications (less than 50 pages) filed electronically through email, the signed affidavit and the check in the amount of \$500 must be delivered to OHCA in hardcopy.

- X The following have been submitted on a CD
1. A scanned copy of each submission in its entirety, including all attachments in Adobe (.pdf) format.
  2. An electronic copy of the documents in MS Word and MS Excel as appropriate.

Bristol Hospital  
41 Brewster Road  
Bristol, CT 06010

Acquisition and Operation of a 40 Slice CT Scanner at Bristol Hospital Bristol, CT.

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Bristol Hospital  
41 Brewster Road  
Bristol, CT 06010

Acquisition and Operation of a 40 Slice CT Scanner at Bristol Hospital Bristol, CT.

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**PUBLIC NOTICE**

## PUBLIC NOTICE

Pusuant to section 19a-638 of Connecticut General Statues, Bristol Hospital Inc., is applying for a Certificate of Need. This proposal includes the acquisition and operation of a Siemens 40 Slice Cat Scanner to be located at Bristol Hospital 41 Brewster Road, Bristol CT. The total capital expenditure for this project is \$795,000.

Applicant:

Bristol Hospital Inc.,  
41 Brewster Road  
P.O. Box 977  
Bristol, CT. 06011- 0977

Estimated Total Project  
Cost/Expenditure:

795K



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BRISTOL - 400 sq. ft. 1,400 sq. ft. office, \$575-2,000 sq. ft. 5,200 sq. ft. \$2,750-6,000 sq. ft. \$3,000-720 Central Bristol, 860-533-9348

**Legals**  
0900  
Request for Proposals 2012-047  
Plans of Memorial  
Industrial Middle School  
The City of Bristol, Connecticut is accepting sealed proposals related to the reuse of the property known as Memorial Boulevard Middle School, identified as Lot 114 - Assessor's Map 30.

The City will conduct two proposals. Informational visits on the following dates:  
December 20, 2012 at 2:00 pm  
January 9, 2013 at 3:00 pm  
It is not mandatory that interested parties attend both of these meetings. However, access to the plans outside of these times may be limited.

Interested responses will be accepted by the Purchasing Department on behalf of the City of Bristol, Connecticut, 1 North Main Street, Bristol, CT 06010. (860) 584-6195 or (860) 584-6177. www.bristolct.gov/bids

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**Legals**  
0900  
STATE OF CONNECTICUT COURT OF PROBATE  
Region #19 Probate District DISTRICT NO. PD19

**NOTICE TO CREDITORS**  
ESTATE OF  
ARTHUR R. REDMAN, LATE OF BRISTOL, DECEASED, AKA ARTHUR REDMAN, SR. AKA ARTHUR RHEINHOLD REDMAN (12-02078)  
The Hon. ANDRE D. DORVAL, Judge of the Court of Probate, Region #19 Probate District, by decree dated December 11, 2012, ordered that all claims must be presented to the fiduciary at the address below. Failure to promptly present such claim may result in the loss of rights to recover on such claim.

Anna C. Holman, Esq. Chief Clerk  
CAROL R. OUELLETTE  
76 BELLEVUE AVE.  
BRISTOL, CT 06010  
RUTH A. REDMAN  
76 BELLEVUE AVE.  
BRISTOL, CT 06010

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**Legals**  
0900  
PUBLIC NOTICE  
Pursuant to Section 15A-696 of Connecticut General Statutes, Bristol Hospital Inc., is applying for a Certificate of Need. This proposal includes the acquisition and operation of a Siemens 40 Slice Cat Scanner to be located at Bristol Hospital, 41 Brewster Road, Bristol, CT. The total capital expenditure for this project is \$795,000.

Applicant:  
Bristol Hospital Inc.  
41 Brewster Road  
PO Box 977  
Bristol, CT 06010-0977  
Estimated Total Project Cost/Expenditure: 795K  
It's true, your link can be someone else's treasure. Prove it to yourself by running a low-cost, high-result Tag Sale ad of your own this weekend. Call Classified at 860-583-2378

**STATE OF CONNECTICUT COURT OF PROBATE**  
Region #19 Probate District DISTRICT NO. PD19  
**NOTICE TO CREDITORS**  
ESTATE OF  
DORIS HARRISON, LATE OF BRISTOL, DECEASED (12-01171)  
The Hon. ANDRE D. DORVAL, Judge of the Court of Probate, Region #19 Probate District, by decree dated December 11, 2012, ordered that all claims must be presented to the fiduciary at the address below. Failure to promptly present any such claim may result in the loss of rights to recover on such claim.

Nancy B. Meyer, Clerk  
The fiduciary is:  
SUSAN H. FLETCHER  
190 BALL FALL ROAD  
MIDDLETOWN, CT 06457

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FIREWOOD  
Call 860-582-0266

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**Wood/Woodstones**  
208  
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\$185 PER CORD  
DELIVERED  
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Wanted to Buy  
238

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305-330  
Dogs & Cats  
305  
FREE KITTENS - (3) about 5 mos. old black & gray females, 3 cats, 1 yr. old, 1 grey & white, tiger stripes, 1 yr. old, available on cash. To good homes only. Call 860-845-7672

**Autos for Sale**  
615  
**Autos for Sale**  
615  
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**EMPLOYMENT**  
505-535  
Help Wanted  
620

**CNC Milling Operator**  
with knowledge of boring capability. Able to work from setup and operation sheets. Min. 5 years exp. Understanding of math and performing setups is required.  
**CNC Lathe/MTL Operator**  
with knowledge of boring, threading and facing setup and operation sheets. Min. 5 years exp. Understanding of math and performing setups is required.  
Training & evaluate but must be able to work independently.  
Both positions are 1st shift. Benefits and 401k available. Overtime is expected if required.  
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**BRISTOL - 1 BR. some inc.**  
w/elec. 860-584-0510  
**BRISTOL - 1st Fl. 2 BR. UR.**  
DR. HW. 40. Pool. W/d. \$750. 860-565-9489

## SUDOKU

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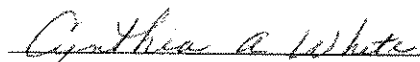
Applicant: Bristol Hospital Inc.

Project Title: Acquisition and Operation of a 40 Slice Cat Scanner at  
Bristol Hospital 41 Brewster Road, Bristol, CT.

I, Kurt Barwis, President and Chief Executive Officer of Bristol Hospital being  
duly sworn, depose and state that Bristol Hospital's information submitted in this  
Certificate of Need Application is accurate and correct to the best of my  
knowledge.

  
Signature Kurt A. Barwis Date 1/23/2013

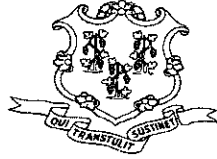
Subscribed and sworn to before me on January 23, 2013

  
Notary Public/Commissioner of Superior Court

My commission expires: 07/31/2014

**CYNTHIA A. WHITE**  
**NOTARY PUBLIC**  
MY COMMISSION EXPIRES JULY 31, 2014

**CON APPLICATION**



**State of Connecticut  
Office of Health Care Access  
Certificate of Need Application**

**Instructions:** Please complete all sections of the Certificate of Need (“CON”) application. If any section or question is not relevant to your project, a response of “Not Applicable” may be deemed an acceptable answer. If there is more than one applicant, identify the name and all contact information for each applicant. OHCA will assign a Docket Number to the CON application once the application is received by OHCA.

**Docket Number:**

**Applicant:** Bristol Hospital, Inc.

**Contact Person’s:** Shelia Kempf and Marie Marciano

**Contact Person’s Title** Senior Vice President Patient Care Services and  
Chief Nursing Officer  
  
Director of Diagnostic Services

**Contact Person’s Address:** 41 Brewster Road  
Bristol, CT 06010

**Contact Person’s Phone Number:** (860) 585-3041

**Contact Person’s Fax Number:** (860) 585-3542

**Contact Person’s Email Address:** skempf@bristolhospital.org

**Project Town:** Bristol

**Project Name:** Acquisition and Operation of a 40 Slice CT Scanner at Bristol Hospital, 41 Brewster Road, Bristol, CT.

**Statute Reference:** Section 19a-638, C.G.S.

**Estimated Total Capital Expenditure:** \$795,000.00

## 1. Project Description: Acquisition of Equipment

a. Please provide a narrative detailing the proposal.

### Response:

Bristol Hospital, Inc. is a 134-bed acute care hospital located at 41 Brewster Road in Bristol, CT. Bristol Hospital proposes to acquire and operate a new 40 slice Computed Tomography Scanner (CT) for the Emergency Center patients at Bristol Hospital. This would be the second CT scanner for the Hospital which would improve flow, decrease patient wait times and enhance patient care. This proposal is based on the following:

- Bristol Hospital is a designated Primary Stroke Center operating with only 1 CT scanner.
- Bristol Hospital's Emergency Center is experiencing an increase of patient volumes requiring a CT exam.
- CT interventional procedures, which require a dedicated CT scan time of at least two hours per procedure, have increased over the past three years, making availability of CT services for urgent cases and strokes a problem.
- Overall volume increases in CT services are related to programmatic expansions in Bariatric and Breast Programs as well as the Emergency Center and CT interventional demands.
- Bristol Hospital's existing CT scanner is at 85% utilization on first shift with spillage to second shift Monday – Friday.
- Patients have experienced delays in diagnosis and treatment due to the CT scanner being occupied or unavailable.
- During the past two years, there has been significant CT down times for unexpected equipment failures and maintenance. This has caused the Hospital to go on Emergency Center diversion, cancel scheduled CT exams and transport inpatients and emergency patients by ambulance to an outpatient facility.
- The only other CT scanner in Bristol is a 4 slice scanner that does not have the capability to perform certain CT exams due to older technology.
- The proposed CT Scanner would be acquired with *donated* funds.

Bristol Hospital's existing CT scanner is accredited by the American College of Radiology (ACR). Modalities accredited by the ACR at Bristol Hospital include, Ultrasound, MRI, MRI-Breast, Mammography, PET/CT and Nuclear Medicine. Bristol Hospital plans on applying for accreditation for the proposed second CT scanner as soon as possible. Also, Bristol Hospital is accredited by the Joint Commission. The following imaging modalities are currently offered at Bristol Hospital: MRI, CT scan, ultrasound, digital mammography, interventional, nuclear medicine and general radiology. PET/CT is offered one day per week through Alliance Imaging. Bristol Hospital currently operates one 64 slice CT scanner which serves four main functions: Emergency Center patients, outpatients (scheduled and walk-in), inpatients, and interventional special procedures (scheduled and urgent).

The 64 slice CT scanner is available twenty-four (24) hours, seven days per week for patients from the Emergency Center and urgent inpatients. Stat interventional procedures are also provided on this CT scanner. In addition, outpatients are scheduled for CT procedures on this

CT scanner Monday through Friday from 7:30 a.m. – 7:00 p.m. and on Saturdays from 7:30 a.m. until 11:00 a.m. All other outpatient requests for walk-ins are performed on this CT scanner.

In our market area, Bristol Radiology Center is an outpatient office owned by Bristol Hospital and Bristol Radiologic Associates. It is located at 25 Collins Road in Bristol, CT. The hours of operation are Monday – Friday from 8:00 a.m. - 4:30 p.m. The imaging modalities currently offered at Bristol Radiology Center are MRI, CT, ultrasound, digital mammography and general radiology. The 4 slice CT scanner is not suitable for special procedures, biopsies and CTA exams. In addition, the CT scan produces higher amounts of radiation compared to the scanners today. Thus, exam times are lengthy due the older technology.

CT continues to be the standard imaging modality for the Emergency Center patients. Although Bristol Hospital’s Emergency Center volumes decreased in the past 2 years, the changes in physician and nursing leadership has turned this trend around, and we are seeing an increase in Emergency Center patient visits. The Hospital’s new emergency physician group started on January 1, 2012 and has decreased patient wait times, improved turnaround times and significantly increased patient satisfaction with Emergency Center services. The Press Ganey report for the time period October 2011 through September 2012 shows the ED overall mean score increased by 10.4%. An extensive marketing campaign outlining our new capabilities and new culture is expected to increase our Emergency Center patient visits by 3% in FY 2013. This is due to a combination of factors including: (1) recapturing lost market share, (2) newly insured patients entering the system who have not yet identified a primary care physician, (3) primary care physicians picking up more insured patients who will require CT scans for diagnosis, and (4) a population that is aging and sicker needing more care. In years FY 2014 and FY 2015, it is expected that our Emergency Center patient visits will increase only slightly by 1% each year. This number will remain flat for FY 2016.

For FY 2012, the Emergency Center patient visits were 38,029. Of these patients, 4028 had CT procedures which is approximately 11%.

	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>
<b>ED VISITS</b>	38029	39,170	39562	39958	39958
<b>ED CT EXAMS</b>	4028	4309	4352	4395	4395

In addition advanced technology with radiation dose reduction and image quality enhancements allow for quicker and more precise diagnosis and is extremely important. The proposed new Siemens 40 slice CT scanner is state of the art in image quality as well as dose reduction minimizing any concerns of radiation exposure that patients may have.

Having one scanner in the Hospital poses limitations in providing CT services. The competing priorities of scheduled interventional special procedures, scheduled outpatient procedures, walk-in procedures, urgent unscheduled inpatient procedures and urgent or emergent procedures from the Emergency Center has increased the need for a second CT Scanner. We are increasingly causing diagnostic and treatment delays for urgent patients, as

well as increased length of stay in both our Emergency Center and inpatient units. In addition, scheduled outpatients are becoming more and more dissatisfied when they are delayed, postponed or rescheduled. In fact, on the day shift the scanner is at its maximum utilization at approximately 85% because of this.

Bristol Hospital is also designated by the Connecticut Department of Public Health as a Primary Stroke Center. Patients presenting in the Emergency Center as a “stroke alert” must be scanned within a time constraint. From door to the CT scanner, the standard of care is within 25 minutes. Adequate CT availability is necessary to provide the level of care designed to quickly diagnose and treat stroke patients, when time is of the essence. When an interventional special procedure is in progress for two hours, and a stroke patient presents, the interventional procedure should be interrupted to perform the CT procedure for the stroke patient in a timely manner. This is not always feasible or practical as it is not good patient care to either remove a patient already undergoing a CT procedure or have the stroke or urgent patient wait until an existing CT procedure is completed. A second CT scanner will greatly reduce the number of times this would occur.

In FY 2010, the average number of stroke patients seen at Bristol Hospital was 103. In FY 2011, the average number of stroke patients seen at Bristol Hospital increased 11% to 115. In FY 2012, this number increased 5% to 121 stroke patients. We anticipate that the number of stroke patients seen at Bristol Hospital will continue to rise by 5% per year due to the aging population in Bristol Hospital’s service area.

	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>
<b>Stroke Patients</b>	103	115	121	127	133	140	147

Bristol Hospital is one of five hospitals in the state designated as a Primary Stroke Center with one CT scanner. The others are the Hospital of Central Connecticut – Bradley Campus in Southington, CT; Day Kimball Hospital in Putnam, CT; Sharon Hospital in Sharon, CT and New Milford Hospital in New Milford, CT. However, there are significant differences in the other hospitals as described below.



<u>Primary Stroke Centers in CT with one CT Scanner</u>	<u>Region</u>	<u>Bristol</u> <sup>1</sup>	<u>Day Kimball</u> <sup>2</sup>	<u>New Milford</u> <sup>2</sup>	<u>Sharon</u> <sup>3</sup>	<u>HCC-Bradley Campus</u> <sup>4</sup>
		4	3	5	5	4
<b>FY 2011 Emergency Visits</b>		41,163	27,950	18,780	16,216	
<b>FY 2012 Emergency Visits</b>		38,029	26,839	18,416	15,694	
<b>FY 2011 CT procedures</b>		12,131	9,867	6,240	4,812	
<b>FY 2012 CT procedures</b>		10,309	8,333	5,319	4,856	
<b>Licensed Beds</b>		134	104	85	78	84
<b>Average Daily Census</b>		87	50	45	35	35
<b>Interventional CT Procedures</b>		Full	Limited	Limited	Full	Limited

<sup>1</sup> Based on Bristol Hospital internal reports.

<sup>2</sup> Based on CHA Patient Census Report and discussion with hospital administrators.

<sup>3</sup> Based on discussion with Sharon Hospital administrator. Volumes noted are based on calendar year numbers.

<sup>4</sup> Data for Bradley and New Britain campuses is combined. No separate Bradley campus data is available.

Bristol Hospital is a 134 bed acute care hospital which has a full service Diagnostic Imaging Department offering a full array of interventional procedures. There are 2 full-time interventional Radiologists who perform procedures such as chemo embolizations, vertebroplasty, vascular stents, ESI's and abscess drainages among others. Our average daily inpatient census is 87 and the Hospital has approximately 38,000 ED visits per year which we anticipate will increase up to 39,958 visits per year in 2015.

The Hospital of Central Connecticut (HCC) – Bradley Campus in Southington, CT is an 84 bed hospital, with a much lower average daily census of 35. This is the closest stroke center to Bristol Hospital (9 miles) and we share a secondary service area. HCC-Bradley Campus does not have a full service Diagnostic Imaging Department. Interventional special procedures are limited in type and duration such as PICC lines. The majority of interventional special procedures including drainages and biopsies are performed at the main campus of HCC in New Britain which is 14 miles away and has 2 CT scanners.

Day Kimball Hospital is a 104 bed hospital located in Putnam, CT, 70 miles away. Interventional special procedures are limited in type and duration. The CHA Patient Census Report states ED visits were approximately 11,200 less than Bristol Hospitals in FY 2012 and they performed approximately 2,100 fewer CT procedures. This hospital is not in Bristol Hospital's service area.

Sharon Hospital is a 78 bed hospital located in Sharon, CT, 40 miles away. The average daily census is 35. This is the closest full service Diagnostic Imaging Department offering interventional procedures similar to Bristol Hospital. However, Sharon Hospital's ED visits in CY 2012 were 12,300 fewer than Bristol Hospital and they performed approximately 5,100 fewer CT procedures. This hospital is not in Bristol Hospital's service area.

New Milford Hospital is an 85-bed hospital located in New Milford, CT, 35 miles away. The average daily census is 45. They are a full-service, community hospital. NMH affiliated with Danbury Hospital in 2010 to form the Western Connecticut Health Network. ED visits at New Milford Hospital were approximately 20,000 less than Bristol Hospitals in FY 2012 and they performed approximately 5,000 fewer CT procedures. Interventional special procedures are limited in type and duration. This hospital is not in Bristol Hospital's service area.

Since Bristol Hospital has larger volumes than the hospitals mentioned above, the availability of CT services for stroke patients is critical. The lack of availability of CT services at Bristol Hospital is compounded by our CT scanner going down for periods of time due to equipment malfunction or preventative maintenance. In these situations, the Emergency Center must seek diversion and patients are sent to a hospital outside of the patient's service area. This is a patient safety concern as well as a quality of care issue for diverted patients and again a community dissatisfier.

It is also anticipated that Bristol Hospital's strategic priorities of growing the Bariatric and Cancer programs will generate additional biopsies and interventional procedures utilizing CT services resulting in further delays. Limited access to CT services will continue to worsen unless a second CT scanner is added to the hospital. Having two CT scanners for a hospital our size with CT annual volumes of approximately 11,000 exams and growing is necessary to provide safe quality patient care.

In summary, as a community hospital, Bristol Hospital is dedicated to serve the residents of this service area. With anticipated increases in (1) emergency visits due to current market dynamics, (2) the average number of stroke patients seen per year increasing at a rate of 5% (3) increases in CT interventional procedures and (4) increases in CT volumes due to programmatic expansions in our Bariatric and Breast programs, the volume of CT services will continue to increase.

Without the availability of an additional CT scanner, patient care will continue to be delayed and patient safety compromised. Through this proposal, Bristol Hospital would

like to provide unencumbered CT services and prepare for expected market demands for CT services.

The current scanner will be used for inpatient and biopsy procedures as well as some outpatients. The 40 slice second scanner will be designated for the patients presenting at the Emergency Center as well as any add on patients who present when the first CT scanner is occupied. This will ensure smooth flow of patients through the Emergency Center with timely results and treatment.

With the addition of a second 40 slice CT scanner, Bristol Hospital will also be able to offer enhanced imaging capabilities and dose reduction in CT imaging that is expected to improve quality of care for patients.

b. Provide letters that have been received in support of the proposal.

**Response:**

Refer to Attachment A - Letters Received in Support of the Proposal. Issues identified with our current CT services at Bristol Hospital include:

- Delayed treatment and diagnosis – The Stroke Center needs 24/7 access to the CT scanner. If the scanner is occupied with a special procedure under CT guidance or a scheduled outpatient, the patient must be taken off the scanner for the stroke patient to be completed within the 25 minute standard of care.
  - Increase patient wait times for outpatient appointments due to continuous “bumping” by urgent Emergency Center patients. In addition, if an interventional procedure takes longer than the allocated time, the scheduled patient will wait longer or cancel. This results in overall increased outpatient wait times as well as decreasing volumes.
  - Difficulty accessing CT services for Emergency Center patients and inpatients due to congestion on the scanner from outpatients and biopsy procedures. If an outpatient (scheduled or add-on) is on the CT table and an Emergency Center patient needs to be imaged, the Emergency Center patient treatment is delayed, impacting patient safety.
  - Patient dissatisfaction – patients are increasingly being inconvenienced by rescheduled procedures or a delay in testing. Patients are dissatisfied when they are rescheduled due to emergencies that come up. Their diagnosis and treatment are delayed.
- c. Provide the Manufacturer, Model, Number of slices/tesla strength of the proposed scanner (as appropriate to each piece of equipment).

**Response:**

**Manufacturer**  
Siemens

**Model**  
SOMATOM Definition AS

**CT Slices**  
40 – slice Configuration

- d. List each of the Applicant's sites and the imaging modalities and other services currently offered by location.

**Response:**

Refer to table below.

<u>Modalities</u>	<u>Bristol Hospital</u>	<u>Bristol Radiology Center</u>
Diagnostic Radiology	✓	✓
CT Scan	✓ 64 slice	✓ 4 slice
MRI	✓	✓
Ultrasound	✓	✓
Mammography	✓	✓
Nuclear Medicine	✓	
Interventional Radiology	✓	
Lab	✓	
Inpatient, Outpatient and Emergency Center	✓	

✓denotes modality or services provided

**2. Clear Public Need**

- a. Explain why there is a clear public need for the proposed equipment. Provide evidence that demonstrates this need.

**Response:**

The addition of a second CT scanner for the Emergency Center patients at Bristol Hospital represents a strategy to provide unencumbered access to state of the art imaging services for patients in the Bristol patient service area. Bristol Hospital is proposing the second CT scanner based on the following reasons:

- Primary Stroke Center - Bristol Hospital is designated as a Primary Stroke Center and must ensure rapid diagnostic evaluation and treatment of stroke patients. A single CT scanner in the Hospital operating at capacity does not provide the CT availability required to diagnose and treat stroke patients adequately. Stroke patient volumes are increasing at 5% per year. As the number of stroke patients continues to increase and with the current CT operating at 85% of capacity during day shifts, CT availability continues to worsen.
- Increasing demand on CT scanner - Demands on the single CT scanner are increasing. It is projected that current CT volumes will grow by 798 cases in FY 2016 or a 7.7% increase. Refer to Attachment B - CT Volume Increases Due To Programmatic Expansions Including Stroke Patients. This growth is the result of a number of factors:

- Increasing Emergency Center visits. While the new Accountable Care Act provides for increased primary care availability, there is still uncertainty on how quickly patients will move away from visiting the Emergency Center. It is well known that when a population obtains insurance, (i.e. first time Medicare), their use of healthcare services increases. The Emergency Center anticipates visits to increase by approximately 3% in FY 2013 related to regaining lost market share, infusion of patients with insurance that have yet to find a primary care physician coupled with an increasing aging population with more severe diagnoses requiring hospital intervention. In FY 2014 and FY 2015, we project a lower 1% increase and in FY 2016 and forward, volume will be flat. It should be noted that although there will be increased visits to primary care physicians in lieu of the Emergency Center, those patients requiring CT scan diagnosis will continue to be referred by the primary care physician to the Emergency Center for their CT procedure.
- There has been an increase in use rates of CT guided interventional procedures due to the aging population in Bristol Hospital's service area as well as trending over the last few years resulting in increases of CT procedures of 15% per year.
- The Hospital anticipates increases in CT services relating to Bristol Hospital strategic growth initiatives for the Bariatric and Cancer programs increasing the number of CT procedures by approximately 74 cases per year.
- Delays in testing – Increasing delays in testing for inpatient, outpatient and Emergency Center patients resulting in delay of results and treatment. This is compounded by the CT scanner scheduled and unscheduled downtimes.
- Patient dissatisfaction – Patients may need to reschedule their appointment due to add on emergencies and interventional procedures.
- Consistent CT technology – (dose reduction) for Bristol Hospital's patient service area.

#### **Reason #1 - Primary Stroke Center**

Bristol Hospital is designated as a Primary Stroke Center. We must ensure rapid diagnostic evaluation and treatment of stroke patients. Refer to [Attachment S](#) Designated Stroke Centers, DPH Primary Stroke Center Dashboard, Bristol Hospital and Number of CT Scanners in Connecticut Hospitals. The spreadsheet shows the standard of care turnaround time for patient from door to CT is 25 minutes. In FY 2011 the average turnaround time for Bristol Hospital stroke patients to start a CT scan was 54 minutes and in FY 2012 it was 47 minutes.

The number of stroke patients seen at Bristol Hospital is increasing. There was a 5% increase in number of stroke patients treated at Bristol Hospital from FY 2011 (115) to FY 2012 (121). Due to demographics and the aging population, we anticipate the volume of stroke patients to continue to increase by 5% per year.

All but five hospitals in the state of Connecticut that are designated Primary Stroke Centers have at least two CT scanners. As mentioned previously, Bristol Hospital is one of the five hospitals in the state with only one CT scanner. The other four hospitals, The Hospital of Central Connecticut – Bradley Campus, Day Kimball Hospital, Sharon Hospital and New Milford Hospital, noted in Question 1a, (Brief Narrative detailing the proposal), are all smaller hospitals with significantly fewer ED visits and perform fewer CT scans per year than Bristol Hospital. It is significant that unlike Bristol Hospital, three of these hospitals have more limited diagnostic imaging services and perform limited interventional procedures. The one hospital with full diagnostic imaging services and interventional procedures (Sharon Hospital) has fewer than half the number of ED visits as Bristol Hospital and performs fewer than half the number of CT procedures as Bristol Hospital.

**Reason #2 - Increasing Demand on CT Scanner**

It is projected that current CT volumes will grow by 793 cases in 2016 or a 7.7% increase in this four year period. Refer to Attachment B - CT Volume Increases Due To Programmatic Expansions Including Stroke Patients for detail of the components of this growth). Described in Reason #1 above was the growth in stroke patient volumes. Described below are the other major components of this growth in ED, Breast, Bariatric and Interventional procedures.

- Emergency Center Visits Increasing – There will be modest but increasing Emergency Center visits. While the new Accountable Care Act provides for increased primary care availability, there is still uncertainty on how quickly patients will move away from visiting the Emergency Center. It is well known that when a population obtains insurance, (i.e. first time Medicare), their use of healthcare services increases. The Emergency Center anticipates visits to increase by approximately 3% in FY 2013 related to regaining lost market share, infusion of patients with insurance that have yet to find a primary care physician coupled with an increasing aging population with more severe diagnoses requiring hospital intervention. In FY 2014 and FY 2015, we project a lower 1% increase and in FY 2016 and forward volume will be flat. It should be noted that although there will be increased visits to primary care physicians in lieu of the Emergency Center, those patients requiring CT scan diagnosis will continue to be referred by the primary care physician to the Emergency Center for their CT procedure.
- Approximately 11% of Bristol Hospital Emergency Center patients require CT procedures. As Emergency Center patient volumes increase, so too will Emergency Center CT volumes increase.

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
<b>ED VISITS</b>	38029	39,170	39562	39958	39958
<b>ED CT EXAMS</b>	4028	4309	4352	4395	4395

- Increased Use Rates of CT Guided Interventional Procedures - In FY 2011, Bristol Hospital performed 127 CT guided interventional procedures and in FY 2012, there

were 146 CT guided interventional procedures. This is a 15% increase in volume. For the reasons noted below, we expect the additional growth of 15% per year to continue. The aging of the population contributes to health care service demands which will increase CT use rate of CT guided interventional procedures within Bristol Hospital's service area as well as Connecticut.

	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
CT Interventional Procedures	146	168	193	222	255

- There are several factors that impact use rate growth including aging of the population, enhancements and advancements in imaging capabilities (e.g. dose reduction) and new clinical applications. A study completed by Siemens Healthcare (Refer to Attachment C, Siemens Healthcare Econometric Analysis, page 12) shows use rates for CT outpatient imaging procedures in Connecticut within a 10 mile radius, estimated at 23.2% increase between FY 2010 and FY 2015 (58,314 – 71,872). In the proposed service area, residents in the 60 – 69 year old bracket are estimated to increase between FY 2011- FY 2016 by 14.6% and residents in the 70 – 79 year old bracket by 14.3% in the same time frame according to the Siemens Healthcare study. (Page 3)
- With this anticipated growth in the CT use rate in Bristol Hospital's service area, timely access to CT services will continue to be problematic unless a second CT scanner is operational at Bristol Hospital.
- Bristol Hospital's Strategic Initiatives – Bristol Hospital is continuing to grow some of its programs that will impact CT utilization. The Hospital is recruiting a breast surgeon as well as two additional surgeons for the Bariatric Program. Through marketing and growth of these service lines, Bristol Hospital will experience an increase in CT and CT interventional procedures. Refer to Attachment D – Bariatric and Breast Surgeries.

With the recruitment of an additional breast surgeon anticipated to start in April of 2013, it is anticipated that CT volumes will grow by an additional 50 cases per year. Patients that have breast cancer will need a CT of the abdomen as a follow-up to their care.

The Bariatric Program at Bristol Hospital continues to show steady increases. From FY 2011 to FY 2012, the average surgeries per month increased from 6 to 8. With the recruitment and hire of two additional surgeons for this program, these numbers are anticipated to grow even higher. Prior to having surgery, all bariatric patients are scheduled to have a CT exam. Based on the current trend, it is anticipated that the average number of bariatric surgeries will be 10 per month in FY 2013, 12 per month in FY 2014, 14 per month in FY 2015 and 16 per month in FY 2016.

	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>
<b>Bariatric Surgeries</b>	96	120	144	168	192
<b>Bariatric CTs</b>	96	120	144	168	192
<b>Breast Surgeries for Malignancy</b>	80	130	180	230	280
<b>Abdomen CT's Work Up for Breast Cancer Patients</b>	80	130	180	230	280

### **Reason # 3 - Delays in testing**

Bristol Hospital's medical staff physicians support unencumbered access to CT services for all patients. The impact of utilizing one CT scanner for inpatients, outpatients and Emergency Center patients is not conducive to providing quality patient care in a timely fashion. Refer to Attachment A – Letters Received in Support of the Proposal.

Patients generated through the Emergency Center are delayed in their diagnosis and treatment due to outpatient scheduled scans, scheduled biopsies as well as scheduled and stat inpatient scans. The delay in scanning these patients results in delays of diagnosis, treatment and length of stay in the Emergency Center. Patient safety is compromised when treatment is delayed.

The physicians note in their letters that the addition of a second CT scanner at Bristol Hospital will allow more efficient processing of emergency patients and scheduled procedures.

For the inpatients, delay of results and treatment impacts length of stay resulting in additional unnecessary costs to the system. The addition of a second CT scanner will allow the inpatients to be done at a scheduled time so the nursing staff can effectively and efficiently plan and manage the care of the inpatients needing CT services. There are several reasons for delays:

- During weekdays, Monday – Friday, the total number of CT exams performed on average during first shift (days) in FY 2012 is 15 cases and at least one interventional special procedure. With the time it takes to prepare the patient, explain the CT procedure being performed and prep the room, CT utilization is at maximum capacity during this time. On average, CT use is at 85% utilization during first shift with spillage on second shift. During second shift (evenings) the average number of CT exams performed on weekdays is 13 cases while on third shift (nights) the average number of exams performed on weekdays is 4 cases.
- During weekends, the total number of CT exams performed on average during first shift (days) Saturday in FY 2012 is 9.5 cases and on Sunday in FY 2012 is 7 cases. During second shift (evenings) the average number of CT exams performed on Saturday is 8 cases and on Sunday is 8.5 while on third shift (nights) the average number of exams



performed is 4 on Saturdays and 3 on Sundays. Refer to Attachment E - Meditech ITS Orders – Shift Statistics and Average Day of the Week Report.

The average Emergency Center wait time from order to CT exam start varies by shift. In FY 2012, based upon a six month random sample ending September 30, 2012, first shift CT wait time was 55 minutes, second shift was 35 minutes and third shift was 29 minutes. Refer to Attachment F - Average ED-Patient Wait Times-CT. However, the wait times are the longest on first shift when the majority of the CT biopsies and drainages are performed. On average, the wait time from Emergency Center order to CT exam should not exceed 10 minutes as Emergency Center patient orders should be treated as stat exams and take priority.

In FY 2012 on average, there are 12 lengthy special procedures in CT per month. These procedures are done Monday – Friday during first shift. From FY 2011 to FY 2012, these procedures increased 15%. Refer to Attachment G - Monthly Volumes – CT Special Procedures. This number continues to rise with the availability to perform biopsy procedures utilizing CT guidance.

When emergent testing and special procedures are needed, scheduled and add-on outpatients and inpatients are frequently delayed or rescheduled to another day and time. The Emergency Center patient's care and treatment are delayed as well. On average during first shift, the wait time for an emergent CT scan is 1 hour and 22 minutes when there is a CT special procedure (biopsy or drainage procedure) in process. Refer to Attachment H - CT Exam Delays Due To Duration Of CT Procedures.

Another factor causing delays in receiving CT services or unavailability of CT services is down time. When the CT scanner is down for a scheduled preventative maintenance, or goes down unexpectedly, the Hospital must go on diversion. Refer to Attachment I - Equipment Down Time and Attachment J – Emergency Center Diversions. These downtimes have been significant during the last few years.

	<u>FY 2010</u> <u>Philips CT</u>	<u>FY 2011</u> <u>Philips CT</u>	<u>FY 2012</u> <u>SiemensCT</u>
<b>Preventative Maintenance</b>	4.5 hrs	14.5 hrs.	6.5 hrs.
<b>Unscheduled down times</b>	6 hrs	164.5 hrs	247.31 hrs
<b>Total Downtime</b>	10.5 hrs	179 hrs	254 hrs
<b>Costs of alternative options made – 1. Bristol Radiology Center 2. PET/CT mobile trailer 3. CT mobile trailer Total hours were never tracked</b>	not tracked	\$31,355.98	49,653.67
<b>Hours Emergency Center on diversion</b>	21 hours 36 minutes	159 hours 25 minutes	144 hours 18 minutes
<b>Number of patients lost Aggregate estimated average of 1.5 patients/hr includes pts sent to BRC, scheduled pts lost to other facilities and pts diverted to other hospitals</b>	32	237	216
<b>Cost of patients lost due to downtimes (Average reimbursement of CT exams \$730/case) see financial attachment II</b>	\$23,360	\$173,010	\$157,680

The Hospital's former Philips CT scanner downtimes in FY 2011 were approximately 179 hours for a twelve month period. Fourteen and one half hours of these were for preventative maintenance while 164.5 hours were for non-scheduled down times. This CT scanner was replaced in October 2011.

The Siemens CT scanner installed in October of 2011, replaced the Philips CT scanner. The Siemens CT scanner was down for 253.8 hours in FY 2012. Preventative maintenance accounted for 6.5 hours while 247.3 hours were for non-scheduled down times related primarily to electrical grounding issues causing repeated need to replace blown imaging tubes.

In the first four months of FY 2013, the Siemens CT scanner has been down 140.5 hours. When the CT scanner goes down, the Hospital attempts to employ alternative arrangements for CT services for its patients if possible. This depends on the time of day and day of the week that the downtime occurs as well as availability. The options that the Hospital seeks to put in place during the CT scanner downtime are the following: (1) Patients may be transported to Bristol Radiology Center or St. Francis Hospital for the CT Scan; (2) the PET/CT mobile trailer may be used if available; (3) A mobile CT trailer may be brought in and rented from Alliance if available. (This is generally not available); or (4) The Hospital must seek diversion.

Option #1 - When the Hospital CT scanner goes down unexpectedly during the hours of Monday – Friday 8:00 a.m. - 4:30 p.m., some inpatients and Emergency Center patients needing a CT scan are able to be transported by ambulance (EMS) to Bristol Radiology Center or St. Francis Hospital for their scan and then back to Bristol Hospital. In FY 2011, there were 43 such transports (21 patients transported round trip and one patient transported only one way). In FY 2012, there were 26 such transports (13 patients transported roundtrip). Bristol Hospital has a contract with Bristol Radiology Center (“BRC”) to accept Emergency Center patients when the Hospital CT scanner is down. However, these patient transports to BRC or St. Francis Hospital further delay results and treatment of the patient. Additional Hospital staff is needed to accompany patients during transport and EMS is taken out of service to transport these patients for their CT procedures. In FY 2011 the total expenses incurred for the 43 transports was \$31,355.98 and in FY 2012 the total expenses incurred for the 26 transports was \$18,043.67. Refer to Attachment K – Costs Incurred When CT Scanner Is Down.

In addition, Bristol Radiology Center is limited in its scope of CT services because it has only a 4 slice scanner. This scanner cannot perform CTA studies or biopsy procedures and the scans are lengthy with increased radiation to the patient. With the Hospital's additional proposed CT scanner, patients will be cared for and treatment rendered without delay within the Bristol Community.

Option #2 - The second alternative the Hospital seeks to put in place during its CT Scanner downtime is the use of the mobile PET/CT trailer. This trailer is at Bristol Hospital on Tuesdays. If the Hospital's CT scanner goes down in close proximity to Tuesday and if this mobile unit is available, CT patients can be completed in between the PET patients already

scheduled for their exam although this further delays testing. When on site, this mobile PET/CT scanner is located outside of the rear entrance of the Hospital in a remote location to the CT and Emergency Center departments. To access this CT scanner, staff must push patients in wheelchairs and on stretchers up a carpeted ramp. The Hospital has to incur an additional expense of renting an electric pusher for stretchers at a cost of \$6,000 because staff have been injured trying to push patients to and from the PET/CT scanner. In FY 2012, the additional expenses incurred to use the mobile PET/CT for standard CT scans during downtimes (including Alliance charges, additional costs for transporters and nurses) were approximately \$14,000. Refer to Attachment K – Costs Incurred When CT Scanner Is Down.

Option #3 - The third alternative the Hospital seeks to put in place when the Hospital CT scanner goes down is the rental of a mobile CT scanner from Alliance Imaging. The cost to lease this CT scanner is approximately \$25,000 a week. The vendor agreed to cover the cost of this rental when the Phillips CT scanner was swapped out for the Siemens CT in October 2011. However, there were still additional expenses incurred by the Hospital to use this mobile scanner including additional transporters, nurses and technologists. These expenses totaled \$17,660 in FY 2012. Refer to Attachment K – Costs Incurred When CT Scanner Is Down.

Option #4 - If none of the alternatives mentioned above are available, the Hospital must go on diversion. Even after attempting to employ these three alternatives, the total number of hours the Hospital was on diversion in FY 2011 was 159 hours and in FY 2012 was 144 hours.

To further understand the magnitude of the downtime problem and the difficulty and time spent in trying to put alternative arrangements in place when the Hospital's single CT scanner is down we will describe two incidents that have occurred in the past twelve months. On December 29, 2011, the Hospital's CT tube had to be replaced due to an electrical issue that damaged the tube. The CT scanner was down six days from December 29, 2011 until January 3, 2012. During this time, the Hospital was on diversion four days until January 1 when Alliance Imaging was able to bring in a mobile CT trailer that the Hospital could rent. Calls were placed to other area hospitals to see if they would accept diversion from Bristol Hospital but these other hospitals were busy and could not take Bristol Hospital patients. It was difficult for Bristol Hospital to find a hospital that would accept diversion and it created a hardship for that hospital and its patients as well.

The second example of the difficulty incurred by the Hospital in putting alternative arrangements for CT services in place when the Hospital's single CT scanner is down, occurred within the past month. On Friday, January 4, 2013, the Bristol Hospital CT scanner went down at 4:00 p.m. There were patients in the Emergency Center that needed CT procedures as well as outpatients in the waiting room waiting for a CT procedure. Bristol Hospital was able to arrange for Bristol Radiology Center to remain open and perform CT procedures for some of the patients that were in the Emergency Center and an outpatient that was waiting. Other patients who needed CT procedures could not be done at BRC and care of these patients was diverted.

The Emergency Center went on diversion after calling many other hospitals to request that they take Bristol Hospital diverted patients. It was challenging because these other hospitals were busy and full with their own patients.

Bristol Hospital was advised by Siemens that a board for the Bristol Hospital CT scanner had to be ordered and it was scheduled to be delivered on Saturday, January 5, 2013 around 11:00 a.m. The Emergency Center was in a state of flux not knowing when the CT Scanner was going to be available and if continued diversion was necessary. If additional time is needed for diversion, Bristol Hospital must notify and confirm in advance if the diverted hospital will continue to accept our patients.

After speaking with Siemens at 11:00 a.m. Saturday morning, January 5, 2013 to inquire as to the whereabouts of the part, Bristol Hospital was told that there was a mistake in the ordering and the part would not be delivered until Monday, January 7, 2013. Bristol Hospital Emergency Center asked for an extension of diversion. Siemens was apologetic for the ordering error and immediately ordered another board. Although efforts were made to have the board delivered on Saturday afternoon, we were told that the board was not in stock in the local warehouse. The board had to be shipped from a remote location. The estimated time of arrival was slated for Sunday, January 6, 2013 at 4:00 p.m. We were informed that once the board arrived, the CT scanner would be operational within 2 hours or 6:00 p.m.

Anticipating the worse, a call was placed to Alliance Imaging on Friday night January 4, 2013 to see if the mobile PET/CT trailer was available. Alliance Imaging delivered the mobile PET/CT on Saturday afternoon January 5, 2013 around 4:00 p.m. instead of the normal delivery of Monday night for Tuesday PET/CT patients. These arrangements were made in order to have a backup plan if the CT part did not arrive as scheduled on January 5, 2013.

When the mobile PET/CT arrived on Saturday, at 4:00 p.m., it was anticipated that this scanner could be used immediately. However, there were artifacts that showed up on the images and the mobile PET/CT scanner had to be re-booted to eliminate them. It was not operational until 8:00 p.m. on Saturday, January 5, 2013.

During this time, the Emergency Center continued to be on diversion even with the mobile PET/CT trailer because of the artifact issue as well as the limitations to perform CT scans on ventilator patients and non-ambulatory patients. The PET/CT room size is limited and could not accommodate patients with these needs.

There were minimal patients done on the mobile PET/CT from 8:00 p.m. Saturday night until the Siemens Scanner went back up at 6:00 p.m. Sunday night. During this downtime, it was difficult for the Emergency Center to seek diversion and treatment of patients were delayed. The total hours of CT downtime for this incident was 50.

#### **Reason #4 - Patient Dissatisfier**

The Hospital frequently must reschedule patient's scheduled CT procedures. When they arrive for a scheduled test, the CT is often occupied by a stat inpatient or Emergency Center patient or a scheduled biopsy CT intervention which has exceeded its scheduled time. The patient then must either wait until the on-going procedure is completed or reschedule, resulting in disruption to the patient's schedule and dissatisfaction. In addition, after hours many physicians will send patients for a CT scan as walk in patients. The physicians are waiting for the CT results on their patient in order to prescribe treatment. If the patient has to wait for their CT scan the treatment is delayed and this may compromise patient safety in addition to leading to greater patient and physician dissatisfaction.

The average wait times for outpatient walk-ins (not scheduled) is approximately 50 minutes. Refer to Attachment L - Tracking Outpatient Walk-In Wait Times and Average ED – Patient Wait Times. Wait times for non-scheduled outpatients should generally be no longer than 20 minutes.

In FY 2012, the average Emergency Center patient wait times for CT procedure varied by shift. On first shift (days) the average wait times are 55 minutes while average for second shift (evenings) are 35 minutes and third shift (nights) are 29 minutes. Wait times in the Emergency Center should not exceed 10 minutes.

Patients who experience significant delays or need to reschedule their CT procedures are understandably dissatisfied with Bristol Hospital and may choose to go elsewhere for future services. The Hospital's Operations Manager receives, on average, three patient complaints per day related to excessive CT scan wait times.

#### **Reason #5 - Consistent CT Dose Reduction**

In Bristol Hospital's service area, there are no other providers of the Siemens Somatom Definition AS CT scanner other than Bristol Hospital. This scanner offers the latest technology in dose reduction. Patient dose is reduced at least 30% - 50% without hindering image quality for precise and accurate interpretation of the study.

Patients are becoming extremely savvy about their health care choices. With increased media coverage on radiation protection and dose reductions, with this proposal, Bristol Hospital will be positioned to offer consistent CT services with the least amount of radiation necessary to produce the highest image quality for accurate diagnosis in a timely manner.

- b. Provide the utilization of existing health care facilities and health care services in the Applicant's service area.

#### **Response:**

Refer to Attachment M for list of health care facilities and health care services in Bristol Hospital's service area.

- c. Complete **Table 1** for each piece of equipment of the type proposed currently operated by the Applicant at each of the Applicant's sites.

**Table 1: Existing Equipment Operated by the Applicant**

<b>Provider Name, Street Address, Town, Zip Code</b>	<b>Description of Service *</b>	<b>Hours/Days of Operation **</b>	<b>Utilization ***</b>
Bristol Hospital 41 Brewster Road Bristol, Ct 06010	Siemens 64 Slice SOMOTOM, Definition AS	Monday – Sunday, 24 hours/365 day	FY 2012 – 10,309

\*Include equipment strength (e.g. slices, tesla strength), whether the unit is open or closed (for MRI)

\*\*Days of the week unit is operational, and start and end time for each day; and

\*\*\*Number of scans/exams performed on each unit for the most recent 12-month period (identify period).

- d. Provide the following regarding the proposal's location:
- i. The rationale for locating the proposed equipment at the proposed site;

**Response:**

The proposed CT will be located at Bristol Hospital, 41 Brewster Road, Bristol CT. There is a location adjacent to the Emergency Center where there is sufficient space to house a CT scanner. CT services are increasingly the standard of care for the Emergency Center population. The proposed second CT scanner will be used primarily for Emergency Center patients and back-up for scheduled or add on patients when the existing CT scanner in the Hospital is not available.

- ii. The population to be served, including specific evidence such as incidence, prevalence, or other demographic data that demonstrates need;

**Response:**

Refer to Attachment C - (Siemens Healthcare Econometric Analysis for Bristol, CT). The proposed CT is expected to serve Bristol Hospital's patient service area (PSA) which includes the following towns: Burlington, Bristol, Farmington, Terryville, Wolcott, Plymouth, Southington and Plainville.

- iii. How and where the proposed patient population is currently being served;

**Response:**

The proposed patient population is being served by Bristol Hospital and Bristol Radiology Center. Also, patients are leaving their town of residence to seek CT services in areas outside of the patient service area, (PSA).

- iv. All existing providers (name, address) of the proposed service in the town listed above and in nearby towns;

**Response:**

The providers of CT services in the proposed service area and towns, in addition to Bristol Hospital, are the following:

Bradley Memorial Hospital  
81 Meriden Avenue  
Southington, CT 06489

Bristol Radiology Center  
25 Collins Road  
Bristol, CT 06010

UConn Health Center  
263 Farmington Ave  
Farmington, CT 06030

- v. The effect of the proposal on existing providers;

**Response:**

The proposal is not anticipated to have any effect on the CT services offered by or volume of the existing providers listed above. The proposed Hospital second CT scanner is intended to address volume and delay issues that exist at Bristol Hospital and is not intended to impact volumes of CT services currently performed at these other provider sites.

- vi. If the proposal involves a new site of service, identify the service area towns and the basis for their selection.

**Response:**

Not Applicable



- e. Explain why the proposal will not result in an unnecessary duplication of existing or approved health care services.

**Response:**

The proposal will not result in an unnecessary duplication of existing or approved health care services because although it will be the second scanner at Bristol Hospital, it is needed to provide timely CT services for the Bristol Hospital Emergency Center and stroke patients.

The increasing demand for CT guided interventional special procedures requires a dedicated CT scanner for two hours at a time. Bristol Hospital is a critical care hospital with high acuity patients and is also a designated Primary Stroke Center. A Primary Stroke Center with only one CT scanner may result in patient access and timely care being compromised. In addition, when the CT scanner is occupied, the Emergency Center must go on diversion therefore not providing immediate care to the patients in this community. A second CT scanner will position Bristol Hospital to better serve existing patients by reducing Emergency Center diversions, increasing timeliness of care and increasing patient satisfaction. Refer to Attachment I - Equipment Down Times and Attachment J – Emergency Center Diversions.

**3. Actual and Projected Volume**

- a. Complete the following tables for the past three fiscal years (“FY”), current fiscal year (“CFY”), and first three projected FYs of the proposal, for each of the Applicant’s existing and proposed pieces of equipment (of the type proposed, at the proposed location only). In Table 2a, report the units of service by piece of equipment, and in Table 2b, report the units of service by type of exam (e.g. if specializing in orthopedic, neurosurgery, or if there are scans that can be performed on the proposed scanner that the Applicant is unable to perform on its existing scanners)

**Table 2a: Historical, Current, and Projected Volume, by Equipment Unit**

	Patient Type	Actual Volume (Last 3 Completed FYs)			CFY Volume *	Projected Volume (First 3 Full Operational FYs)**			
		FY 2009	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
CT Scanner 64 slice	Inpatient	3998	3980	2789	3489	<u>3519</u>	<u>3549</u>	<u>3580</u>	<u>3611</u>
	Outpatient		5003	3799	<u>2792</u>	<u>2864</u>	<u>2939</u>	<u>3018</u>	<u>3101</u>
	ED	10,661	6072	5543	<u>4028</u>	<u>3950</u>			
CT scanner 40 slice	Inpatient								
	ED					<u>359</u>	<u>4352</u>	<u>4395</u>	<u>4395</u>
<b>Total</b>		14,659	15,055	12,131	<u>10,309</u>	<u>10,692</u>	<u>10,840</u>	<u>10,993</u>	<u>11,107</u>

\* For periods greater than 6 months, report annualized volume, identifying the number of actual months covered and the method of annualizing. For periods less than six months, report actual volume and identify the period covered.

**CFY 2012 volumes include (October 2011- September 2012 which is 12 months.)**

\*\* If the first year of the proposal is only a partial year, provide the first partial year and then the first three full FYs. Add columns as necessary.

**The proposed CT is expected to be operational sometime in late FY 2013. Therefore FY 2013 is a partial year of operation for the unit, Sept 2013 only. FY 2014 - FY 2016 will be full years of operation for the unit.**

\*\*\* Identify each scanner separately and add lines as necessary. Also break out inpatient/outpatient/ED volumes if applicable.

\*\*\*\* Fill in years. In a footnote, identify the period covered by the Applicant's FY (e.g. July 1- June 30, calendar year, etc.).

**NOTE: Bristol Hospital Fiscal Year is from October 1 – September 30**

**Table 2b: Historical, Current, and Projected Volume, by Type of Scan/Exam**

<b>BRISTOL HOSPITAL</b>	<b>Actual Volume (Last 3 Completed FYs)</b>			<b>CFY Volume *</b>	<b>Projected Volume (First 3 Full Operational FYs)**</b>			
	<b>FY 2009</b>	<b>FY 2010</b>	<b>FY 2011</b>	<b>FY 2012</b>	<b>FY 2013</b>	<b>FY 2014</b>	<b>FY 2015</b>	<b>FY 2016</b>
CT HEAD	2811	2972	3024	2931	3017	3036	3056	3063
CT ABD	4301	4218	159	180	230	280	330	380
CT CHEST	1415	1370	585	1000	1070	1080	1090	1090
CT PELVIS	4020	3980	85	97	97	97	97	97
CT CERVICAL	274	390	438	519	570	580	590	590
CT OTHER	1838	2125	3634	1831	1853	1878	1907	1940
CT ABD & PELVIS			3834	3640	3744	3778	3812	3836
CT CXR, ABD & PEVIS			372	111	111	111	111	111
Total	14,659	15,055	12,131	10,309	10,692	10,840	10,993	11,107

\* For periods greater than 6 months, report annualized volume, identifying the number of actual months covered and the method of annualizing. For periods less than six months, report actual volume and identify the period covered. **CFY 2012 volumes include (October 2011-September 2012 which is 12 months).**

\*\* If the first year of the proposal is only a partial year, provide the first partial year and then the first three full FYs. Add columns as necessary. **The proposed CT is expected to be operational some time in FY 2013. therefore, FY 2013 is a partial year of operation for the unit. FY 2014 - FY 2016 will be full years of operation for the unit.**

\*\*\* Identify each type of scan/exam (e.g. orthopedic, neurosurgery or if there are scans/exams that can be performed on the proposed piece of equipment that the Applicant is unable to perform on its existing equipment) and add lines as necessary.

\*\*\*\* Fill in years. In a footnote, identify the period covered by the Applicant's FY (e.g. July 1- June 30, calendar year, etc.).

**NOTE: Bristol Hospital Fiscal Year is from October 1 – September 30**

- b. Provide a breakdown, by town, of the volumes provided in Table 2a for the most recently completed full FY.

**Response:**

Refer to the table below for FY 2012 volumes (10,309) by service area town for CT services at Bristol Hospital

<u>Service Area</u>	<u>Volume</u>	<u>% of Total</u>
1. Bristol	6,907	67%
2. Terryville/Plymouth	928	9%
3. Plainville	412	4%
4. Burlington	309	3%
5. Farmington	103	1%
6. Southington	206	2%
7. Wolcott	206	2%
8. Other	1,135	11%
9. Plymouth	103	1%
Total	10,309	100%

- c. Describe existing referral patterns in the area to be served by the proposal.

**Response:**

Patients living in these service areas are referred to Bristol Hospital for their CT services. Bristol Hospital's Centralized Scheduling department schedules all outpatient referrals based on patient preference. Patients are given their appointment time depending on when the biopsy procedures are scheduled. The number of biopsies performed per week is approximately 4-5. Each biopsy time slot is blocked for 2 hours or more depending on the procedure. Emergency exams as well as scheduled and walk-in CT patients, cannot be completed during this time.

- d. Explain how the existing referral patterns will be affected by the proposal.

**Response:**

The addition of the proposed second CT scanner will allow the Emergency Center patients to be completed on the new scanner. This will expedite patients through the system and provide the necessary care needed. The original scanner will be used for timely scheduling of all outpatients along with the add on walk in patients, inpatients and biopsies. The second scanner will be used for over flow of the outpatient schedule during the day when biopsies are scheduled. The second CT scanner will allow for patients to be done in a timely manner and not have their scans delayed therefore delaying care and treatment.

e. Explain any increases and/or decreases in volume seen in the tables above.

**Response:**

The decreases in volumes noted in Tables 2a and 2b from FY 2010 to FY 2011 are due to a number of factors, including the combination of certain CPT codes as a new single code, significant CT downtime on the older CT scanner resulting in patient diversions and significant downtime in the installation of the newer CT scanner.

Beginning in FY 2011, certain CPT codes have been combined so that Abdomen and Pelvis are now treated as one code versus two in the past. Also, Chest, Abdomen and Pelvis have been combined as one CPT code where prior to FY 2011, they were treated as three separate exams. The effect of this combination of codes is to make it appear as though CPT volumes have decreased. If the 2010 separate CPT codes were in effect in 2012, the CT Abdomen and Pelvis volumes of 3640 would be approximately 50% higher or 5460, and CT Chest, Abdomen and Pelvis volume of 111 would be approximately 200% higher or 222. As a result, total CT volume in FY 2012 under the old CPT methodology would be approximately 12,240.

The decrease in volumes in FY 2011 was also the result of significant CT downtime. Refer to Attachment I – Equipment Down Time and Attachment J – Emergency Center Diversions. In FY 2011, there were 159 hours of diversion resulting in an approximate loss of 237 patients for the year. In FY 2012, there were 144 hours of diversion resulting in an approximate loss of 216 patients. Some patients were sent by ambulance to Bristol Radiology Center or St. Francis Hospital for their CT procedure.

The decrease in volumes noted in Table 2a from FY2011 to FY 2012 was also the result of volumes that were lost when the new CT scanner was installed in October, 2011. In addition, once installed and operational, the Hospital continued to experience unscheduled downtime. In FY 2012, the Siemens CT scanner was down approximately 254 hours; 247 of these were unscheduled downtime hours. Refer to Attachment I - Equipment Down Time and Attachment J – Emergency Center Diversions.

f. Provide a detailed explanation of all assumptions used in the derivation/calculation of the projected volume by scanner and scan type.

**Response:**

i. New CT Scanner 40 Slice – The proposed CT scanner 40 slice will primarily be used for Emergency Center patients and overflow of the outpatient schedule during the day when biopsies are scheduled.

Emergency Center patients account for approximately 39% - 40% of the total volumes of CT procedures done each year. Emergency Center patient visits are anticipated to increase by 3% in FY 2013. FY 2012 annual visits are approximately 38,000. CT services were provided to 4,028 patients or approximately 11% of Emergency Center

patients. As the Emergency Center volumes continue to grow, CT procedures will also grow. Scan type will remain the same.

- ii. Current CT Scanner 64 Slice - The current CT scanner will be used for all outpatient, walk-in patients, inpatients, biopsies and interventional procedures. Looking at the trends over the past years, interventional procedures will grow 15%.

Also, as noted earlier in this application, the Hospital's Bariatric and Breast programs are growing, generating additional surgeries on patients that may need CT services. It is anticipated that these two programs will increase the volume of CT services by an additional 74 cases per year from FY 2013 – FY 2016.

Scan type will remain the same except that the number of CT interventional procedures on this CT scanner is anticipated to increase.

- g. Provide a copy of any articles, studies, or reports that support the need to acquire the proposed scanner, along with a brief explanation regarding the relevance of the selected articles.

**Response:**

Refer to Attachment C – Siemens Healthcare Econometric Analysis. The attachment shows Bristol Hospital's service area aging population from 2011 – 2016. The population between the ages of 60 – 69 will increase by 15% within the next 3 years and the population between the ages of 70 – 79 will increase by 14%. With the aging population, there will be greater need for imaging services including interventional CT procedures.

#### 4. Quality Measures

- a. Submit a list of all key professional, administrative, clinical and direct service personnel related to the proposal. Attach a copy of their Curriculum Vitae.

**Response:**

Key personnel related to the proposal are listed below. Refer to Attachment N - Curriculum Vitae.

- Kurt Barwis, President and Chief Executive Officer
- George Eighmy, Vice President and Chief Financial Officer
- Sheila Kempf, Sr. Vice President Patient Care Services/Chief Nursing Officer
- Len Banco, MD, Chief Medical Officer
- Dennis Ferguson, MD, President Radiologic Associates, Medical Director  
Department of Radiology Bristol Hospital
- John Walker, MD, Vice President Radiologic Associates Associate Medical Director  
Department of Radiology Bristol Hospital

- Marie Marciano, MBA, R.T.(R)(M) Director of Diagnostic Services
- Al Lamptey, R.T.(R)(CT) Operations Manager Diagnostic Services

b. Explain how the proposal contributes to the quality of health care delivery in the region.

**Response:**

The addition of a second CT scanner in Bristol Hospital will eliminate the need for diversion, provide timely urgent CT scan requests from the Emergency Center, provide a shorter wait time for stroke patients and provide the ability to schedule outpatients with reliable times and efficiency.

Bristol Hospital is a designated Primary Stroke Center with the need to provide stroke patients with timely care from door to CT scanner of 25 minutes. With only one CT scanner, the Hospital's ability to provide stroke patients with timely care is compromised.

The letters of support note that outpatient volumes including the interventional biopsies performed under CT guidance have been causing a backlog which delays testing for all patients. Testing delays result in the patient's diagnosis and treatment being delayed which can compromise their care. The quality of healthcare delivery will be enhanced by the addition of the second CT scanner and ensure patients receive CT services in a timely manner.

Also, the proposed Somatom Definition AS addresses with the concern of radiation exposure as one of the first CT scanners that adapts to virtually any patient. It provides each patient with complete dose protection along with providing clearer images for patients with weight issues. The bore on this scanner is 78cm with a table weight of 480 lbs which will better accommodate patients from the Hospital's bariatric program.

Bristol Hospital will offer state of the art CT scanning services to patients optimizing diagnostic quality while keeping patient safety our number one priority.

**5. Organizational and Financial Information**

a. Identify the Applicant's ownership type(s) (e.g. Corporation, PC, LLC, etc.).

**Response:**

Corporation

b. Does the Applicant have non-profit status?  
X Yes (Provide documentation)  No

**Response:**

Refer to Attachment O - Documentation of non-profit status.

- c. Provide a copy of the State of Connecticut, Department of Public Health license(s) currently held by the Applicant and indicate any additional licensure categories being sought in relation to the proposal.

**Response:**

Refer to Attachment P - Copy of the State of Connecticut, Department of Public Health license.

- d. Financial Statements

If the Applicant is a Connecticut hospital: Pursuant to Section 19a-644, C.G.S., each hospital licensed by the Department of Public Health is required to file with OHCA copies of the hospital's audited financial statements. If the hospital has filed its most recently completed fiscal year audited financial statements, the hospital may reference that filing for this proposal.

**Response:**

Refer to OCHA FY 2011- 12 month filing for Bristol Hospital.

If the Applicant is not a Connecticut hospital (other health care's facilities): Audited financial statements for the most recently completed fiscal year. If audited financial statements do not exist, in lieu of audited financial statements, provide other financial documentation (e.g. unaudited balance sheet, statement of operations, tax return, or other set of books.)

**Response:**

Not applicable



e. Submit a final version of all capital expenditures/costs as follows:

**Table 3: Proposed Capital Expenditures/Costs**

Medical Equipment Purchase	
Imaging Equipment Purchase	\$595,000.00
Non-Medical Equipment Purchase	
Land/Building Purchase *	
Construction/Renovation **	\$200,000.00
Other Non-Construction (Specify)	
<b>Total Capital Expenditure (TCE)</b>	<b>\$795,000.00</b>
Medical Equipment Lease (Fair Market Value) ***	
Imaging Equipment Lease (Fair Market Value) ***	
Non-Medical Equipment Lease (Fair Market Value) ***	
Fair Market Value of Space ***	
<b>Total Capital Cost (TCC)</b>	
<b>Total Project Cost (TCE + TCC)</b>	<b>\$ 795,000.00</b>
Capitalized Financing Costs (Informational Purpose Only)	
Total Capital Expenditure with Cap. Fin. Costs	

\* If the proposal involves a land/building purchase, attach a real estate property appraisal including the amount; the useful life of the building; and a schedule of depreciation.

**NON APPLICABLE**

\*\* If the proposal involves construction/renovations, attach a description of the proposed building work, including the gross square feet; existing and proposed floor plans; commencement date for the construction/ renovation; completion date of the construction/renovation; and commencement of operations date.

**REFER TO ATTACHMENT Q FOR DESCRIPTION OF BUILDING WORK INCLUDING FLOOR PLANS.**

\*\*\* If the proposal involves a capital or operating equipment lease and/or purchase, attach a vendor quote or invoice; schedule of depreciation; useful life of the equipment; and anticipated residual value at the end of the lease or loan term.

**REFER TO ATTACHMENT R FOR EQUIPMENT VENDOR QUOTE.**

- f. List all funding or financing sources for the proposal and the dollar amount of each. Provide applicable details such as interest rate; term; monthly payment; pledges and funds received to date; letter of interest or approval from a lending institution.

**Response:**

The proposal (\$795,000.00) for the purchase and installation of the CT is funded entirely by donations and fundraising events as follows:

Hospital Gala, Wine Tasting and Golf Tournament	\$262,153
Bristol Hospital Development Foundation donation	\$532,847
<b>TOTAL</b>	<b>\$795,000</b>

- g. Demonstrate how this proposal will affect the financial strength of the state's health care system.

**Response:**

Bristol Hospital has been experiencing delays in scanning Emergency Center patients as well as outpatients and inpatients. The average number of biopsies per month are between 16 -20. This number will continue to rise within the next five years due to the aging population within Bristol Hospital's service area. This will negatively affect the availability of the CT scanner for scheduled outpatients, walk-ins, inpatients and most importantly the Emergency Center and stroke patients. The treatment and progress of patients are negatively compromised when there are delays in scanning which result in diagnosis and treatment delays. With the addition of the second CT scanner, Bristol Hospital expects to reduce these delays.

The inpatient and emergency delays in scanning can result in unnecessary length of stays. The lengths of stays are increasing the costs of health care delivery which further affect the financial strength of the state's health care system.

By adding a second CT scanner and giving Bristol Hospital additional capacity, we will be improving the financial strength of the health care system. Patients in our service area will experience timely unencumbered access to CT services resulting in quicker diagnosis and treatment.

**6. Patient Population Mix: Current and Projected**

- a. Provide the current and projected patient population mix (based on the number of patients, not based on revenue) with the CON proposal for the proposed program.

**Table 4: Patient Population Mix**

	<b>Current** FY 2012</b>	<b>FY2013-NOT FULL YEAR</b>	<b>Year 1 FY2014</b>	<b>Year 2 FY2015</b>	<b>Year 3 FY2016</b>
Medicare*	44.17	46.17	47.17	47.17	47.17
Medicaid*	18.28	18.28	18.28	18.28	18.28
CHAMPUS & TriCare					
<b>Total Government</b>	<b>62.45</b>	<b>64.45</b>	<b>65.45</b>	<b>65.45</b>	<b>65.45</b>
Commercial Insurers*	34.13	32.13	31.13	31.13	31.13
Uninsured	1.85	1.85	1.85	1.85	1.85
Workers Compensation	1.57	1.57	1.57	1.57	1.57
<b>Total Non-Government</b>	<b>37.55</b>	<b>35.55</b>	<b>34.55</b>	<b>34.55</b>	<b>34.55</b>
<b>Total Payer Mix</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\* Includes managed care activity.

\*\* New programs may leave the "current" column blank.

\*\*\* Fill in years. Ensure the period covered by this table corresponds to the period covered in the projections provided.

- b. Provide the basis for/assumptions used to project the patient population mix.

**Response:**

The Hospital's Medicare patient population is projected to increase due to the aging population as noted earlier while the Hospital's commercially insured patients will decrease.

**7. Financial Attachments I & II**

- a. Provide a summary of revenue, expense, and volume statistics, without the CON project, incremental to the CON project, and with the CON project. **Complete Financial Attachment I.** (Note that the actual results for the fiscal year reported in the first column must agree with the Applicant's audited financial statements.) The projections must include the first three full fiscal years of the project.

**Response:**

Refer to Financial Attachment I

- b. Provide a three year projection of incremental revenue, expense, and volume statistics attributable to the proposal by payer. **Complete Financial Attachment II.** The projections must include the first three full fiscal years of the project.

**Response:**

Refer to Financial Attachment II

- c. Provide the assumptions utilized in developing **both Financial Attachments I and II** (e.g., full-time equivalents, volume statistics, other expenses, revenue and expense % increases, project commencement of operation date, etc.).

**Response:**

Financial Attachment I assumes 1 new FTE technologist for the day shift to run the proposed CT scanner. Project commencement date of operations will be in September 2013. Volumes will increase as noted in the footnotes.

- d. Provide documentation or the basis to support the proposed rates for each of the FYs as reported in Financial Attachment II. Provide a copy of the rate schedule for the proposed service(s).

**Response:**

Not Applicable

- e. Provide the minimum number of units required to show an incremental gain from operations for each fiscal year.

**Response:**

Not Applicable

- f. Explain any projected incremental losses from operations contained in the financial projections that result from the implementation and operation of the CON proposal.

**Response:**

**There are no projected incremental losses from operations contained in the financial projections.**

- g. Describe how this proposal is cost effective.

**Response:**

This proposal is cost effective because Bristol Hospital needs to provide unencumbered CT services for the community. All CT staff (both current CT staff and the one new FTE technologist) will be shared between our existing CT scanner and the proposed scanner as appropriate, on an as needed basis. This reduces the costs associated with per diem staff for coverage.

As mentioned previously, the delays in scanning can extend length of stay for inpatients as well as delay care and treatment for outpatients and emergency room patients. With the additional CT scanner, the Hospital will not have to divert patients to have their care outside of their service area. This will ensure that diagnosis, treatment and discharges are timely.

**ATTACHMENT A**  
**LETTERS IN SUPPORT OF THE PROPOSAL**



June 12, 2012

Lisa Davis, MBA, BSN, RN  
Deputy Commissioner  
State of Connecticut  
Department of Public Health  
Office of Health Care Access Division  
410 Capital Avenue  
MS #13HCA  
P.O. Box 340308  
Hartford, CT 06134

PO Box 977  
Bristol, CT  
860-585-3000  
bristolhospital.org

RE: Certificate of Need Application to Acquire and Operate a 40 Slice CT Scanner at Bristol Hospital in Bristol, CT.

Dear Deputy Commissioner Davis,

I am writing in support of Bristol Hospital's CON application to add another CT scanner to our facility. Bristol Hospital is a critical care hospital with moderate to high volume of high acuity patients. Although not a designated trauma center, our utilization of CT services is increasingly the standard of care for our emergency population.

The need for reliable 24/7 access to the CT scanning service is mandatory. I support the CON request based on the need for supplemental scanning services to ensure that when our current CT scanner is occupied by prolonged biopsies, which occur frequently, that we can continue to provide unencumbered access to CT services for our emergency patients. As a certified stroke center, having back-up CT scan availability will ensure our commitment to door-to-CT scan times within 25 minutes.

Respectfully submitted,

Dr. Craig Mittleman  
Medical Director of Emergency Medicine  
Emergency Department  
Bristol Hospital

**BRISTOL**  
HOSPITAL

July 13, 2012

Lisa Davis, MBA,BSN, RN  
Deputy Commissioner  
State of Connecticut  
Department of Public Health  
Office of Health Care Access Division  
410 Capital Avenue  
MS#13HCA  
P.O. Box 340308  
Hartford, CT 06134

PO Box 977  
Bristol, CT 06011-0977  
860.585.3000  
bristolhospital.org

RE: Certificate of Need Application to Acquire and Operate a 40 Slice CT Scanner at Bristol Hospital in Bristol CT.

Dear Deputy Commissioner Davis,

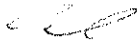
I am writing in support of Bristol Hospital's CON application to add a second CT scanner to our facility. Bristol Hospital is a full service critical care hospital with our Emergency Department seeing approximately 40,000 patients a year. The importance of acquiring a second CT scanner is pertinent to better serve and provide exceptional care for our community.

The benefits of purchasing a second CT scanner significantly outweigh the costs when it comes to expediting the care of our patients and satisfaction of our community. Bristol Hospital's CT department provides a full range of routine and urgent cases along with biopsy procedures.

Having a second scanner is beneficial when one machine is undergoing routine maintenance or repair or in use for biopsy procedures, which occur frequently and can occupy a machine for at least an hour or more. These instances can easily back up the Emergency Department's patient flow delaying patient treatment, which is unacceptable. It is pertinent that we provide reliable and unencumbered CT services when needed.

If you have any further inquiries regarding our request, I would be happy to comply.

Respectfully Submitted,

  
Noah Keller, D.O.  
Emergency Department  
Bristol Hospital

**BRISTOL**  
HOSPITAL

June 26, 2012

Lisa Davis, MBA,BSN, RN  
Deputy Commissioner  
State of Connecticut  
Department of Public Health  
Office of Health Care Access Division  
410 Capital Avenue  
MS#13HCA  
P.O. Box 340308  
Hartford, CT 06134

PO Box 977  
Bristol, CT 06010-0977  
860.585.3000  
bristolhospital.org

RE: Certificate of Need Application to Acquire and Operate a 40 Slice CT  
Scanner at Bristol Hospital in Bristol CT.

Dear Deputy Commissioner Davis,

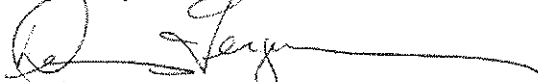
I am writing in support of Bristol Hospital's CON application to add a second CT scanner to our facility. There is a need for a second scanner at Bristol Hospital to provide services for the Emergency Department patients as well as outpatients and interventional procedures.

There are delays in providing CT services when interventional procedures are being done which delays patient care and treatment. The hospital will go on diversion when the CT scanner is occupied, not functioning, or serviced for preventative maintenance.

CT services are 24/7 and are mandatory for a critical care community hospital that also is a stroke center. Unencumbered access to CT services is vital to serve our patient population.

I would be happy to speak further regarding our request.

Respectfully submitted,



Dennis Ferguson, MD, FACR  
Medical Director of Diagnostic Imaging  
Diagnostic Imaging  
Bristol Hospital



**BRISTOL**  
HOSPITAL

July 18, 2012

Lisa Davis, MBA,BSN, RN  
Deputy Commissioner  
State of Connecticut  
Department of Public Health  
Office of Health Care Access Division  
410 Capital Avenue  
MS#13HCA  
P.O. Box 340308  
Hartford, CT 06134

PO Box 977  
Bristol CT 06011-0977  
860.585.3000  
bristolhospital.org

RE: Certificate of Need Application to Acquire and Operate a 40 Slice CT Scanner at Bristol Hospital in Bristol CT.

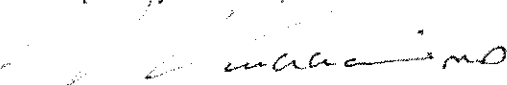
Dear Deputy Commissioner Davis,

I am writing to express my support of Bristol Hospital's CON application in the decision to request a second CT scanner for Bristol Hospital. Bristol Hospital sees thousands of emergency cases, in and outpatient procedures, and biopsies monthly. It is imperative that we, as healthcare providers, have the required resources and technology available and functional when needed at a moment's notice.

The CT scanner is a vital tool in identifying internal bleeding and injuries. If the one scanner we have is in use for another patient exam, a lengthy biopsy procedure, or undergoing maintenance/repair, valuable seconds are wasted on patients who are in need of urgent care.

In order to maintain our commitment of providing the best patient experience in the region, we must have the technological support. I would be happy to discuss further the importance of an additional CT scanner to our facility.

Respectfully Submitted,

  
Jitesh Vachhani, M.D.  
Director of Hospitalist Services  
Bristol Hospital

**BRISTOL**  
HOSPITAL

**Bariatric Program**

December 7, 2012

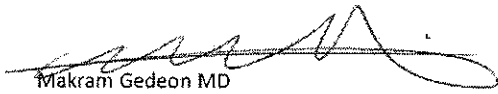
PO Box 977  
Bristol, CT 06011-0977  
860.585.3000  
bristolhospital.org

To: Office of Health Care Access,

This letter is in regards to the purchase of an additional CT Scanner for use at Bristol Hospital. As the bariatric program continues to grow, the delays associated with the current scanner greatly impact our patients flow and care. This is compounded by the weight capacity barrier that the current machine brings with it also. Obesity has become a nationwide epidemic, and this trend is now a visible issue that Bristol Hospital struggles with on a daily basis. We are seeing patients regularly with BMI's well over 35 and often times as high as 80. This poses patient care concerns in being able to effectively and efficiently perform adequate patient work ups and screenings to diagnose issues and treat them.

The purchase of an additional CT Scanner will facilitate the flow of patients and provided the staff the means to follow best practice protocols and procedures to assess, diagnose, and treat our obese patient population within this community. I support the decision to purchase an additional CT Scanner, if I can be of any further assistance please contact my office at 860-585-1560. Thank you for your time and consideration.

Sincerely,



Makram Gedeon MD

**ATTACHMENT B**  
**CT VOLUME INCREASES DUE TO PROGRAMMATIC**  
**EXPANSIONS**

**CT VOLUME INCREASE DUE TO PROGRAMMATIC EXPANSIONS**

**INCLUDING STROKE PATIENTS**

CT EXAMS	Stroke Patient Volumes	<u>FY 2012</u>	<u>FY 2013</u>	<u>FY 2014</u>	<u>FY 2015</u>	<u>FY 2016</u>
			Additional Growth	Additional Growth	Additional Growth	Additional Growth
	Bariatric Program	121	6	6	7	7
	Breast Program	96	24	24	24	24
	ED visits needing CT's	80	50	50	50	50
	IR Volumes	4028	281	43	43	0
		146	22	25	29	33
<b>TOTAL</b>		<b>4,471</b>	<b>383</b>	<b>148</b>	<b>153</b>	<b>114</b>

**CT VOLUME INCREASE DUE TO PROGRAMMATIC GROWTH  
INPATIENT, OUTPATIENT, EMERGENCY CENTER**

		<u>FY 2013</u>	<u>FY 2014</u>	<u>FY2015</u>	<u>FY 2016</u>
<b><u>Stroke patient volumes</u></b>					
CT HEAD	inpatient volume	6	6	7	7
	outpatient volume				
	er volume				
<b><u>Bariatric program volumes</u></b>					
CT ABD & PELVIS	inpatient volume	24	24	24	24
	outpatient volume				
	er volume				
<b><u>Breast program volumes</u></b>					
CT ABD	inpatient volume				
	outpatient volume	50	50	50	50
	er volume				
<b><u>ED visits requiring CT</u></b>					
CT CERVICAL		51	10	10	0
CT ABD & PELVIS		80	10	10	0
CT CHEST		70	10	10	0
CT HEAD		80	13	13	0
<b><u>Interventional volumes</u></b>					
CT OTHER	inpatient volume				
	outpatient volume	22	25	29	33
	er volume				
		<b><u>383</u></b>	<b><u>148</u></b>	<b><u>153</u></b>	<b><u>114</u></b>

**ATTACHMENT C**  
**SIEMENS HEALTHCARE ECONOMETRIC ANALYSIS**

# Bristol Hospital

## Analysis of the Service Area Around Bristol, CT

SIEMENS

### Econometric Analysis

25 June 2012

The data in this report is provided as a convenience to assist the customer in understanding the demographic characteristics of the service area where they operate. It is important to note that the population estimates represent the entire service area, and no assumptions about market share are taken into account. In other words, the population totals represent the whole market, not the portion of the market that is likely to demand service from the customer—unless the customer has 100% market share.

All of the estimates are based on public domain data, and the data sources fully documented at the end of this report for future reference. This report contains population estimates for the following criteria:

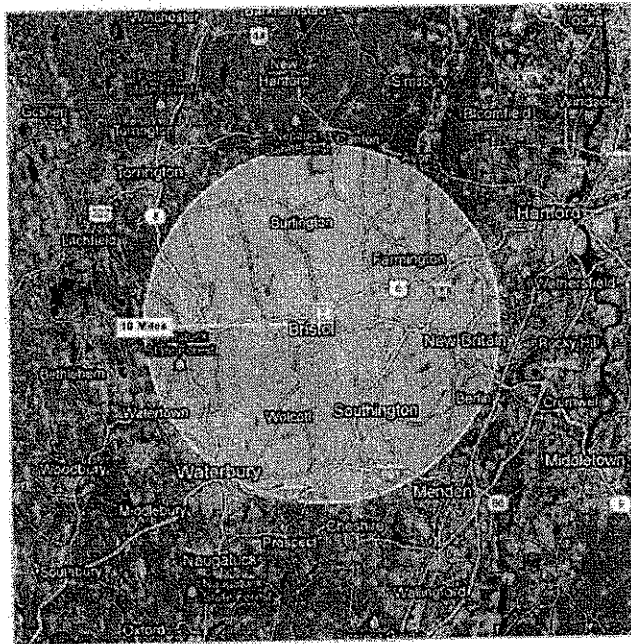
- **Demographic Variables** - Female Population 40+, Pediatric Population, Population 50+, and Population by Age Group
- **Insurance** - Insurance Payer
- **Risk Factors** - Childhood Obesity (Age 10-17), Cigarette Smoking, Diabetes, High Alcohol Consumption, High Cholesterol, Hypertension, Injuries (Age 0-5), Obesity, and Physical Inactivity
- **Cancer Sites** - All Sites, Breast, Colon-Rectum, Lung & Bronchus, and Prostate
- **Circulatory Diseases** - Angina Pectoris, Cardiovascular Disease, Coronary Heart Disease, Heart Failure, Myocardial Infarction, and Stroke
- **Lung Diseases** - Asthma Attack, COPD, Current Asthma, and Lifetime Asthma Diagnosis
- **Musculoskeletal Disorders** - Arthritis, Chronic Joint Pain, Lower Back Pain (Lumbar), Lower Back Pain Spreading Below Knee, and Neck Pain (Cervical Back Pain)
- **Neurological Diseases** - Alzheimer's Disease, Multiple Sclerosis, and Parkinson's Disease
- **Imaging Modality** - Computed Tomography
- **Imaging Modalities** - Computed Tomography

The customer should not assume any expressed or implied warranties regarding this report. The forecasts are based upon best available data but should not be taken as a prediction of the future. We encourage the customer to seek independent verification of current or future demand for healthcare services. This report is the property of Siemens Healthcare and is not to be disseminated, distributed or conveyed to third persons without the expressed and advanced written permission of Siemens Healthcare.

## Service Area

Below are the names and definitions of the geographic areas that are used in this report to estimate potential service areas. The perimeters listed in the grey box to the right of the map are centered at the following location:

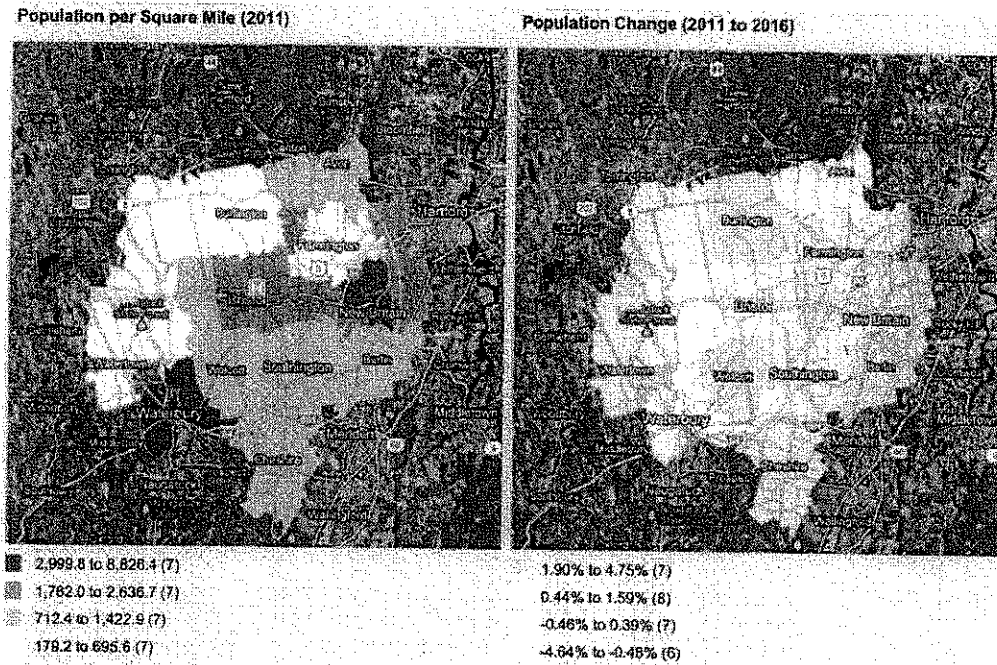
 Bristol Hospital - 41 Brewster Rd, Bristol, CT 06010



10 Miles  
28 Connecticut zip codes



## Population by Age Group



### Estimated Population Totals

Age Cohort	10 Miles		
	2011 Est.	2016 Est.	Change
Population 0 to 9	45,714	45,674	0.4 %
Population 10 to 19	52,077	50,648	-2.7 %
Population 20 to 29	47,627	47,043	-1.2 %
Population 30 to 39	46,215	47,220	2.2 %
Population 40 to 49	56,527	51,317	-9.2 %
Population 50 to 59	55,019	54,542	-0.9 %
Population 60 to 69	37,403	42,868	14.5 %
Population 70 to 79	20,886	23,882	14.3 %
Population 80+	18,111	18,474	2.0 %
<b>Total</b>	<b>379,579</b>	<b>381,868</b>	<b>0.6 %</b>

4  
L

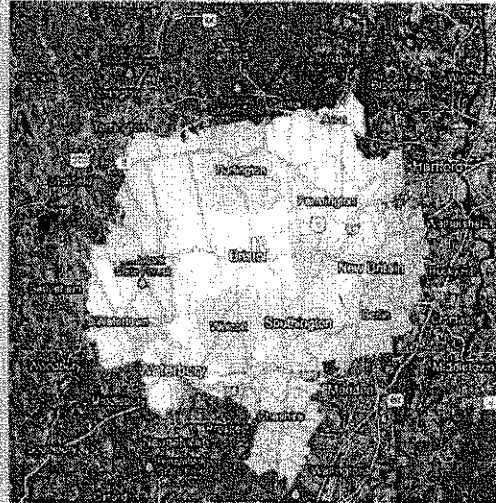
## Population 50+

50+ Population per Square Mile (2011)



1,017.0 to 1,837.9 (7)  
 667.5 to 1,006.1 (7)  
 289.1 to 526.8 (7)  
 75.7 to 250.6 (7)

50+ Population Change (2011 to 2016)



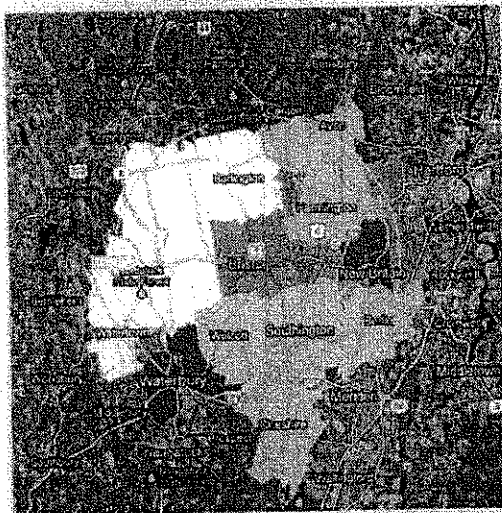
8.08% to 10.08% (7)  
 6.18% to 7.87% (7)  
 5.32% to 6.13% (7)  
 1.44% to 5.17% (7)

### Estimated Population Totals

Age Cohort	10 Miles		
	2011 Est.	2016 Est.	Change
Population 50 to 59	55,019	54,542	-0.9 %
Population 60 to 69	37,403	42,868	14.6 %
Population 70 to 79	20,886	23,882	14.3 %
Population 80+	18,111	18,474	2.0 %
Total	131,419	139,766	6.4 %

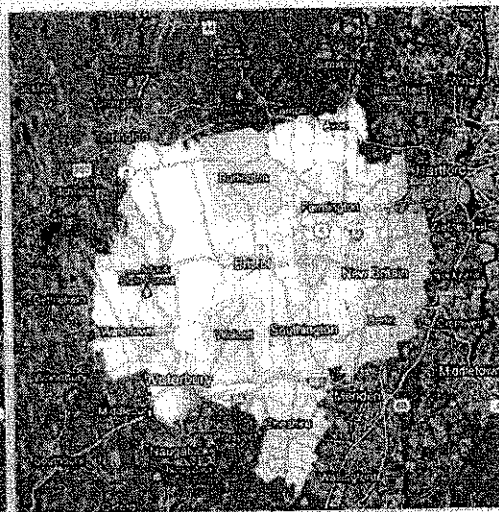
## Female Population 40+

Female 40+ Population per Square Mile (2011)



- 774.1 to 1,663.9 (7)
- 521.5 to 770.9 (7)
- 216.1 to 410.7 (7)
- 54.0 to 192.3 (7)

Female 40+ Population Change (2011 to 2016)



- 2.06% to 4.76% (7)
- 1.06% to 2.67% (7)
- 0.23% to 0.92% (8)
- 4.46% to 0.00% (6)

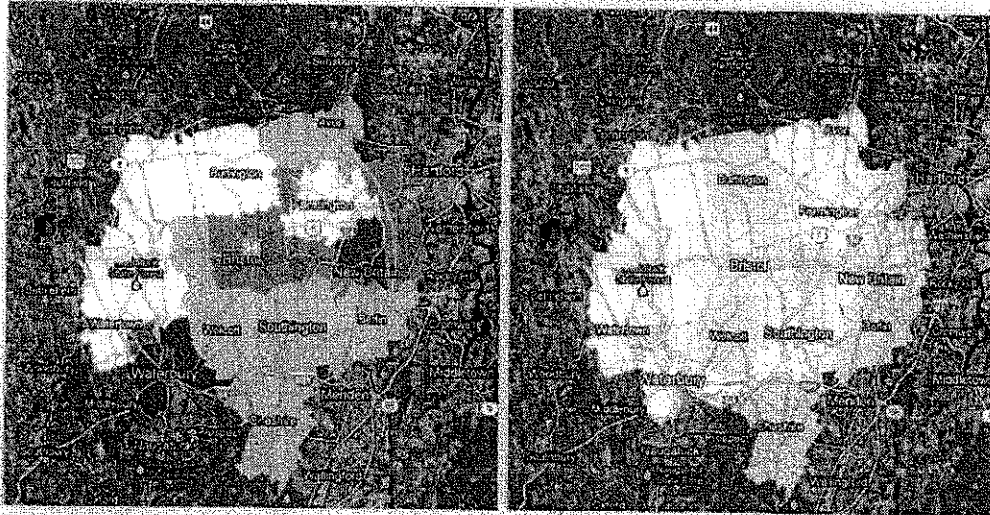
### Estimated Population Totals

Age Cohort	10 Miles		
	2011 Est.	2016 Est.	Change
Females 40 to 49	29,065	26,249	-9.7 %
Females 50 to 59	28,203	27,864	-1.2 %
Females 60 to 69	19,877	22,747	14.4 %
Females 70 to 79	11,929	13,499	13.2 %
Females 80+	11,843	11,828	-0.1 %
Total	100,917	102,187	1.3 %

## Pediatric Population

Pediatric Population per Square Mile (2011)

Pediatric Population Change (2011 to 2016)



681.5 to 2,882.2 (7)  
 379.7 to 603.4 (7)  
 153.8 to 322.1 (7)  
 39.0 to 141.1 (7)

0.28% to 3.65% (7)  
 -0.98% to 0.27% (8)  
 -1.59% to -0.99% (7)  
 -6.90% to -1.87% (6)

### Estimated Population Totals

Age Cohort	10 Miles		
	2011 Est.	2016 Est.	Change
Population 0 to 4	21,703	21,986	-1.3 %
Population 5 to 9	24,012	23,888	-0.5 %
Population 10 to 14	25,853	26,030	0.7 %
Population 15 to 17	15,735	14,771	-6.1 %
Total	87,303	86,675	-0.7 %

## Insurance Payer

Estimated Population Totals

	10 Miles	
	2011 Lives	Pct of Total
Commercial Enrollment	228,303	60.1 %
Medicaid Beneficiaries <sup>1</sup>	60,945	16.1 %
Medicare Eligibles <sup>2</sup>	63,188	16.6 %
Dual Eligible Population	8,769	2.3 %
Estimated Total with Coverage <sup>3</sup>	343,666	90.5 %
Uninsured	35,911	9.5 %
Total Population	379,577	100.0 %

<sup>1</sup> Total Medicaid Medical Beneficiaries including Dual Eligibles. <sup>2</sup> Total Medicare Beneficiaries including Dual Eligibles. and <sup>3</sup> Calculated: Commercial + Medicare + Medicaid - Dual Eligibles

## Risk Factor Estimates

Rates and estimates are for Population 18+ (Unless otherwise noted)

### Affected Population per 100:

⊖ indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference.

Risk Factor Estimates	United States	10 Miles
Asthma	13.80	9.19
Cigarette Smoking	17.30	13.17
Diabetes	8.70	7.36
High Alcohol Consumption	5.00	4.99
Female High Alcohol Consumption <sup>1</sup>	4.50	4.60
High Cholesterol	37.50	37.36
Hypertension	28.60	27.37
Obesity	27.50	22.99
Female Obesity <sup>1</sup>	26.80	20.90
Physical Inactivity	24.00	20.74
Female Physical Inactivity <sup>1</sup>	25.70	23.00

### New Cases per 100:

⊖ indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference.

Risk Factor Estimates	United States	10 Miles
Injuries (Age 0-5) <sup>2</sup>	9.40	9.60
Childhood Obesity (Age 10-17) <sup>3</sup>	16.40	12.50

### Estimated Affected Population

Risk Factor Estimates	10 Miles		
	2011 Est.	2016 Est.	Change
Asthma	26,861	26,958	0.4 %
Cigarette Smoking	38,498	38,313	-0.5 %
Diabetes	21,510	22,607	5.1 %
Female High Alcohol Consumption <sup>1</sup>	6,963	7,015	0.7 %
High Alcohol Consumption	14,571	14,626	0.4 %
High Cholesterol	109,198	111,525	2.1 %
Hypertension	79,987	83,617	4.5 %
Female Obesity <sup>1</sup>	31,838	31,873	0.7 %
Obesity	67,205	67,889	1.0 %
Female Physical Inactivity <sup>1</sup>	34,817	35,076	0.7 %
Physical Inactivity	60,625	62,108	2.4 %

### Estimated New Cases

Risk Factor Estimates	10 Miles		
	2011 Est.	2016 Est.	Change
Injuries (Age 0-5) <sup>2</sup>	2,083	2,111	1.3 %
Childhood Obesity (Age 10-17) <sup>3</sup>	5,198	5,100	-1.9 %

<sup>1</sup> - Females 18+

<sup>2</sup> - Population 0 to 4

<sup>3</sup> - Population 10 to 17

## Cancer Case Estimates

Rates and estimates are for Total Population (Unless otherwise noted)

New Cases per 100,000:

⊖ Indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference

Cancer Case Estimates	United States	10 Miles
All Sites	518.56	604.82
Breast <sup>1</sup>	141.80	172.67
Colon-Rectum	45.39	48.47
Lung & Bronchus	71.56	76.40
Prostate <sup>2</sup>	154.90	192.09

### Estimated New Cases

Cancer Case Estimates	10 Miles		
	2011 Est.	2016 Est.	Change
All Sites	2,295	2,309	0.6 %
Breast <sup>1</sup>	339	340	0.3 %
Colon-Rectum	184	186	1.1 %
Lung & Bronchus	290	292	0.7 %
Prostate <sup>2</sup>	352	355	0.9 %

1 - Female Population

2 - Male Population

## Circulatory Disease Estimates

Rates and estimates are for Population 45+ (Unless otherwise noted)

### Cases per 100:

☞ indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference.

Circulatory Disease Estimates	United States	10 Miles
Coronary Heart Disease	7.25	8.63

### New Cases per 1,000:

☞ indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference.

Circulatory Disease Estimates	United States	10 Miles
Angina Pectoris	5.52	4.53
Cardiovascular Disease	20.57	20.91
Heart Failure <sup>1</sup>	14.01	15.46
Myocardial Infarction <sup>1</sup>	7.11	7.69
Stroke <sup>2</sup>	9.12	9.30

### Estimated Cases

Circulatory Disease Estimates	10 Miles		
	2011 Est.	2016 Est.	Change
Coronary Heart Disease	24,314	25,732	5.6 %

### Estimated New Cases

Circulatory Disease Estimates	10 Miles		
	2011 Est.	2016 Est.	Change
Angina Pectoris	728	783	7.8 %
Cardiovascular Disease	3,359	3,601	7.2 %
Heart Failure <sup>2</sup>	849	924	8.8 %
Myocardial Infarction <sup>1</sup>	1,627	1,743	7.1 %
Stroke <sup>3</sup>	946	1,031	8.0 %

1 - Population 35+

2 - Population 55+

3 - Population 65+



## Lung Disease Estimates

Rates and estimates are for Total Population (Unless otherwise noted)

Affected Population per 100:

Indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference.

Lung Disease Estimates	United States	10 Miles
COPD <sup>1</sup>	5.20	5.39
Current Asthma	7.80	7.78
Asthma Attack	4.20	4.20
Lifetime Asthma Diagnosis	12.00	11.95

Estimated Affected Population

Lung Disease Estimates	10 Miles		
	2011 Est.	2016 Est.	Change
COPD <sup>1</sup>	15,780	16,282	3.3 %
Current Asthma	29,518	29,690	0.6 %
Asthma Attack	15,941	15,958	0.1 %
Lifetime Asthma Diagnosis	45,344	45,499	0.3 %

1 - Population 18+

## Musculoskeletal Disorder Estimates

Rates and estimates are for Population 18+

Cases per 100:

Indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference.

Musculoskeletal Disorder Estimates	United States	10 Miles
Arthritis	21.06	23.34
Chronic Joint Pain	26.41	28.46
Lower Back Pain (Lumbar)	27.80	28.86
Lower Back Pain Spreading Below Knee	9.13	9.67
Neck Pain (Cervical Back Pain)	14.49	15.01

Estimated Cases

Musculoskeletal Disorder Estimates	10 Miles		
	2011 Est.	2016 Est.	Change
Arthritis	68,224	70,854	3.9 %
Chronic Joint Pain	83,190	85,379	2.6 %
Lower Back Pain (Lumbar)	84,340	85,462	1.3 %
Lower Back Pain Spreading Below Knee	28,263	28,756	1.7 %
Neck Pain (Cervical Back Pain)	43,870	44,344	1.1 %

## Neurological Disease Estimates

Rates and estimates are for Population 65+ (Unless otherwise noted)

Cases per 100,000:

⊗ indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference.

Neurological Disease Estimates	United States	10 Miles
Alzheimer's Disease	12,500.00	14,633.55
Multiple Sclerosis <sup>1</sup>	87.00	98.27

New Cases per 100,000:

⊗ indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference.

Neurological Disease Estimates	United States	10 Miles
Parkinson's Disease	477.72	493.55

Estimated Cases

Neurological Disease Estimates	10 Miles		
	2011 Est.	2016 Est.	Change
Alzheimer's Disease	8,035	8,514	6.0 %
Multiple Sclerosis <sup>1</sup>	373	371	-0.5 %

Estimated New Cases

Neurological Disease Estimates	10 Miles		
	2011 Est.	2016 Est.	Change
Parkinson's Disease	271	291	7.4 %

1 - Total Population

## Outpatient Imaging Procedure Estimates

Rates and estimates are for Total Population

Outpatient Procedures per 1,000:

⊗ indicates if the variable is above (+), below (-), or equal to (=) the national average in terms of percent difference.

Outpatient Imaging Procedure Estimates	United States	10 Miles
Computed Tomography	157.44	163.63

Estimated Outpatient Procedures

Outpatient Imaging Procedure Estimates	10 Miles		
	2010 Est.	2015 Est.	Change
Computed Tomography	58,314	71,872	23.2 %

## Facility Count

### Diagnostic Imaging Center Facility Count

Imaging/Treatment Modality	10 Miles	
	Count	Pct of Total
Computed Tomography	3	30.0 %
Total	10	100.0 %

### Hospital Facility Count

Imaging/Treatment Modality	10 Miles	
	Count	Pct of Total
Computed Tomography	5	83.3 %
Total	6	100.0 %

## Data Sources

- **Alzheimer's Association, The** - The Alzheimer's Association is the first and largest voluntary health organization dedicated to finding prevention methods, treatments and an eventual cure for Alzheimer's. For more than 25 years, the Association has provided reliable information and care consultation; created services for families; increased funding for dementia research; and influenced public policy changes.  
[www.alz.org](http://www.alz.org)
- **American Cancer Society, The** - The American Cancer Society is the nationwide community-based voluntary health organization dedicated to eliminating cancer as a major health problem by preventing cancer, saving lives, and diminishing suffering from cancer, through research, education, advocacy, and service.  
[www.cancer.org](http://www.cancer.org)
- **American Heart Association** - The American Heart Association is a national voluntary health agency whose mission is to reduce disability and death from cardiovascular diseases and stroke.  
[www.heart.org](http://www.heart.org)
- **American Lung Association** - The American Lung Association is the leading organization working to save lives by improving lung health and preventing lung disease through education, advocacy and research.  
[www.lungusa.org](http://www.lungusa.org)
- **Burden of Musculoskeletal Diseases in the United States, The** - The Burden of Musculoskeletal Diseases in the United States is a joint project of the American Academy of Orthopaedic Surgeons, American Academy of Physical Medicine and Rehabilitation, American College of Rheumatology, American Society for Bone and Mineral Research, Arthritis Foundation, National University of Health Sciences, Orthopaedic Research Society, Scoliosis Research Society, and the United States Bone and Joint Decade.  
[www.BoneAndJointBurden.org](http://www.BoneAndJointBurden.org)
- **Centers for Disease Control and Prevention** - The Centers for Disease Control and Prevention (CDC) is one of the 13 major operating components of the Department of Health and Human Services (HHS). Their data is sourced for health status information.  
[www.CDC.gov](http://www.CDC.gov)
- **Data Resource Center for Child and Adolescent Health** - The purpose of The Data Resource Center for Child and Adolescent Health (DRC) is to advance the effective use of public data on the health and health-related services for children, youth and families in the United States. The DRC does this by providing hands-on access to national, state, and regional data findings as well as technical assistance in the collection and use of this data by policymakers, program leaders, advocates and researchers in order to inform and advance key child and youth health goals. Child and Adolescent Health Measurement Initiative, 2003 and 2007 National Surveys of Children's Health, Data Resource Center for Child and Adolescent Health website. Retrieved 05/10/2010.  
[www.os.chdata.org](http://www.os.chdata.org)
- **Environmental Systems Research Inst. (ESRI)** - ESRI is one of worlds foremost companies specializing in geographic information system (GIS) technology. They provide a full spectrum of ready-to-use geospatial data products, based on the US census and other third party sources.  
[www.ESRI.com/Data/ESRI\\_Data/Customgeospatial.html](http://www.ESRI.com/Data/ESRI_Data/Customgeospatial.html)
- **HealthLeaders-InterStudy** - HealthLeaders-InterStudy is the authoritative source for managed care market intelligence. They deliver data and analysis products to help users better understand the managed care environment at a national, state, MSA, and county level.  
[hlisr.com](http://hlisr.com)
- **IMS Health** - IMS Health is a provider of data on healthcare facilities, such as: diagnostic imaging centers, hospitals, and medical group practices. They purchased SDI in 2011, and SDI purchased Verispan in 2010.  
[www.imshealth.com](http://www.imshealth.com)
- **National Heart, Lung, and Blood Institute (NHLBI)** - The NHLBI is part of the U.S. Department of Health & Human Services. The National Heart, Lung, and Blood Institute (NHLBI) provides global leadership for a research, training, and education program to promote the prevention and treatment of heart, lung, and blood diseases and enhance the health of all individuals so that they can live longer and more fulfilling lives.  
[www.nhlbi.nih.gov](http://www.nhlbi.nih.gov)
- **Neuroepidemiology/Karger** - Parkinson's Disease incidence rates were taken from a paper published January 15, 2010 in Neuroepidemiology: Allison Wright Willis, Bradley A. Evanoff, Min Lian, Susan R. Criswell, and Brad A. Racette, "Geographic and Ethnic Variation in Parkinson Disease: A Population-Based Study of US Medicare Beneficiaries", Neuroepidemiology 2010;34:143-151. Neuroepidemiology is a publication of Karger AG.  
[content.karger.com/ProdukteDB/produkte.asp?Aktion=JournalHome&ProduktID=224263](http://content.karger.com/ProdukteDB/produkte.asp?Aktion=JournalHome&ProduktID=224263)
- **Neurology (Publication of the American Academy of Neurology)** - Neurology is the official publication of the American Academy of Neurology (AAN). Multiple Schlerosis prevalence rates were taken from an article published in the January 8, 2002 issue of Neurology: Curtis W. Noonan, Steven J. Kaufman, and Mary C. White, "Prevalence estimates for MS in the United States and evidence of an increasing trend for women", Neurology 2002 58: 136-138. The AAN is a medical specialty society established to advance the art and science of neurology, and thereby promote the best possible care for patients with neurological disorders.  
[www.Neurology.org](http://www.Neurology.org)

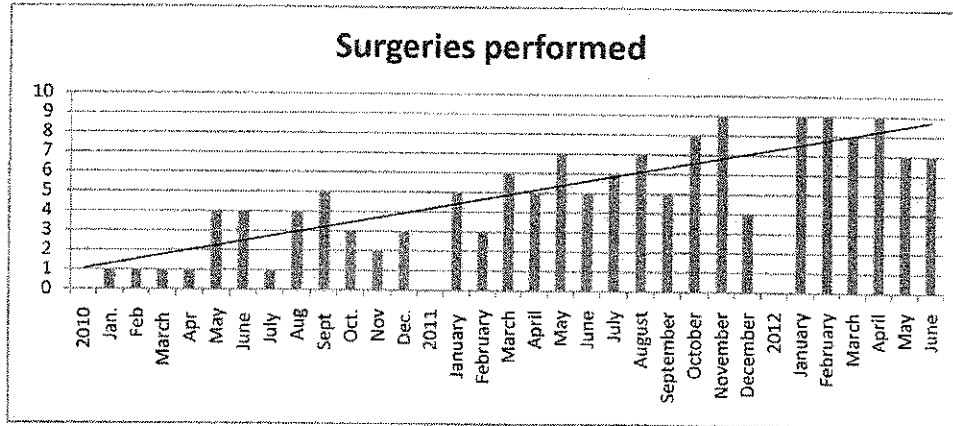
- **Radiology Data Corporation (RDC)** - RDC gathers and updates information on 5,100+ acute care hospitals nationwide in order to track current CT and/or MRI installations.  
[www.RadiologyData.com](http://www.RadiologyData.com)
- **Truven Health Analytics** - Formerly known as Thomson Reuters Healthcare, Truven Health Analytics is the leading provider of decision support solutions that help organizations across the healthcare industry improve clinical and business performance. It is built on the strength of leading healthcare brands including Medstat, MercuryMD, Micromedex, PDR, and Solucient.  
[www.TruvenHealth.com](http://www.TruvenHealth.com)

Report CID: 8e6deca7-7c3c-4e98-a5ca-e5e0db795eb9

**ATTACHMENT D**  
**BARIATRIC AND BREAST SURGERIES**

## BARIATRIC PROGRAM SURGERIES PERFORMED

The increase in surgical procedures is seen below



Year	Average surgeries per month
2010	2.5
2011	6
2012 (through June)	8

## BREAST SURGEON VOLUMES

### FY 2012

Mastectomy 26

Mastectomy partial 5

Mastectomy simple 5

Breast wide excision 44

**ATTACHMENT E**  
**MEDITECH ITS ORDERS – SHIFT STATISTICS REPORT**



Week Day	First Shift 14:58 - 17:00	Second Shift 15:00 - 22:58	Second Shift Average	Third Shift 23:00 - 06:59	Third Shift Average	Missing TIME	Total	Day Avg
Sunday	363	451	8.51	190	2.83	0	964	18.19
Monday	753	630	12.12	198	3.81	0	1581	30.4
Tuesday	759	663	12.75	193	3.71	0	1615	31.06
Wednesday	799	640	12.31	186	3.58	0	1625	31.25
Thursday	780	656	12.62	188	3.23	0	1604	30.85
Friday	811	703	13.52	168	3.23	0	1682	32.35
Saturday	506	429	8.09	197	3.72	0	1132	21.36
Missing TIME	0	0	0	0	0	101	101	101
	4771	4172		1260		101	10204	

**ATTACHMENT F**  
**EMERGENCY CENTER PATIENT WAIT TIMES**

### Tracking ED-Patient Wait Times ( CT)

Audit FY 2012	Patient	Shifts	Order time	Exam start time	Exam Finalize Time	Wait time from Order to Exam Start	Wait time from Order to Finalize	
	KAM	3	0:34	1:12	7:55	0:38	7:21	
	FM		1:57	2:22	7:50	0:25	5:53	
	PR		1:57	2:22	7:50	0:25	5:53	
						0:29	6:22	
	SDR	1	7:49	8:05	8:22	0:16	0:33	
	FM		9:25	10:20	10:51	0:55	1:26	
	BA		12:09	12:52	13:08	0:43	0:59	
	LA		12:21	14:08	14:30	1:47	2:09	
						0:55	1:16	
	PJ	2	15:50	17:00	17:07	1:10	1:17	
	DA		16:33	17:10	17:15	0:37	0:42	
	GK		18:11	18:20	18:43	0:09	0:32	
	GN		18:52	19:33	8:09	0:41	13:17	
	LB		21:48	22:10	8:07	0:22	10:19	
						0:35	5:13	
	Ave overall wait time.						0:40	

**ATTACHMENT G**  
**MONTHLY VOLUMES CT SPECIAL PROCEDURES**

**Monthly CT Special Procedures by FY**

	<b><u>FY 2011</u></b>	<b><u>FY 2012</u></b>
Oct	13	3
Nov	12	12
Dec	13	9
Jan	11	17
Feb	7	13
March	9	13
April	17	13
May	10	10
June	5	13
July	10	15
August	11	16
Sept	9	12
	<b>127</b>	<b>146</b>

**ATTACHMENT H**  
**CT EXAM DELAYS DUE TO DURATION OF CT PROCEDURE**

CT Exam Delays due to duration of CT Procedure

(Siemens)

\*CT procedure are generally booked for 1 hr slots at 11am

Sample taken for 5 procedures per month/

Average Volume 12-15 CT procedures per month

Date	Pt	location	exam type	Exam		Exam Delay (hr:min)	Comments
				Exam Ordered Time	Completion Time		
11/9/2011	OP		Lumbar	12:00	12:50	0:50	
11/9/2012	IN		CTA chest	8:30	13:20	4:50	
11/16/2012	ED		head	13:02	13:20	0:18	
11/29/2012	IP		c-spine	12:08	12:55	0:47	
12/1/2011	ED		head	11:47	13:48	2:01	
12/1/2012	ED		head	11:37	14:10	2:33	
12/8/2011	ED		A/P	11:19	12:25	1:06	no drinks
12/8/2012	OP		Chest	12:30	12:50	0:20	
12/15/2012	ER		head/cspine	10:29	11:34	1:05	
12/21/2012	ER		head/cspine	12:08	12:55	0:47	
1/5/2012	ED		A/P	11:29	12:20	0:51	
1/5/2012	ED		head	12:14	12:45	0:31	
1/10/2012	ED		head	9:17	10:09	0:52	
1/15/2012	ED		head	12:14	13:25	1:11	
1/16/2012	ED		CHEST	12:55	13:38	0:43	
1/16/2012	OP		A/P,head	13:30	14:39	1:09	
1/31/2012	ED		head	10:11	12:31	2:20	
2/2/2012	ED		A/P	12:15	13:51	1:36	no drinks
2/13/2012	ED		A/P	11:45	13:15	1:30	
2/14/2012	ED		A/P	10:22	12:57	2:35	no drinks
2/14/2012	ED		head	10:25	12:55	2:30	
2/17/2012	ED		A/P	12:32	12:45	0:13	
3/11/2012	ED		head	10:22	11:56	1:34	
3/14/2012	ED		chest	12:14	13:28	1:14	
3/14/2012	ED		chest	13:18	13:52	0:34	
3/20/2012	ED		head	12:17	13:36	1:19	
3/30/2012	IN		head	11:43	12:30	0:47	
3/30/2012	ED		head	12:31	13:00	0:29	
4/6/2012	ed		head	11:12	12:38	1:26	
4/12/2012	ED		A/P	11:30	13:22	1:52	no drinks
4/12/2012	ED		A/P	10:28	13:52	3:24	no drinks
4/26/2012	er		CTA chest	13:54	16:13	2:19	
4/27/2012	ER		HEAD,CSPINE	11:44	13:00	1:16	
4/27/2012	ER		HEAD	11:50	13:12	1:22	
5/3/2012	ER		lumbar	11:42	12:30	0:48	
5/3/2012	ER		head	11:34	12:40	1:06	
5/10/2012	ER		A/P	11:37	12:52	1:15	
5/18/2012	OP		C/A/P	10:30	12:40	2:10	
5/23/2012	ED		head	12:30	13:06	0:36	
6/20/2012	ED		HEAD	12:59	13:14	0:15	
6/21/2012	ED		A/P	11:25	12:44	1:19	
6/27/2012	ED		head	11:59	14:09	2:00	
6/26/2012	OP		chest	12:30	13:00	0:30	

6/26/2012	ED	chest	13:04	13:38	0:34	
6/26/2012	ED	HEAD	13:15	13:50	0:35	
7/3/2012	ED	A/P	10:17	12:37	2:20	no drinks
7/12/2012	ED	HEAD	10:54	12:06	1:12	
7/12/2012	ED	HEAD	11:41	12:34	0:53	
7/16/2012	ED	head	12:13	13:01	0:48	
7/19/2012	ED	A/P	12:54	13:47	0:53	
8/1/2012	ED	head	12:06	12:23	0:17	
8/2/2012	OP	A/P	12:30	13:27	0:57	
8/14/2012	ER	head	11:45	13:36	1:51	
8/30/2012	ER	head	11:14	12:35	1:21	
9/6/2012	er	A/P	12:19	17:37	5:18	
9/14/2012	er	head	11:02	12:30	1:28	

<b>Average Wait Minutes</b>	<b>1:22</b>
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**ATTACHMENT I**  
**CT EQUIPMENT DOWN TIME**

	<u>FY 2010</u> <u>Philips CT</u>	<u>FY 2011</u> <u>Philips</u> <u>CT</u>	<u>FY 2012</u> <u>Siemens CT</u>
<b>Preventative Maintenance</b>	4.5 hrs	14.5 hrs.	6.5 hrs.
<b>Unscheduled down times</b>	6 hrs	164.5 hrs	247.31
<b>Total Downtime</b>	10.5 hrs	179	254
<b>Costs of alternative options made-</b> 1. Bristol Radiology Center 2. PET/CT mobile trailer 3. CT mobile trailer Total hours were never tracked	not tracked	\$31,355.98	\$49,653.67
<b>Hours Emergency Center on CT diversion</b>	21 hours 36 minutes	159 hours 25 minutes	144 hours 18 minutes
<b>Number of patients lost</b> Aggregate estimated average of 1.5 pts/hr includes, pts sent to BRC, scheduled pts lost to other facilities, pts diverted to other hospital	32	237	216
<b>Cost of patients lost due to down times -</b> Average reimbursement of CT exams \$730.00/case	\$23,360.00	\$173,010.00	\$157,680.00

Total hours were never tracked

Aggregate estimated average of 1.5 pts/hr includes, pts sent to BRC, scheduled pts lost to other facilities, pts diverted to other hospitals.

Average reimbursement of CT exams \$730.00/case

Siemens Downtime FY12							
Report number ending -	Date	Downtime Hours Charged by Siemens (hrs)	New Minutes	Hours before siemens arrived	Down from	Down To	Total downtime hours not on Siemens invoice but account was down
FY12							
1	ED DT 10/7/2011	5.25	315	2			
2	ED DT 10/16/2011	2.50	150	2			
3	ED DT 10/19/2011	5.50	330	2			
4	7822 10/28/2011	1.00	60	2			
5	7821 10/28/2011	2.50	150	2			
6	1715 10/28/2011	2.50	150	2			
7	7823 11/11/2011	1.00	60	2			
8	12/22/2011		374				
9	7831 11/29/2011	1.50	90	2			24
10	7834 11/29/2011	6.50	390	4			24
	12/31/11-2pm to 1/3/12-10:25am			2	2pm	10:25am	68
12	9041 1/6/2012	2.50	150	2			
13	877 1/10/2012	0.50	30	2			
14	1768 1/11/2012	2.00	120	2			
15	9385 1/23/2012	2.00	120	2			
16	291 1/20/2012	0.50	30	2			
17	5368 2/1/2012	1.00	60	2			
18	5359 2/1/2012	1.00	60	2			
19	3548 2/14/2012	1.50	90	3			
20	3548 2/14/2012	1.50	90	2			
21	7838 2/18/2012	6.00	360	4			
22	7839 2/18/2012	5.50	330	2			
23	4730 4/9/2012	1.00	60	2			
24	7449 4/12/2012	2.00	120	3			
25	5858 4/13/2012	1.00	60	2			
26	6644 4/16/2012	2.50	150	3			
27	7507 4/17/2012	3.00	180	3			
28	6/12/2012						
29	7394 6/26/2012	2.00	120	3			
30	7395 6/16/2012	0.50	30				
31	8493 6/26/2012	0.00					
		74.89	4480	63 hrs			116
		253.81	4480	3780 mins			5960
FY 13							
1	5924 10/8/2012	1.00	120	2			5
2	2206 10/15/2012	2.50	150	3	4:30am		
3	2201 10/18/2012	7.00	420	4		17:00	37
4	152 10/28/2012	1.00	60	2			
5	154 10/28/2012	6.00	360 PM	2			
6	2982 10/26/2012	2.00	120	3			5
7	9195 11/3/2012	1.00	60	2			
8	9196 11/3/2012	1.00	60				
9	3124 11/5/2012	1.00	60	2			
		1/4/13 to 1/6/13			4pm	6pm	50
<b>Total</b>		<b>23.50</b>	<b>1410</b>	<b>20</b>			<b>97</b>
		<b>140.50</b>	<b>1410</b>	<b>1200</b>			<b>3820</b>

### Equipment Down-Time

Date	Equipment	Description	Start Time	End Time	Difference	Service Call number	Duration of Svc Time Hrs	Hours before Phillips arrived	Comments
8/10/2010	Phillips CT	System not letting customer recon.	16:00	20:30		26875168	4.50	3.00	
8/12/2010	Phillips CT	STUCK IN INITIALZING / SEVE	22:00	23:45		26511338	1.45	2.00	
9/21/2010	Phillips CT	Maintenance plan for 4065275710	8:00	12:30		24954139	4.50	1.00 PM	
11/28/2010	Phillips CT	SYSTEM DOWN	6:00	17:00		26837901	9.00	3.00	
12/5/2010	Phillips CT	customer sasys that unit s	22:40	22:45		25969786	5.00	3.00	
12/7/2010	Phillips CT	water leak in system	15:00	20:30		26980204	4.50	2.00	
12/22/2010	Phillips CT	Maintenance plan for 4065275710	8:30	16:30		26397546	6.00	1.00 PM	
12/27/2010	Phillips CT	SHUTTING DOWN IN MIDDLE OF INU	14:00	21:00		26047375	7.00	3.00	
1/5/2011	Phillips CT	GETTING ERROR MESSAGES ON SCAN	9:00	16:30		26047418	7.50	3.00	
1/16/2011	Phillips CT	CUST STATES THAT THE SCANNER	6:00	23:30		26074146	17.50	4.00	
1/31/2011	Phillips CT	no recons	15:00	21:30		26172094	6.50	3.00	
1/31/2011	Phillips CT	3D images aren't going to PACS	8:30	14:00		26150438	5.50	3.00	
3/16/2011	Phillips CT	the heads are unreadable	9:00	13:00		26341791	4.00	3.00	
3/16/2011	Phillips CT	just did a patient & had frigs	15:00	17:30		26347524	2.50	2.00	
4/19/2011	Phillips CT	Maintenance plan for 4065275710	8:30	13:00		25977149	4.50	1.00 PM	
4/28/2011	Phillips CT	Intercom are making loud squeak	13:00	16:30		26489804	3.50	2.00	
5/2/2011	Phillips CT	no speaker	16:00	20:30		26505909	4.50	3.00	
6/9/2011	Phillips CT	IRS, issue Can't view reco	16:30	20:30		26643765	4.00	3.00	
6/20/2011	Phillips CT	Deale operation has failed	16:00	21:00		26678993	5.00	3.00	
6/30/2011	Phillips CT	Mouse movement intermittent or	9:00	12:30		26718770	3.00	3.00	
7/21/2011	Phillips CT	Autovoice is not working	16:00	18:30		26803200	2.50		
7/22/2011	Phillips CT	Gantry temp high	11:00	13:00		26807097	2.50		
8/23/2011	Phillips CT	PM August 9th add a line to th	8:00	13:00		26802979	5.00	3.00	
8/23/2011	Phillips CT	Maintenance plan for 4065275710	8:00	13:00		26320277	2.00	1.00 PM	
							123.95	56.00	
							178.95		

**ATTACHMENT J**  
**EMERGENCY CENTER DIVERSIONS**

Bristol Hospital  
 ED Diversion due to CT Scanner  
 Downtime

FY 2010 (10/09 - 9/10)

<u>Date</u>	<u>Time Started</u>	<u>Time Ended</u>	<u>Total Time</u>
12/10/2009	1:15	10:00	8:45
12/17/2009	7:22	11:52	4:30
4/30/2010	9:50	11:59	2:09
8/6/2010	8:20	9:17	0:57
8/18/2010	10:12	16:45	6:33
8/30/2010	9:39	11:00	1:21
			<del>21:36</del>

FY 2011 (10/10-9/11)

<u>Date</u>	<u>Time Started</u>	<u>Time Ended</u>	<u>Total Time</u>
11/20/2010	14:54	18:54	4:00
11/27/2010	17:40	24:00:00	6:20
11/28/2010	0:00	15:30	15:30
12/4/2010	22:40	0:00	1:20
12/4/2010	0:00	0:41	0:41
12/15/2010	15:00	19:00	4:00
12/18/2010	22:20	24:00:00	1:40
12/22/2010	7:15	15:00	7:45
12/27/2010	13:03	22:30	9:27
12/28/2010	11:00	16:33	5:33
1/16/2011	5:45	19:03	13:18
1/18/2011	20:07	23:01	2:54
1/20/2011	5:32	22:56	17:24
1/21/2011	0:53	22:00	21:07
1/24/2011	23:00	24:00:00	1:00
1/25/2011	0:00	1:00	1:00
6/30/2011	8:30	9:00	0:30
7/24/2011	17:10	21:10	4:00
7/25/2011	1:05	19:45	18:40
7/29/2011	19:00	0:00	5:00
7/30/2011	0:00	3:00	3:00

8/6/2011	20:30	0:00	3:30
8/7/2011	0:00	11:30	11:30
			159.25

FY 2012 ( 10/11 - 9/12)

<u>Date</u>	<u>Time Started</u>	<u>Time Ended</u>	<u>Total Time</u>
10/7/2011	21:20	0:00	2:40
10/7/2011	0:00	1:45	1:45
10/18/2011	21:30	24:00:00	2:30
10/19/2011	0:00	5:30	5:30
12/21/2011	23:55	24:00:00	0:05
12/22/2011	0:00	9:34	9:34
12/28/2011	23:55	24:00:00	0:05
12/29/2011	0:01	0:00	23:59
12/30/2011	0:01	24:00:00	23:59
12/31/2011	0:01	24:00:00	23:59
1/1/2012	0:01	15:30:00	15:29
1/6/2012			2.50
1/10/2012			0.50
1/11/2012			2.00
1/13/2012			2.00
1/20/2012			0.50
2/1/2012			1.00
2/1/2012			1.00
2/14/2012			1.50
2/14/2012			1.50
2/18/2012			6.00
2/18/2012			5.50
4/9/2012			1.00
4/12/2012			2.00
4/13/2012			1.00
4/16/2012			2.50
4/17/2012			3.00
6/26/2012			2.00
6/26/2012			0.50
6/26/2012			0.00
			144.18

Patients lost  
aggregate  
average of 1.5  
pts/hr

FY 2010	21.36	32
FY 2011	159.25	237
FY 2012	144.18	216
Total Hours	324.79	



**ATTACHMENT K**  
**COSTS INCURRED WHEN CT SCANNER IS DOWN**

**COSTS INCURRED WHEN CT SCANNER IS DOWN**

<u>COSTS</u>	<u>FY 2011</u>	<u>FY 2012</u>
<u>EMS Transport patients out to BRC or St. Francis</u>	\$12,783.39	\$7,258.12
<b>Nursing costs for patient transport to BRC</b> (43 total trips in FY 2011) (26 total trips in FY 2012) 1hr = 1 trip \$50.00/hr x number of trip	\$2,150.00	\$1,300.00
<b>Bristol Radiology Center charges to Bristol Hospital</b> Invoices from A/P paid to BRC	\$16,422.59	\$9,485.55
<u>Alliance Imaging charges to use PET/CT if the scanner is here</u> Invoices from A/P paid to Alliance Imaging 1/1/2012 10 patients and 1/2/2012 25 patients 2/18/2012 6 patients 6/12/12 4 patients		\$7,000.00 \$1,242.00 \$828.00
<b>Transporters</b> 12/29/2011 2 transporters \$15.00/hr x 16 hours 12/30/2011 2 transporters \$15.00/hr x 16 hours 12/31/2011 2 transporters \$15.00/hr x 16 hours 1/1/12 and 1/2/12 2 transporters \$15.00/hr x 32 hours 2/18/12 2 transporters \$15.00/hr x 8 hours 6/12/12 2 transporters \$15.00/hr x 8 hours		\$480.00 \$480.00 \$480.00 \$960.00 \$240.00 \$240.00
<b>Nurses</b> 12/29/11 - 1/2/2012 1 nurse \$50.00/hr x 40 hours		\$2,000.00
<u>Additional costs incurred when CT scanner was swapped out</u> Mobile CT scanner supplied by the vendor for 24 days in Oct 2011.		
<b>Transporters</b> (1 additional transporter on 1st shift and 1 additional transporter on 2nd shift for overtime \$22.50 x 40hrs x 3 wks = \$2700 per transp.		\$5,400
<b>Nurses</b> (additional nursing time for patients on the mobile) 40 hours total in 3 weeks x \$50.00/hr		\$2,000.00
<b>Technologists</b> (1 additional tech on 3rd shift for 3wks)120 hours at over time rate of \$35.50 = \$4260.00		\$4,260.00
<b>Rental of Electric Pusher for Stretcher</b>		\$6,000.00
<b>TOTAL COSTS</b>	<b>\$31,355.98</b>	<b>\$49,653.67</b>

**ATTACHMENT L**  
**TRACKING OUTPATIENT WALK-INS WAIT TIMES**

Tracking Out-Patient Walk-ins (not scheduled) Wait Times

Av. per month	Patient Signed In	Patient Taken for Test	Minutes	Hr/Minutes	Walk-in Status W	Add-on Status A
	9:47	10:25	38	0.6	W	
	11:41	12:20	39	0.7	W	
	14:41	15:25	44	0.7	W	
	15:40	16:35	55	0.9	W	
	12:55	13:40	45	0.8	W	
	13:15	13:50	35	0.6	W	
	13:37	14:19	42	0.7	W	
	10:24	11:40	76	1.3	W	
	9:55	10:30	35	0.6	W	
	13:06	13:45	39	0.7	W	
	11:48	12:30	42	0.7	W	
	12:00	13:40	100	1.7	W	
	12		590	10.7	Walk-in	Add-on
					12	0

Ave Wait/Day

49.167

Patients Counted

12

TOTAL

**ATTACHMENT M**  
**HEALTH CARE FACILITIES AND SERVICES IN BRISTOL**  
**HOSPITAL'S SERVICE AREA**

**LOCATIONS WITHIN BRISTOL HOSPITAL'S SERVICE AREA**

<u>Provider Name</u> <u>Street Address</u> <u>Town, Zip Code</u>	<u>Description of</u> <u>Services</u>	<u>Hours/Days</u> <u>of Operation</u>	<u>Utilization</u>
Bradley Memorial 81 Meriden Avenue Southington, CT 06489	GE 16 slice CT scanner	Monday – Friday 7:30 a.m. – midnight On call otherwise	Unknown
Bristol Radiology Center 25 Collins Road Bristol, Ct 06010	Toshiba Aquilion 4 slice	Monday – Friday 8:00 a.m. – 4:30 p.m.	Calendar year FY 2011 1816 CT scans
Uconn Health Center 263 Farmington Ave Farmington, CT 06030	Siemens Definition 64 slice	24/7 operation	Unknown



**Hospitals located in surrounding towns around Bristol Hospital**

<u>HOSPITAL/OFFICE</u>	<u>EQUIPMENT</u>	<u>HOURS OF OPERATION</u>
Bradley Memorial 81 Meriden Ave Southington, CT 06489	GE 16 Slice CT scanner	Monday - Friday 7:30 a.m. - midnight weekends and off hours on call
Midstate Hospital 435 Lewis Ave Meriden, CT 06451	GE 64 Slice CT scanner	Monday - Friday 8:00 - 7:00 p.m. emergency patients only all other times
St. Mary's Hospital 56 Franklin Street Waterbury, CT 06706	GE 64 Slice CT scanner	Monday - Friday 8:00 a.m.- 8:00 p.m. emergency patients only all other times
Waterbury Hospital 64 Robbins Street Waterbury, CT 06706	Toshiba 64 Slice CT scanner GE single slice CT scanner	Monday - Friday 8:00 a.m. - 6:00 p.m. Saturday and Sunday 8:00 a.m - 1:00 p.m. emergency patients all other times
Charlotte Hungerford Hospital 540 Litchfield Street Torrington, CT 06790	Toshiba 64 Slice CT scanner	Monday - Sunday 24/7
The Hospital of Central Conn. 100 Grand Street New Britain, CT 06050	GE 64 Slice CT scanner GE 16 Slice CT scanner	Monday - Sunday 24/7
Mandell & Blau 40 Hart Street New Britain, CT	GE 16 Slice CT scanner - wide bore	Monday - Friday 8:00 a.m - 5:00 p.m.
Jefferson Radiology 100 Simsbury Road Suite 101 Avon, CT	GE 16 Slice CT scanner	Monday - Friday 7:30 a.m. - 9:00 p.m. Saturday 8:30 a.m. - 5:00 p.m.
Hartford Hospital Helen and Gray Cancer Center 80 Fisher Drive Avon, CT	Toshiba 32 Slice CT scanner	Monday - Friday 7:30 a.m. - 4:00 p.m. Saturday 8:30 a.m. - 5:00 p.m.



**ATTACHMENT N**  
**CURRICULUM VITAE FOR KEY STAFF**

**Kurt A. Barwis, FACHE**  
21 Lakewood Circle - Bristol, Connecticut 06010  
Home Phone: (860) 585-7877 · Work Phone (860) 585-3222  
E-Mail: [kbarwis@bristolhospital.org](mailto:kbarwis@bristolhospital.org)

### Professional Experience

#### **President & Chief Executive Officer 8/2006 to Current**

**Bristol Hospital and Health Care Group, Bristol, CT** – With combined net revenue of \$161.5 million, Bristol Hospital and Health Care Group consists of Bristol Hospital, a 134-bed private, not-for-profit community hospital; Central Connecticut Medical Management, a managed services organization including Greater Bristol Primary Care Group, P.C.; Bristol Psychiatry, P.C.; Ingraham Manor, a 128-bed, short-term rehabilitation and long-term care facility, and the Bristol Hospital Development Foundation. For the fiscal year ending September 30, 2009, Bristol Hospital admitted 7,858 patients, provided care to 39,220 emergency patients and employed approximately 1,200 people in the greater Bristol area. Bristol Hospital, Inc. reported gains from operations of \$49,791 and \$1,214,345 in fiscal years ending 2009 and 2010 respectively. Bristol Hospital and Health Care Group reported gains and losses from operations of (\$383,094) and \$924,026 in the fiscal years ending 2009 and 2010 respectively.

#### **Job Responsibilities:**

Reporting to the Board of Directors, primary responsibilities include providing leadership, strategic guidance and the management direction necessary to fulfill the mission of the health system and its related entities.

#### **Selected Accomplishments:**

- Developed and implemented a formal, transparent and deliberate board/medical staff organizational structure and process for addressing community wide physician manpower needs, succession planning and emergency room on-call coverage issues. Resulted in extensive recruitment of new physicians.
- Successfully recruited a full executive team, SVP Patient Services, Chief Nursing Officer, SVP Chief Medical Officer and others.
- Led a turnaround of the Hospital's financial performance. Reported gain (loss) from operations of (\$9,440,732) and \$6,486,253 in fiscal years ending 2006 and 2007 respectively.
- Developed and implemented a formal leadership development program in conjunction with Tunxis Community College.
- Developed and implemented a plan to increase the capacity of the Hospital's Emergency Care Center, address environmental/aesthetic issues and improve overall turnaround time/patient flow. Bristol Hospital successfully completed the construction of a six bed express care unit on February 15, 2007, on time and on budget. From start to finish the entire project took less than six months. In addition, the Hospital graciously and successfully received \$1.2 million in support for the renovation and expansion project from the State of Connecticut's Distressed Hospital Fund.
- Commenced a formal, inclusive, strategic planning process with the support of a nationally recognized hospital strategic planning organization. Recruited and implemented an internal planning structure, completing subsequent plan updates.

**Senior Vice President & Chief Operating Officer  
10/2003 to 8/2006**

**St. Mary's Hospital of St. Mary's County, Leonardtown, MD** – A 100-bed non-profit acute care hospital, with 904 employees, 7,527 admissions, 38,339 emergency visits and \$78 million in net patient revenues for the fiscal year ending June 30, 2005.

**Job Responsibilities:**

Reporting to the President and Chief Executive Officer, primary responsibilities include the day-to-day leadership of all hospital, hospice and urgent care center operations, administrative and facility support services with the exception of finance, marketing and medical staff office.

**Selected Accomplishments:**

- Led a turnaround of the Hospital's financial performance. Prior to my arrival the Hospital experienced one of its worst financial years reporting operating income for the 2003 fiscal year of \$3,334. In FY 2004, the Hospital ended 1.1 million ahead of its budget with total operating income of \$2.3 million. In FY 2005, the budget was exceeded by 4.2 million with total operating income of \$6.5 million. The Maryland Hospital Association Financial Condition Report dated June 2005 ranked St. Mary's Hospital's 8.2% FYE 2005 operating margin as the highest of all forty-nine Maryland hospitals. For the six months of FY 2006 ending December 2005, St. Mary's Hospital had 12.44% operating margin and was \$3.6 million ahead of its approved budget.
- Revised and re-energized the Hospital's Performance Improvement Program resulting in the Hospital achieving recognition for its clinical excellence by receiving the Medicare Excellence Award in 2004. In addition, the Hospital received the 2004 Press Ganey Compass Award for having the most significant improvement in emergency care patient satisfaction. Further, St. Mary's Hospital is frequently chosen by Delmarva (the Maryland Medicare Quality Improvement Organization) and the Maryland Patient Safety Center to participate in a variety of performance improvement collaboratives.
- Led the development of a comprehensive Information Systems Strategic Plan including detailed return-on-investment analysis which resulted in Board approval of a five-year, \$12.1 million investment in advanced clinical information systems.
- As Chair of the Hospital's Joint Commission Task Force, led the Hospital through its first tracer methodology JCAHO survey. The survey was highly successful with the equivalent of no type one deficiencies being identified by the JCAHO.
- In January of 2005, successfully replaced the Hospital's Emergency Care Center physician group of eighteen years with an all emergency trained physician group that resides in the Hospital's primary service area.
- Successfully transitioned the Hospital's contracted adult Hospitalist program to an employed model resulting in increased medical staff utilization and an annual program cost reduction of approximately \$300,000.
- Served as the lead negotiator in the creation of a new radiation oncology joint venture for the three Southern Maryland Hospitals (Calvert Memorial Hospital, Civista Medical Center and St. Mary's Hospital). The three Hospitals successfully purchased a 60% ownership interest in a radiation oncology center owned by Holy Cross Hospital and Adventist Health Services, and developed a second center in St. Mary's County.
- Consistently improved the Hospital's inpatient primary region market share from 68% for the twelve months ending September 2003, to 70.8% and 72.2%, in 2004 and 2005 respectively. For the six months of FY 2006 ending December 2005, St. Mary's Hospital admissions are running 25.38% above the actual admissions for the same period in FY 2005.

- Planned and conducted an organization-wide employee climate survey in 2005 which showed a 1.7% improvement over the survey conducted in 2002.

**System Vice President – Managed Care and Business Development -  
11/1998 to 10/2003**

**Union Hospital of Cecil County, Elkton, MD** – A 130-bed non-profit acute care hospital, with 864 employees, 8,655 admissions, 624 deliveries, 29,971 emergency room visits and \$71 million in net patient revenues for the fiscal year ending June 30, 2003.

**Job Responsibilities:**

Responsible for significant aspects of Union Hospital's strategic and operational activities, including outreach programs, surgical services, anesthesia, marketing, public relations, customer service, physician recruitment, human resources, facilities, environmental services, dietary, security, rehabilitation services, respiratory care, occupational medicine, cancer program, sleep lab, and outpatient access. Accountable for the Health System's for-profit joint venture with Physiotherapy Associates, Inc. (a subsidiary of Stryker Corp.), that provides access to physical therapy services through 13 freestanding clinics. Direct reports include the Vice President of Human Resources, Vice President of Facilities and Planning, Director of Surgical Services, Director of Patient Access, physician executive Director of the Maternal and Infant's Center/Managing Director of Women's Health Associates, and all employed primary care physicians.

**Selected Accomplishments:**

- Staffed and actively participated in the Hospital's Medical Staff Development Committee. Developed and successfully implemented an employed physician recruitment "incubator model" to support the community need for primary and specialty care physicians as identified in the Hospital's Medical Staff Development Plan. Successfully recruited, developed and converted four solo primary care practices and a two-physician OB/GYN practice from hospital employment to private practice. Successfully recruited many other physicians through income guarantee arrangements, including internal medicine, pediatrics, general surgery, ENT, and gastroenterology.
- Developed and enhanced obstetrical and infant care services to respond to community need and improve market share, including the recruitment of an obstetrical physician executive and recruitment of a pediatrician with neonatal expertise and focus.
- Actively participated in the development of the Health System's Strategic Plan including identification, justification and coordination of a Master Facility Plan. Lead the Master Facility Plan creative development with architects, consultants and engineering firms resulting in Board approval of a \$24 million facility expansion project. Negotiated and executed all contracts related to the expansion project. Designed and recruited a facility management team to oversee the implementation of the Master Facility Plan and expansion project.
- As the Hospital's Cancer Program Administrator, lead the application and preparation process for a successful Community Cancer Program national accreditation by the Commission on Cancer of the American College of Surgeons. Developed a business plan for the creation of a Breast Health Center, achieved Board approval for the Center, established a community Board to provide input into the strategic development of the Center, developed the physical layout and recruited the Center's Medical Director.
- Led the successful reorganization of the Health System's for-profit physician Management Services Organization, both corporately and operationally, resulting in improved physician relations, growth and strengthened financial performance. Developed a cohesive management team and instilled pride and confidence in the MSO's services. Subsequent to the reorganization, the number of physicians contracting for either billing or full practice management services grew from 29 to 45, or by 55%.

- Restructured the Hospital's human resource programs and department, successfully recruited a Vice President of Human Resources, expanded services and implemented a hospital-wide customer service program.

**Vice President Finance and Chief Financial Officer  
5/1996 to 11/1998 (Part-time 1/1993 - 4/1998)**

**Renaissance Technology, Inc., Newtown, PA** - Renaissance was an early-stage company that developed and marketed the IQ™ System, an FDA approved non-invasive cardiac diagnostic monitoring device.

**Job Responsibilities:**

Responsible for strategic financial management including finance, accounting, auditing, taxation, revenue cycle, purchasing, inventory, management information systems, investor due diligence and banking/investor reporting.

**Selected Accomplishments:**

- Successfully negotiated the terms of a \$5.5 million private investment firm preferred stock purchase.
- Successfully engaged PricewaterhouseCoopers as the company's public accountants, prepared the company's financial statements, books and records for Security and Exchange Commission initial public offering (IPO) look back review.
- Developed extensive financial modeling tools utilized for strategy development, valuing opportunity spaces, assessing value capture arrangements and performing sensitivity analysis on key business drivers and design choices.
- Improved sales efficiency and effectiveness through the development of selling economic models and sales targeting tools that integrated HCIA, NIP and MedPar databases.

**Previous Positions**

- **General Manager - 5/1994 to 6/1996, Eastern Rail Systems, Inc., Newtown, PA**  
Eastern Rail is a small privately held niche manufacturer of high quality medical equipment rail, medical gas manifolds and related organizational products.
- **Chief Operating Officer - 7/1989 to 5/1994, Eastern Anesthesia, Inc., Newtown, PA**  
Eastern Anesthesia was a small privately held Mid-Atlantic medical products distribution, medical construction and biomedical engineering company.
- **Director, Patient Services Resources - 7/1986 to 7/1989, Jeanes Hospital, Philadelphia, PA**  
Jeanes Hospital is a 245-bed non-profit acute care hospital.
- **Auditor, Reimbursement Specialist, Consultant - 1/1984 to 7/1986, Coopers and Lybrand, Philadelphia, PA.**
- **Patient Transport, Outpatient Billing Clerk and General Accountant - 7/1978 to 12/1983, Jeanes Hospital, Philadelphia, PA.**

**Education**

**1997 – La Salle University**  
Philadelphia, PA USA  
M.B.A., Beta Gamma Sigma  
MAJOR: Finance

**1983 – The Wharton School of the University of Pennsylvania**  
Philadelphia, PA USA  
B.A., Cum Laude  
MAJOR: Accounting

**Specialized Training, Licensure, Certification**

Certified Public Accountant, Pennsylvania, November 17, 1999 (license is currently expired)  
Fellow of the American College of Healthcare Executives

**Professional & Civic Affiliations**

Healthcare Financial Management Association  
American College of Healthcare Executives.

2009- Director, Vice President, Connecticut Association of Healthcare Executives  
2008- Director, Connecticut Hospital Association, CEO Forum Executive  
2007- Committee Member, Finance Committee of the Connecticut Hospital Association  
2007- Director and Co-Chair of the Governmental Affairs Committee, Bristol Chamber of Commerce  
2005-2006 Strategic Planning Committee Member, Southern Maryland Navy Alliance  
2004-2006 Director, Second Vice President and Chairman of the Governmental Affairs Committee, St. Mary's County Chamber of Commerce  
2004-2006 Committee Member, Community Hospital Connection, Maryland Hospital Association  
2004-2006 Committee Member, Legislative Policy Group, Maryland Hospital Association  
2002-2003 Director, Elkton Alliance (Development and revitalization of downtown Elkton jointly funded by Union Hospital and the Town of Elkton)  
2001-2003 Director, Triangle Health Alliance, Inc. (Union Hospital's physician MSO)  
2000 Served on the Citizen's Budget Review Committee, Cecil County Government  
1999-2003 Director, Treasurer, North East Little League Board of Directors (Enjoyed coaching and managing, accomplishments include the 2003 Maryland Junior Boys State Champions and 2001 Maryland District 5 Major Boys All-Star Champions)  
1999-2003 Director, President of the Board of Directors (2003), Cecil County Chamber of Commerce  
Chairman of the Bylaws Committee and member of the Legislative Policy Committee

**Personal**

Married, to my wife Jean for twenty-seven years, we have two children. Sean lives in Milford, MA and works in physician marketing with Meditech. Kimberly, is a junior at Penn State University, State College Pennsylvania.

**Confidential Resume of  
George W. Eighmy C.P.A.**

7 Chauncey Dr • Oxford CT, 06478

Home: (203) 764-1621 • Office: (845) 342-7378 • Email: geighmy@comcast.net

**Administrative Director of Finance**

Healthcare Financial Executive with 22 years of progressive experience. Skilled in accounting, financial reporting, financial analysis, strategic planning, budgeting, reimbursement, physician practice management, managed care and treasury functions. Demonstrated ability to lead key initiatives, manage professional staff, foster teamwork, use strategic thought, and achieve goals. Respected by peers for being committed, results oriented, and for having integrity and vision.

**Executive Performance**

Extensive interaction with Hospital Executives and Board Members. Presentations include: fiscal results; fiscal and strategic analysis; budget and long term financial plan; insight and recommendations on strategic issues.

Integral part of and participant in, the annual development of the Hospital's strategic plan and leader in the development of the operating, capital and cash budgets.

Integrated the Finance Department into clinical areas to facilitate an understanding of both clinical and financial perspectives on issues.

Key member on the Hospital Consolidation and Merger Team comprised of Board members and Hospital Executives from both Hospitals

**Employment**

**2008 - Present**

**GREATER HUDSON VALLEY HEALTH SYSTEM (GHVHS):** Middletown, NY  
\$450 million, 678 licensed bed, healthcare network with three acute care hospitals, long term care facility, physician practices, outpatient service centers. Currently building a new state of the art, flagship 375 bed hospital set to open the spring of 2011 replacing two existing hospitals.

**Administrative Director of Finance** Reports directly to the C.F.O. responsible for 4 directors in the following areas: General accounting, corporate accounting, financial analysis and reporting, long range financial planning, treasury and cash management, budgeting, reimbursement, accounts payable, G.A.A.P. compliance, cost accounting, internal control, tax exempt bond compliance, taxes, external and regulatory reporting, payroll.

**2000 - 2008**

**GREATER WATERBURY HEALTH NETWORK •** Waterbury, CT  
\$250 million healthcare network with a 360 bed Teaching Hospital and Subsidiaries including: Imaging and Diagnostic Companies, Physician Groups, A Physician Management Company, Rehabilitation Service Company, and a Visiting Nurse Company.

**2005 - 2008**

**Administrative Director of Finance • Promoted, Responsibilities added -** Managed care, revenue cycle improvement, revenue compliance. Performance oversight of the Medical Records and Patient Accounting areas.

2000 - 2005	<p><b>Director of Finance</b> Reported directly to the C.F.O. Directs a professional staff of 16. General accounting, corporate accounting, G.A.A.P. compliance, cost accounting, accounts payable, treasury, cash management, internal control, tax exempt bond compliance, taxes, external and regulatory reporting, financial analysis and reporting, long range financial planning, budgeting, reimbursement, managed care, revenue cycle improvement, revenue compliance, and financial information systems.</p>
<u>1993 - 2000</u>	<p><b><u>SAINT RAPHAEL HEALTH SYSTEM</u></b> • <span style="float: right;">New Haven, CT</span>          \$400 million healthcare network with a 511 bed Teaching Hospital. The Saint Raphael Health System is the holding company for the Hospital and several subsidiary companies.</p>
1998 - 2000	<p><b>Director Financial Planning and Decision Support</b> – Reported directly to the CFO/Vice President of Finance. Managed seven professional employees. Areas of responsibility include; long range financial planning, cost accounting, and budgets. Implemented, and managed the functions and activities related to the Hospital's Decision Support Systems. Provided reporting and analytical support to Executives, Clinical Chairs, Administrators, Department Managers and Clinicians.</p>
1996 - 1998	<p><b>Manager of Financial Planning</b> – Reported to Director of Financial Planning. Managed three financial analysts. Areas of responsibility include; budget, cost accounting, and decision support systems. Planned, tested and implemented the introduction and rollout of new applications, products, and modules, related to Decision Support Systems.</p>
1996 - 1998	<p><b>Senior Managed Care Analyst</b> – Responsible for analysis and implementation of all commercial and managed care contracts, including rate setting and analysis. Supported contract negotiations. Discovered and received \$1.8 million in payment recoveries from insurers. Designed a capitation reporting and analysis package.</p>
1993 - 1996	<p><b>Reimbursement Analyst</b> – Prepared all governmental cost reports and compliance filings. Regulatory and contractual allowance analysis.</p>
<u>1991 - 1993</u>	<p><b><u>ALR &amp; CO</u></b> • <span style="float: right;">West Haven, CT</span>   <b>Senior Accountant</b> – Audit, tax, and reimbursement issues for nursing homes and home health agencies, small to mid size companies and higher wealth individuals.</p>
<u>1989 - 1991</u>	<p><b><u>PRICEWATERHOUSE</u></b> • <span style="float: right;">Stamford, CT</span>   <b>Auditor</b> – Perform audits, prepare financial statements, and analyze internal control systems for "Fortune 500" corporations and large partnerships.</p>

### Key Accomplishments

**Key Accomplishments:**

- Upon arrival at GHVHS assumed leadership role of the year-end audit, resolved many finance department deficiencies, as outlined in the prior year's Auditors Management Comments.
- Co-chairing committee to evaluate and assess alternative care delivery models (ACO) involving the entire continuum of care providers.
- Key member of Physician Practice Improvement Team. We transitioned medical staff to physician group foundation. Realized a \$2.5 million increase in net revenue.
- Developed departmental productivity metrics and processes to flex departments financial results with agreed statistic and targeted result based on benchmarking.



- Developed recurring financial outreach and training sessions with departmental leadership to engage finance with other departments in understanding each area's unique services, understand financial management, and to encourage interdepartmental interaction.
- Aligned surgical supply item and cost utilization to patient, doctor and procedure by integrating the purchasing system with the OR system and the billing system. This greatly enhanced our ability to measure, track, model and budget surgical supply costs for procedural and physician mix changes.
- Restructured the finance department. Expanded responsibilities by taking over Accounts Payable, Benchmarking, Managed Care, Payment Recoveries, Revenue Cycle Performance and Revenue Compliance while reducing staffing by 4.4 fte's.
- Major participant in 3 "Lean" process improvement initiatives. Supply tracking, Inventory management and Patient flow through the ED.
- Key Project Lead in the following system implementations
  - Eclipsys TSI Sunrise Decision Support Manager
  - Lawson Payroll
  - Cardinal Health Pharmaceutical Distribution
  - Solucient / Thompson Benchmarking
  - McKesson Horizon Business Intelligence
  - Co-Leader of GHX supply chain cycle improvement through e-commerce and analytics.

### **Boards and Committees**

Finance Committee, Audit Committee, Pension and Investment Committee, Clinical Council, Strategic Planning Committee, Compliance Committee, Revenue Cycle Team Leader, Budget Review Committee Leader.

### **Education**

Quinnipiac University, Hamden, CT • 1989  
Bachelor of Science -- Accounting.

University of Connecticut, Storrs, CT • 1981  
Bachelor of Science -- Marketing.

20 Eighth Avenue  
Milford, CT 06460

**SHEILA G. KEMPF**

203 494 5805 (c)  
860 585 3041 (w)  
sgkempf@aol.com

**EDUCATION**

PhD HEALTH CARE ADMINISTRATION, January, 2011  
Capella University, Minneapolis, MN

MASTERS IN NURSING EDUCATION, May 1978  
Columbia University, New York, NY

BACHELOR OF SCIENCE IN NURSING, May 1974  
Villanova University, Villanova, PA

Finance & Accounting for Non-financial Managers, 1994  
Wharton School of Business, Univ of Penn

Medical Marketing Executive Management Program, 1993  
UCLA

**PROFESSIONAL EXPERIENCE**

**BRISTOL HOSPITAL & HEALTHCARE SYSTEM**, (185 beds) Oct, 2010 to present  
**Sr. Vice President, Patient Care Services/ Chief Nursing Officer**  
Senior executive in 185 bed hospital with responsibility for nursing, pharmacy, radiology, diagnostic services, perioperative center, oncology center, home care/ hospice, 128 bed nursing home/rehab center, Bristol EMS, and numerous outpatient services.

**ST. VINCENT'S MEDICAL CENTER**, (400 beds). **Bridgeport, CT** July, 2007- Oct, 2010  
**Vice President, Cardiovascular Services**  
As a member of the senior executive team, responsible for \$150M revenue, \$32M expenses, and 300 staff. Units include inpatient telemetry, post interventional and open-heart units, outpatient services cardiac catheterization and electrophysiology labs, cardiac rehab, diagnostic testing, and CHF program.

**WESTCHESTER MEDICAL CENTER**, Valhalla, NY 2006 – 2007  
**Staff Nurse, Intensive Care Unit**  
1000 bed Level 1 Trauma Center, seven bed ICU with liver transplant program, major surgical service, bariatric, and trauma. Successfully transitioned back into Nursing.

**HONEYWELL, INC**, Minneapolis, MN 2003 – 2006  
*\$29B diversified global corporation*  
**Vice President, Global Strategic Marketing** (2005 – 2006)  
\$800M global sensor business, managed six Marketing and Communications professionals.

**Vice President & General Manager, Medical & Commercial Sensor Business (2003 – 2005)**  
Responsible for \$135M Global P&L for sensors used in medical products. Managed 2400 employees, three global manufacturing plants, remote and local engineering teams, and all support functions.

- Implemented a significant product portfolio re-alignment resulting in 11% revenue & 20% profit growth.
- Created engineering team in India improving product development time to market
- Completed turn-around of underperforming manufacturing plant (reduced backorder from \$4M to \$1M).

**B. BRAUN MEDICAL INC., Bethlehem, PA** 2001 – 2003  
**Vice President, Marketing**

Responsible for domestic \$500M diverse medical products business including intravenous solutions and sets, Infusion pumps, anesthesia epidural and spinal products, IV safety catheters, and pharmaceuticals. Managed 45 marketing and clinical education staff in three locations.

**CHROMATICS COLOR SCIENCES, MEDICAL DIVISION, New York, NY** 1998 – 2001  
**Vice President, General Manager**

Start up company. Managed launch of infant jaundice diagnostic product, including development of clinical education program, marketing and sales strategies. Technology sold.

**COROMETRICS MEDICAL SYSTEMS (acquired by GE), Wallingford, CT** 1996 – 1997  
**Vice President, Marketing**

Managed worldwide P&L for \$60M fetal monitoring & neonatal cardiac monitoring products, including marketing, clinical education, customer service & sales support.

**NELLCOR INC, (acquired by TYCO), Pleasanton, CA** 1991 – 1996

**Director of Marketing, Sensors and Accessories Division**

Managed Marketing & Clinical program for pulse oximetry sensor products (\$200M).

**FENEM, INC., (acquired by Nellcor) New York, NY** 1988 – 1990  
**Vice President, Marketing**

Start up company end-tidal CO2 product for intubation. Company successfully sold in two years. Coordinated product clinical research studies resulting in 23 publications.

**QUANTIFIED SIGNAL IMAGING, INC., Toronto, Canada** 1985 – 1988  
**Vice President, Operations and Sales Support**

As founding partner, responsible for overall start-up functions of this neurological capital equipment company including regulatory, sales, clinical education, marketing and R&D.

**NORWALK HOSPITAL (400 beds), Norwalk, CT** 1982 – 1985  
**Director of Nursing, Critical Care**

Member of Nursing Executive Team. Managed Medical-Surgical ICU, CCU, Cardiac Telemetry, Respiratory Step-Down, 100 employees, seven Managers, \$4M budget. Created and Chaired Equipment Standardization Committee streamlining purchased products with 10% - 15% reduction in Critical Care operating expenses.

**MOUNT SINAI MEDICAL CENTER** (1200 beds), New York, NY 1980 – 1982

**Nursing Supervisor, Neurosurgery**

32 bed Neurosurgical Unit and Weekend Administrative coverage for 256 bed Surgical Division.  
Division Editor for Nursing Newsletter and representative on Clinical Guidelines committee.

- Developed program for staffing based on acuity, upgrading clinical skills, and general management of unit increasing nursing retention rate from 22% to 70% in two years.

**MONTEFIORE MEDICAL CENTER** (900 beds), New York, NY 1978 – 1980

**Clinical Instructor, Critical Care Nursing**

Clinical Education for 200 nurses in Critical Care Division (Medical Surgical ICU, Cardiothoracic, CCU, Pulmonary Step-down and Emergency Dept).

- Developed & executed Critical Care Advanced Course, Critical Care new graduate orientation, and Leadership Workshop for experienced nurses.
- Created ICU Patient Acuity program, Redesigned ICU documentation system.
- Instituted ACLS Course for NYC Dept of Emergency Medical Services as Advanced Life Support Instructor-Trainer

**MOUNT SINAI MEDICAL CENTER** 1974-1978

**Senior Clinical Nurse (Nurse Manager) 17 bed Surg-Resp ICU (1976 – 1978)**

**Staff Nurse, Surgical-Respiratory ICU (1974 – 1976)**

**CERTIFICATIONS AND LICENSURE**

Basic Life Support, Current

SCCM - Advanced Fundamentals of Critical Care, 2006

Six Sigma Green Belt, 2004

Advanced Life Support, Instructor, 1978 – 1988

CCRN – AACN Certification Corporation; 1979 – 1990

Certificate of Appreciation, NYC Health & Hospitals Corp, 1980

Registered Nurse, New York State and Connecticut

**PROFESSIONAL MEMBERSHIPS**

American College Healthcare Executives

American Organization Nurse Executive

American Association Critical Care Nurses

**NON-PROFIT EXPERIENCE**

Coalition for the Homeless, Marin County, CA, 1992-1996

Academy Mount Saint Ursula, Board of Trustees, Bronx, NY 1996- 2002

St Gabriel School, Board of Trustees, Milford, CT 2003- 2010

**PROFESSIONAL PRESENTATIONS AND PUBLICATIONS**

Numerous national lectures (including AACN NTI), articles, and book chapters in Critical Care Nursing publications. Topics include Hemodynamic Monitoring, Mechanical Ventilation, and Respiratory Disease.

## Leonard Banco, MD

5 Ryan Circle  
Simsbury, CT 06070  
860-658-6503 (home)  
860-878-4746 (cell)  
LenBanco@aol.com

A seasoned physician executive who is committed to helping health care institutions and professionals improve the health and lives of patients, families and the communities in which they live. Extensive experience in strategy, operations management, quality improvement, business and relationship building with proven ability to translate concept into program. A leader with a collaborative management style who can rely upon a wide array of clinical and non-clinical experiences to provide credibility within a wide range of professional environments. A solid, nationally recognized track record of academic productivity with attainment of senior academic rank. An "out of the box thinker" with leadership experience in a wide array of organizational structures, including free standing children's hospital (12 years), major medical/surgical teaching hospital (15 years), staff model health maintenance organization (4 years), academic medical centers, not-for-profit community organizations and professional groups. Maintained clinical practice of pediatrics until June, 2005.

### Professional Experience -

#### 1997 – 2008 Vice President, Strategy and Regional Development

##### **Connecticut Children's Medical Center, Hartford Connecticut**

Responsible for devising and implementing the medical center's strategic plan which grew inpatient market share an average of 1.5% per year for 4 years in a mature market, and has grown ambulatory specialty services by 50% over 5 years. Conceived, planned and was responsible for implementing all new hospital programs. Devised, planned and implemented all strategic relationships with community physicians, including a Primary Care Network of over 400 pediatricians, and an after-hours telephone advice line for over 300 pediatricians. Conceptualized, planned, implemented and managed a hospital affiliation strategy, linking CCMC to 10 community hospitals across the state. Conceived and developed a pediatric hospital within a hospital as part of a 3-way merger of pediatric services in a community hospital. Organized and promoted 15 CCMC Faculty Practice Plan satellites across the state. Wrote all Certificate of Need applications for the hospital, all of which were approved and implemented. Shared responsibility with the VP, CCMC Foundation, for all marketing efforts. Supervised annual institutional capital budget process. Served as medical director and managed CCMC Utilization Management program which has a clinical denial rate of <0.05% of all total hospital days. Led 2 year hospital-wide cost reduction effort that saved over \$5 million (7% of operations) compared to baseline year actual expense without layoffs. Executive management member responsible for operating and growing selected programs, including occupational/physical therapies, speech/audiology, the CCMC School, Center for Children with Special Health Care Needs, Craniofacial program, the Injury Prevention Center and the CCMC internet.

- 1996-1997 **Director, Ambulatory and Community Services**  
**Connecticut Children's Medical Center, Hartford Connecticut**  
 Key transitional role to merge and transition pediatricians and their staffs from 3 hospitals to an integrated faculty practice plan model as part of institutional merger. Developed basic structure, staff relationships between practices, conceived and began implementation of satellite and network strategy. Developed quality improvement program for all ambulatory services.
- 1993-1996 **Director, Department of Pediatrics**  
**Hartford Hospital, Hartford Connecticut**  
 Led and managed comprehensive 65 bed pediatric department at a large teaching hospital, including 20 bed NICU and 10 bed PICU, Primary Care Center with 18,000 visits/year and Emergency Department with 15,000 visits/year. Provided medical leadership for 20 specialty and general pediatricians and 10 mid-level practitioners. Developed new programs including innovative injury prevention center, school-based clinic, program for drug-exposed infants, lead treatment/prevention and child abuse. Established section of research within the department resulting in doubling of research efforts and publications produced by the department. Responsible, with Director of Pediatric Nursing, for all departmental staff, budget, quality improvement and operations. Numerous institutional and university-related roles and responsibilities. Major transitional role to new children's hospital, including interim management (Executive Transition Group) and staging of move.
- 1989-1993 **Associate Director, Department of Pediatrics**  
**Hartford Hospital, Hartford Connecticut**
- 1988-1989 **Assistant Director, Department of Pediatrics**  
**Hartford Hospital, Hartford Connecticut**  
 Assumed operational responsibilities for the entire department during merger planning and design of new children's hospital. Major role in design of new children's hospital, including preparation of statistics and narrative for Certificate of Need and work with planners, architects and designers. Much of this work was performed via multidisciplinary groups, many of which I led. Participant in redesign of departmental leadership via collaborative management team structure.
- 1981-1993 **Director, Pediatric Ambulatory Services**  
**Hartford Hospital, Hartford, Connecticut**  
 Reorganized, managed and expanded services of active, urban pediatric ambulatory service which included primary care, urgent and emergency care. Expanded clinical volume by 40-60%. Built and expanded academic capacity and productivity of faculty and staff within the area. Primary ambulatory training site for 40 residents and 36 medical students/year within the University of Connecticut School of Medicine.
- 1979-1981 **Chief of Pediatrics,**  
**Genesee Valley Group Health Association, Rochester, New York**
- 1977-1979 **Pediatrician**  
**Genesee Valley Group Health Association, Rochester, New York**  
 Led a group of 7 pediatricians, 4 nurse practitioners in a pediatric practice with 30,000 children within a site-based HMO while maintaining a full-time pediatric

practice. Recruited and terminated staff as necessary. Managed clinical and non-clinical activities of all personnel within the department. Responsible for creating quality management program within the department. Created innovative after-hours nurse practitioner call system. Examined physician utilization data and changed practice patterns through data sharing and provider education.

### Education and Training

Stuyvesant High School, New York, New York 1963-66

Brooklyn College, City University of New York, Brooklyn, New York 1966-70 B.S.  
Magna cum laude with honors in chemistry.

Yale University School of Medicine, New Haven, Connecticut 1970-74 M.D.

Residency Program in Pediatrics, University of Rochester Strong Memorial Hospital  
1974-77 Asst. Chief Resident 1977.

Management Training: American College of Physician Executives The Physician in  
Management Parts I, II & III - 1986-88

Advocacy Training: American Academy of Pediatrics Legislative Course 1994

Board Certification, American Board of Pediatrics, 1979

License, State of Connecticut

### Academic

Professor of Pediatrics, University of Connecticut 1996 – present

### HONORS

Phi Beta Kappa

Jonas Salk Scholar

Injury Prevention work Profiled in *N.Y. Times* article June 26, 1994

Invited to White House to discuss Health Care Reform, June, 1994

Visited by Rosalyn Carter & Betty Bumpers to recognize efforts of Hartford Childhood  
Immunization Project, 1995

American Academy of Pediatrics, Outstanding Chapter Award, 1992; Award of Chapter  
Excellence, 1994; Special Achievement Awards, 1996 & 1998.

Central Area Health Education Council Award for Contributions to Community Health,  
2005

University of Connecticut Department of Pediatrics Leon Chameides Career  
Achievement Award, 2007

American Academy of Pediatrics CT Chapter Award named in my honor 2008 to be  
awarded for excellence in "leadership, teaching, research and advocacy".

Parents Magazine recognized Connecticut as being the safest state for children in the  
United States, March, 2008.

### **PROFESSIONAL ORGANIZATIONS**

Fellow, American Academy of Pediatrics  
Member, American College of Physician Executives  
Member, American College of Healthcare Executives  
Member, Ambulatory Pediatric Association (APA)  
Member, International Society of Childhood & Adolescent Injury Prevention  
President, Connecticut Chapter, American Academy of Pediatrics 1994-1997  
Chair, APA Special Interest Group on Injury Control, 1994-1996  
President Elect, Rochester Pediatric Society, 1980-1981.

### **Selected Presentations**

"The Connecticut Childhood Injury Prevention Center - The First Five Years." The 3rd International Conference on Injury Prevention and Control, Melbourne, Australia, February 18-22, 1996.

"Building the market by building relationships" Society for Healthcare Strategy and Market Development, NACHRI Pre-Conference Workshop. Philadelphia. August 29, 1998

"Strategic Program Planning/New Program Development", Presentation at Society for Healthcare Strategy and Market Development 3<sup>rd</sup> Annual Educational Conference, Philadelphia, PA, August 29, 1998.

"Marketing a Children's Hospital: Lessons for the "For Profit" World" Connecticut Chapter of the American Marketing Association. Hartford. January 14, 2003

"From Silos to Synergy - Applications to Volunteer Organizations" Connecticut Association of Volunteers. Quinnipiac University, Hamden, CT. May 19, 2004.

**Publications and Curriculum Vitae** - Available upon request.



CURRICULUM VITAE FOR AMERICAN COLLEGE OF RADIOLOGY

Please provide the following information:

Name: DENNIS FERGUSON DOB: 11/30/44

Place: \_\_\_\_\_

Pre Med Education: ST. PETERS COLLEGE Jersey City N.J.  
Dates: SEPT 1963 - June 1967  
Degree: BS

Medical School: U. of P. Hsburgh  
Dates: Sept 1967 - May 1971  
Degree: MD

Internship: Hartford Hospital  
Dates: July ~~1971~~ Sept 1971 - July 1972

Residency: Hartford Hospital  
Dates: July 1972 - June 1975

Additional Training - Fellowships:

Dates: \_\_\_\_\_  
H. Strial Size - Radiology St. Elizabeth's Hospital Boston MA JULY

Publications: Lipomas of the Dorsal Radiology

Board Certified: Diag Radiology  
Date: 1975

Practice Experience: U.S. Army - Radiology July 1975 - June 1977  
Radiology Assoc July 1977 - present

Professional Memberships: ACR, RSNA, NEMA, AIUM, SNM



John M. Walker, M.D.  
19 Saxon Woods  
Avon, CT 06001  
(860) 673-7501

**EDUCATION:**

Undergraduate: UNION COLLEGE, Schenectady, NY  
7/71 - 6/75; Bachelor of Science -- Biology/Psychology

Medical: NEW YORK UNIVERSITY SCHOOL OF MEDICINE, N.Y., N.Y.  
7/75 - 6/79; M.D. Degree

Internship: HARTFORD HOSPITAL, Hartford, CT.  
7/79 - 6/80; Straight Medical Internship

Residency: NORTH SHORE UNIVERSITY HOSPITAL, Manhasset, N.Y.  
7/80 - 6/83; Residency in Diagnostic Radiology under Department Chairman  
Harry L. Stein, M.D.

Fellowship: NORTH SHORE UNIVERSITY HOSPITAL, Manhasset, N.Y.  
7/83 - 6/84; Fellowship in Body Imaging (CT and MRI and Ultrasound)  
under Mitchell A. Goldman, M.D.

**SPECIAL TRAINING:**

HOSPITAL FOR SPECIAL SURGERY, N.Y., N.Y.; March - April 1982;  
Bone and Joint Radiology under Robert H. Frieberger, M.D.

ARMED FORCES INSTITUTE OF PATHOLOGY, Washington, DC  
August - September 1982; Radiology-Pathology Correlation under  
David S. Hartman, M.D.

**ACADEMIC HONORS AND POSTIONS:**

Union College: Summa Cum Laude  
Phi Beta Kappa  
Sigma Xi Honorary Research Society  
Eliphaz Nott Scholar  
President, Sigma Phi Fraternity, 7/74 - 6/75

North Shore  
University Hospital: Chief Resident in Diagnostic Radiology, 1982 -83

**PRESENT POSITION:**

Partner in a seven man private radiology group located outside of Hartford  
working at Bristol Hospital (125+ bed community hospital) in addition to  
two private offices located in Bristol and Farmington, CT.

CT, MRI, ultrasound, nuclear medicine, mammography, and interventional  
procedures are performed in addition to general diagnostic radiology.

**ACADEMIC APPOINTMENTS:**

Assistant Clinical Professor of Radiology, University of Connecticut School of Medicine  
1991 - 1998

**PUBLICATIONS:**

**Books:**

Walker JM, Margoulef D: A Clinical Manual of Nuclear Medicine. Appleton-Century - Crofts; pp. 300; October 1983.

**Articles:**

Walker JM, Kanzer BF: Carcinoma of the Cystic Duct Mimicking the Mirizzi Syndrome. *Am J Gastroenterology*, Dec. 82; Vol. 77: 936-938.

Walker JM, Ferguson DD: The Sonographic Appearance of Blood in the Fetal Stomach and its Association with Placental Abruption. *J Ultrasound Med*. 7:155-161, 1988.

**SYMPOSIUM  
LECTURES:**

Instructor at the Two-Dimensional Echocardiography Course, sponsored by North Shore University Hospital and the American Heart Association. October 31 - November 4, 1983.

Guest Lecturer at the Annual UCONN ENT Department Dinner. CT of the Mastoids. Farmington, CT. May, 1986.

Guest Lecturer at the semi-annual meeting of the Bristol Dental Society. CT of the Temporomandibular Joint. Bristol, CT, March 1987.

Presenter at the New England Conference of Radiologic Technologists. CT and US in the Diagnosis of Acute Appendicitis. Stamford, CT. October, 1992.

Lecturer at the following institutions:

University of Connecticut School of Medicine  
North Shore University Hospital  
Meriden-Wallingford Hospital

**CERTIFICATION:**

Diplomate of the National Board of Medical Examiners: July 1980  
New York State Medical License: March 1981  
American Board of Radiology: certified June 1983  
Connecticut State Medical License: July 1984



**PROFESSIONAL  
SOCIETIES:**

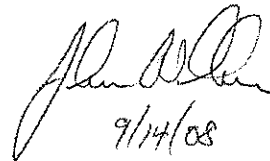
American College of Radiology  
Radiological Society of North America  
American Institute of Ultrasound in Medicine  
Society of Nuclear Medicine  
Hartford County Medical Society

**POSITIONS HELD:**

Medical Staff Representative, Bristol Hospital, 1997 - 2004  
Board of Directors, Bristol Hospital, 1997 - 2004  
Board of Directors, Saint Francis - Bristol Hospital Affiliation Corporation  
2001 - 2005  
Board of Directors, Bristol Hospital Development Foundation, 2000- 2006  
Executive Committee of the Bristol Medical Staff, 1997 - 2004  
Bristol Medical Staff - Hospital Leadership Forum, 1999 - 2004  
Quality Assurance Committee, Bristol Hospital, 1997- 2003  
Finance Committee, Bristol Hospital, 1997 - 2005  
President, Bristol Medical Provider Organization, 1998 - 1999  
President, Bristol Regional Health Alliance, 1998 - 1999  
Vice-President, Bristol Medical Provider Organization, 1999 - 2003  
Board of Directors, Bristol Medical Provider Organization, 1995 - 2003  
President, Bristol Medical Service Organization, 1998 - present

**RADIOLOGY/MEDICAL ADVISORY PANELS:**

Anthem Blue Cross, 1999- 2002  
Cigna, 2000 - 2005

  
9/14/08

24 Perrin Lane  
South Windsor, CT 06074  
Home: (860) 644-5306  
Cell: (860) 614-9656  
E-Mail: Marie.marciano@cox.net

## **MARIE A. MARCIANO, MBA, R.T. (R) (M)**

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### **EDUCATION**

**MASTER OF BUSINESS IN ADMINISTRATION, 1992**  
University of Hartford, West Hartford, CT

**BACHELOR OF SCIENCE IN HEALTH SCIENCES / HEALTHCARE ADMINISTRATION, 1984**  
University of Hartford, West Hartford, CT

**ASSOCIATE OF SCIENCE IN RADIOLOGICAL TECHNOLOGY, 1978**  
Middlesex Community College, Middletown, CT

**RADIOLOGICAL TECHNOLOGIST DIPLOMA, 1975**  
Mount Sinai Hospital, School of Radiologic Technology, Hartford, CT

### **EXPERIENCE**

**November 2009 – present**

**BRISTOL HOSPITAL, Bristol, CT**

*Director of Diagnostic Services (Radiology and Imaging, Cardiology, Cardiac/Rehab, Pulmonary Rehab, Laboratory, Outpatient Lab Services and Sleep Center)*

Plans, organizes, and directs the operations and administrative function of a multi-imaging Radiology Department including Nuclear Medicine, PET/CT, Diagnostic Radiology, Cat Scan, MRI, Mammography, Ultrasound and Interventional Radiology with an annual operating budget of \$12 million and revenue of \$125 million. Provide leadership and resources to supervisory staff and over 85 employees. Oversee marketing, fiscal management, regulatory compliance and accreditations. ACR, MQSA, JCAHO, DPH, NRC accreditation experience.

Plans, organizes and directs the operations and administrative function of the Cardiology, Cardiac and Pulmonary Rehab departments. Provide leadership and resources to clinical nurse coordinator and 20 employees. Oversee fiscal management, regulatory compliance and accreditations. Echo accreditation experience.

Transition, organize and directs the operations and administrative function of the Laboratory. Transition existing CLS laboratory to Bristol Hospital. Provide leadership and resources to 4 leads and 40 employees. Also, included 3 draw stations and centralized phlebotomy. CAP inspection and JCAHO experience.

Start up operation of Sleep Center including hiring of staff, design of space and equipment needs. Directs the operations of the Sleep Center with the coordinator including marketing, financial management and accreditation. Sleep Accreditation experience.

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Marie A. Marciano, MBA, R.T.

Page 1 of 6

March 2008 – November 2009

HOSPITAL OF SAINT RAPHAEL, New Haven, CT

*Director of Imaging Services*

Plans, organizes, and directs the operations and administrative function of a large multi-imaging Radiology Department including Cardiac Diagnostic Unit, Nuclear Medicine, PET/CT, Diagnostic Radiology, Cat Scan, Mammography, Ultrasound and Interventional Radiology with an annual operating budget of \$30 million and revenue of \$243 million. Provide leadership and resources to supervisory staff and over 150 employees. Oversee marketing, fiscal management, regulatory compliance and accreditations.

**Selected Accomplishments:**

- Implemented process and procedures to ensure that authorizations are received when needed to capture an additional 75K per year.
- Evaluate, negotiate and purchase Ultrasound equipment for the main department and Cardiac Diagnostic unit for a cost savings of 95K.
- Implemented central registration for Radiology outpatients having procedures in all modalities. Currently maintaining 96% compliance in MSP's and ABN's.
- Implemented central scheduling to increase the number of calls answered from 78% to 92%.
- Reduce TAT (turn around time) for films being completed and read from the ED from 5 hours to less than 1 hour.
- Reduced TAT for portable chest x-rays done in the ED from 2 hours to 10 minutes.
- Implemented processes and procedures that reduced accounts receivables from 120 day to 60 days.
- Worked closely with the IT department for PACS upgrade to HL7 for all modalities.
- Maintained labor and non-labor FY08 departmental budgets, \$225k under budget.

February 2006 – March 2008

NAVIX DIAGNOSTIX, Taunton, MA

*Regional Operations Manager*

Direct operation and maintain full P&L for over 60 clients, hospitals and private offices with a \$5.4 million annual budget. Oversee fiscal management, human resources, marketing and strategic planning for all clients and clinical staff. Ensure regulatory compliance and accreditations are maintained.

**Selected Accomplishments:**

- Improved operations and increased revenue from \$2.3 M to \$3.5 M in year one.
- Achieved cost savings of \$200K by streamlining operations.
- Improved relationships between clinical staff and clients resulting in an increase in profitability.
- Eliminated the use of contract labor by working to fill open positions and establish a PRN pool of technologists resulting in an annual reduction of \$100K.

- Extended service contracts in excess of \$200K per year.
- Developed relationships with client physicians, staff and hospital administration resulting in increased utilization of diagnostic services.
- Ensured control systems and processes in place to supported compliance with regulatory requirements.
- Evaluated, negotiated and implemented new client contracts.
- Initiated and directed the start-up operations for ten (10) additional services within the first two years.

**November 2002 – January 2006**

**MEDICAL IMAGING CENTER, Bloomfield, CT**

***Executive Director***

Directed a staff of 75 employees with seven imaging sites and an annual budget of \$7.0 million with revenues in excess of \$60 million. Oversaw operations, marketing, A/P, human resources and billing. Worked closely with six physicians as part of the leadership Committee.

**Selected Accomplishments:**

- Planned, directed, organized and managed the operations of Diagnostic Radiology services at seven locations.
- Evaluated, negotiated and purchased imaging equipment with cost savings in excess of \$200K.
- Negotiated insurance payer contracts to maximize revenue in excess of \$1.2K.
- Implemented central scheduling decreasing phone wait times and increasing patient through put by 20%.
- Developed and achieved CON for a high field MRI magnet.
- Responsible for the success of Imaging Services including X-ray, Nuclear Medicine, Cat Scan, Ultrasound, MRI, Mammography, Bone Densitometry and support services.
- Responsible for strategic planning and implementation of PACS, new equipment purchases and marketing.
- Implemented processes and procedures that reduced accounts receivables from 130 days to 60 days.

**1997 – 2002**

**ADVANCED RADIOLOGY CONSULTANTS, Trumbull, CT**

***Director of Operations***

Directed a staff of more than 120 employees, eight (8) imaging sites, and one (1) radiation therapy site with fourteen (14) physicians. Annual operating budget of \$20M with revenues in excess of \$100M. Responsibilities included MQSA and FDA compliance, staffing, purchasing and contract negotiations.

**Selected Accomplishments:**

- Eliminated the use of contract labor for overtime by establishing PRN pool resulting in an annual reduction of \$150K.
- Negotiated vendor contracts for other non-clinical services resulting in first year savings of \$300K.
- Planned, developed and implemented construction of five (5) imaging sites ranging from 2000 square feet to 5200.
- Developed clinical ladders to offer staff recognition and career advancement opportunities.
- Directed efforts toward ACR accreditation of multiple modalities.
- Planned, developed and implemented central scheduling and film filing to decrease labor hours and lease payments in excess of \$500K.
- Evaluated and resolved issues relating to non-compliance with MQSA, FDA and ACR rules for reporting and following up on mammography resulted in successfully passing FDA inspections and obtaining ACR accreditation.

1992 – 1997

**KAISER FOUNDATION HEALTH PLAN, West Hartford, CT**

***Operations Manager – Multi speciality***

Responsible for the operations of five health centers including fifteen (15) full time employees for Kaiser Foundation in the Northeast.

**Selected Accomplishments:**

- Established multi-departmental start-up for Kaiser Permanente, West Hartford location to include design of the department, hiring of staff, purchasing equipment and budgeting.
- Streamlined operations in all offices resulting in staff reduction of \$120K.
- Participated in corporate strategic planning meetings weekly with support services including pharmacy, lab and physical therapy.
- Negotiated and implemented service contracts resulting in savings of \$250K.
- Designed, developed and implemented a patient satisfaction initiative that demonstrated 80% satisfaction increase within a twelve-month period.
- Redesigned employee and managers performance evaluations.
- Worked with the administrator on marketing campaign increasing patient volume by 20% the first year.
- Developed, planned and implemented a mammography program that demonstrated 15% growth in the first year.



1992 – 1993

MIDDLESEX MEDICAL CENTER, Marlborough, CT

*Staff Technologist / Per Diem*

Per Diem assignment at free standing trauma center performing procedures.

1992

GREATER HARTFORD COMMUNITY COLLEGE, Hartford, CT

*Consultant, Radiological Technology Program*

Developed through the State of Connecticut, a two year associates degree program in Radiological Technology. Course planning, curriculum design, recruiting and marketing were accomplished in this position.

1982 – 1992

MOUNT SINAI HOSPITAL, Hartford, CT

*Assistant Radiology Administrator*

Assisted administrator on all projects including budget preparation and staffing assignments. Also served as the administrator on call in the absence of the administrator. Negotiated service contracts resulting in a cost savings of \$25K.

#### **CERTIFICATIONS**

- American Registry of Radiological Technologists, Mammography, 1991.
- American Registry of Radiological Technologists, Radiology, 1975.

#### **PROFESSIONAL MEMBERSHIPS**

- Member, ARRT (American Registry of Radiological Technologists), National Certification, 1995-Present.
- Member, ASRT (American Society of Radiological Technologists), National Professional Society, 1975-Present.
- Member, CSRT (Connecticut Society of Radiological Technologists), State Professional Society 1975-Present.
- Member, AHRA (American Health Care Radiology Administrators), National Professional Society, 1992-Present.

# **ALBERT LAMPTEY** RT (R) (CT)

Phone (203) 788-0910 • E-mail AL.LAMPTEY@gmail.com

54 RESERVOIR ROAD • NEW MILFORD, CONNECTICUT 06776

## **OBJECTIVE**

**To gain employment as a Radiology Manager**

## **EDUCATION**

SUNY Westchester Community College, Valhalla, N.Y

Associates in Applied Science

Kaplan University

Bachelors of Health-Care Administration.(Pending)

## **CLINICAL EXPERIENCE/ SKILLS**

- Computed Tomography: (C.T.): Whole body Multi- plane images with and without oral and intravenous contrast,
- Musculoskeletal and Neuro Magnetic Resonance Imaging. Equipment: Hitachi Aries2 and Phillips Gyroscan.
- Body CT Angiography. Cardiac CT Angiography with 3D Reconstruction Specialist.
- Efficient on Terarecon and Siemens Leonardo Workstations.
- Efficient on the following scanners; G.E HiSpeed, CT/I, Siemens Sensation 64, 16 and Siemens Plus 4.
- Efficient on Medrad and EZM Single and Dual head, Power Injectors.
- 
- Conventional Radiography: Assist physicians with Fluoroscopy/Contrast media studies. Portable units, C-Arm units: Obtain diagnostic radiographs in OR, CCU and ICU.
- Proficient user of radiology management and hospital information systems. IDX, Quardramed, Meditech.
- Assist with on-the-job training of new employees and students, and provide input to department heads regarding training performance.
- ACLS/CPR certified

## **MANAGEMENT EXPERIENCE/ SKILLS**

- Excellent Supervisory skills
- Compliance with relevant regulations, policies, and ability to accurately interpret and apply these to work performance.
- Responsible for departmental budgets.
- Excellent ability in keeping accurate and precise records related to services.
- Project management experience as relates to the acquisition, construction, set up of a new CT departments as well as replacement of older CT Scanners..And getting units ACR accredited.
- ACR Accreditation for MRI, CT and US
- Radiology Scheduling and front office management.

#### **CERTIFICATION**

American Registry of Radiologic Technologists.(Radiography).

American Registry of Radiologic Technologists.(Cat-Scan)

New York State Department of Health.

Connecticut Department of Public Health.

#### **PREVIOUS EMPLOYMENT HISTORY**

Lawrence Hospital. Bronxville N.Y - *AUG.2000- OCT. 2002*

**Position: C.T. Technologist**

Lawrence Hospital. Bronxville N.Y - *OCT.2002- NOV. 2004*

**Position: C.T. Supervisor**

Our Lady of Mercy Med. Center, Bronx, N.Y - *NOV.2004-OCT. 2006*

**Position: C.T. Supervisor / Radiology Manager**

Cardiology Consultants of Westchester's CT Imaging Center. Hawthorne, NY -*OCT.2006 - March 2009.*

**Position: Technical Director Cat-Scan.**

Hospital of Saint Raphael's. New Haven, CT. *March 2009 - April 2011*

**Position: C.T. Supervisor**

Bristol Hospital, Bristol CT. *April 2011- Present.*

**Radiology Operations Manager.**

**PROFESSIONAL MEMBERSHIPS**

Member of The American Society of Radiologic Technologist. (ASRT)  
New York State Society of Radiologic Technologist. (NYSSRT)  
Society of Cardiovascular CT Angiography. (SCCT)

Phone (203) 788-0910 • e-mail ALLAMPTEY@GMAIL.com

54 RESERVOIR ROAD • NEW MILFORD, CONNECTICUT 06776 •

**ATTACHMENT O**  
**DOCUMENTATION OF NON PROFIT STATUS**

Internal Revenue Service  
District Director

Department of the Treasury

P. O. Box 2508  
Cincinnati, OH 45201

Date: APR 30 1999

Bristol Hospital Incorporated  
Brewster Rd.  
Bristol, CT 06010

Person to Contact:  
Tracy Garrigus 31-02991  
Customer Service Representative  
Telephone Number:  
877-829-5500  
Fax Number:  
513-684-5936  
Federal Identification Number:  
06-0646559  
Accounting Period Ends  
September 30

Dear Sir or Madam:

This is in response to your correspondence dated April 7, 1999, requesting a letter affirming your organization's exempt status.

In July 1925, we issued a determination letter that recognized your organization as exempt from federal income tax under section 101(6) of the Internal Revenue Code of 1939 (now section 501(c)(3) of the Internal Revenue Code of 1986). That determination letter is still in effect.

We classified your organization as a publicly supported organization, and not a private foundation, because it is described in sections 509(a)(1) and 170(b)(1)(A)(iii) of the Code. This classification was based on the assumption that your organization's operations would continue as stated in the application. If your organization's purposes, character, method of operations, or sources of support have changed, please let us know so we can consider the effect of the change on the organization's exempt status and foundation status.

Your organization is required to file Form 990, Return of Organization Exempt from Income Tax, only if its gross receipts each year are normally more than \$25,000. If a return is required, it must be filed by the 15th day of the fifth month after the end of the organization's annual accounting period. The law imposes a penalty of \$20 a day, up to a maximum of \$10,000, when a return is filed late, unless there is reasonable cause for the delay.

As of January 1, 1984, your organization is liable for taxes under the Federal Insurance Contributions Act (social security taxes) on remuneration of \$100 or more the organization pays to each of its employees during a calendar year. There is no liability for the tax imposed under the Federal Unemployment Tax Act (FUTA).

Organizations that are not private foundations are not subject to the excise taxes under Chapter 42 of the Code. However, these organizations are not automatically exempt from other federal excise taxes. If you have any questions about excise, employment, or other federal taxes, please let us know.

Donors may deduct contributions to your organization as provided in section 170 of the Code. Bequests, legacies, devises, transfers, or gifts to your organization or for its use are deductible for federal estate and gift tax purposes if they meet the applicable provisions of sections 2055, 2106, and 2522 of the Code.

Your organization is not required to file federal income tax returns unless it is subject to the tax on unrelated business income under section 511 of the Code. If your organization is subject to this tax, it must file an income tax return on Form 990-E, Exempt Organization Business Income Tax Return. In this letter, we are not determining whether any of your organization's present or proposed activities are unrelated trade or business as defined in section 513 of the Code.

**ATTACHMENT P**  
**HOSPITAL LICENSE**

STATE OF CONNECTICUT

Department of Public Health

License No. 0041

General Hospital

In accordance with the provisions of the General Statutes of Connecticut Section 19a-493:

Bristol Hospital, Inc. of Bristol, CT, d/b/a Bristol Hospital, Inc. is hereby licensed to maintain and operate a General Hospital.

Bristol Hospital, Inc. is located at Brewster Road, Bristol, CT 06010

The maximum number of beds shall not exceed at any time:

20 Bassinets

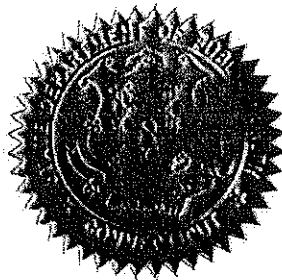
134 General Hospital beds

This license expires **March 31, 2013** and may be revoked for cause at any time.

Dated at Hartford, Connecticut, April 1, 2011. RENEWAL.

Satellites:

The Counseling Center, 440 North Main Street, Bristol, CT



*Jewel Mullen*

Jewel Mullen, MD, MPH, MPA  
Commissioner



**ATTACHMENT Q**  
**DESCRIPTION OF PROPOSED BUILDING WORK, INCLUDING**  
**FLOOR PLANS**

## Forty Slice CT Unit – Room Re-configuration

### **Summary.**

Introduction of a 2<sup>nd</sup> CT unit within the radiology department shall be accomplished by re-configuring the existing X-ray suite , room # 01-C-02 ( 268sf) , an office , room # 01-C-13 (94sf) and 3 dressings rooms , (50sf), totaling 412sf.

### **Suggested Scope of Work.**

#### General Conditions & Co-ordination Services

- Architectural , structural and engineering services by registered engineers and architects, final mechanical , electrical design, debris removal , project management w/ on site supervision.

#### Demolition

- Remove all existing flooring , vinyl base , ceiling tile, core drilling or saw cutting concrete.

#### Ceilings

- Install new 2'x2' acoustical ceiling panels with new metal grid suspended from existing deck

#### Flooring

- Floor covering to be sheet vinyl, with floor leveling for new 40 slice unit.

#### Specialities

- Control room wall and observation window modifications , including conduit wall feeds and isolation connectors.

#### Painting

- All walls shall be prepared as required to receive two coat finish paint in accordance with finish schedule.

#### Roofing

- All flashing and roof preparation , including support rails for a new chiller unit.

#### HVAC

- All HVAC re-configuration of the new space shall be per mechanical design scope, including controls, duct and supply and return distribution grills, balancing.

## Forty Slice CT Unit – Room Re-configuration

### Plumbing

- All plumbing per mechanical design, to support HVAC with CW supply and return.

### Electrical

- All electrical work shall be per electrical design , in accordance with design-build MEP specifications. Specific scope elements to be included are room lighting, power feeds to the new CT Unit , chiller unit, local duct heating elements, re-located outlets, control room supply, and low voltage consideration to support cable feed installation from server location, conduit protection, wall terminations.

### Budget Estimate to support 40 CT Slice Installation:

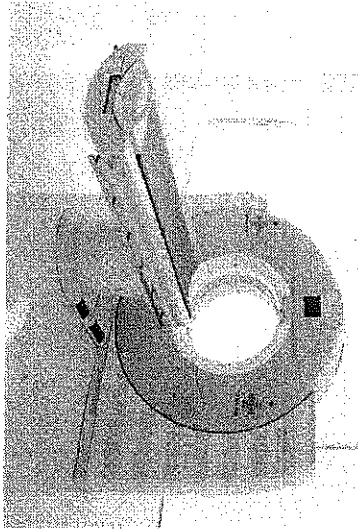
A. Front- End --Loading...	= \$ 15,000.
B. General Conditions ...	= \$ 20,000.
C. Demolition ...	= \$ 7,500.
D. Concrete Patch/floor leveling	= \$ 3,500.
E. Structural framing ...	= \$ 5,400.
F. Ceilings ...	= \$ 9,700.
G. Flooring ...	= \$ 11,000.
H. Specialities...	= \$ 13,000
I. Painting ...	= \$ 8,500.
J. Roofing mod for chiller rails ...	= \$ 6,300.
K. HVAC...	= \$ 11,300.
L. Plumbing ...	= \$ 6,400.
M. Electrical ...	= \$ 40,000.
N. Architect...	= \$ 14,000.
O. Mech/Structural Eng/Design...	= \$ 7,300.
P. Permits ...	= \$ 1,800.
Q. Sub-total ...	= \$180,700.
R. 7.5 % Profit/Overhead...	= \$ 11,553.
S. Sub-total...	= \$194, 253
T. <u>3% Contingency ...</u>	<u>= \$ 7,770.</u>
<b>Sub-total</b>	<b>\$ 200,000.</b>

# BRISTOL HOSPITAL

Brewster Rd  
Bristol, CT 06011

SOMATOM DEFINITION AS 20 CT

40



### Contents:

Sheet No. Description

### Project Contacts:

Siemens  
Project Manager  
Sam Demerits  
Phone: (607) 221-4893  
Voice Mail: (610) 448-4827 Ext:  
sam.demerits@siemens.com

Planner  
Joan Dillon

Project #: 1100309

**SIEMENS**  
SIEMENS MEDICAL SOLUTIONS  
51 Valley Stream Parkway  
Malvern, PA 19355  
www.usa.siemens.com/medical

**SIEMENS**

Issue #: A  
Date: 02/08/11

SOMATOM DEFINITION AS 20 CT  
CT SUITE

BRISTOL HOSPITAL

### ARCHITECTURAL EQUIPMENT PLAN

**DELIVERY:**  
 Equipment is to be delivered to the site in a timely manner. The contractor is responsible for coordinating the delivery of all equipment to the site and ensuring that it is properly stored and protected from damage.

**ROOM MEASUREMENTS:**  
 All room dimensions are to be verified by the contractor prior to installation. The contractor is responsible for ensuring that the equipment is installed in the correct location and orientation.

**MAXIMUM DISTANCES:**  
 The maximum distance between the server and the console is 100 feet. The maximum distance between the server and the network is 50 feet. The maximum distance between the console and the network is 50 feet.

**NOISE LEVEL:**

Equipment	Power (W)	Distance (ft)	Noise Level (dB)
Server	1000	10	70
Console	500	10	65
Network	100	10	60

**ENVIRONMENTAL/POWER AUDIT:**  
 The equipment is to be installed in a room that meets the following requirements: temperature 68-72°F, humidity 40-60%, and power 100-120V AC. The room must also have adequate ventilation and fire protection.

**ENVIRONMENTAL REQUIREMENTS:**

Parameter	Requirement
Temperature	68-72°F
Humidity	40-60%
Power	100-120V AC
Ventilation	Adequate
Fire Protection	Adequate

**POWER QUALITY:**  
 The equipment is to be installed in a room that has a power quality of at least 95%. The contractor is responsible for ensuring that the power quality is maintained throughout the life of the equipment.

**REMOTE SYSTEM DIAGNOSTICS:**  
 The equipment is to be installed in a room that has a remote system diagnostics capability. The contractor is responsible for ensuring that the remote system diagnostics capability is maintained throughout the life of the equipment.

**CUSTOMER & ACCESSORY NOTES:**  
 The equipment is to be installed in a room that has a customer and accessory notes capability. The contractor is responsible for ensuring that the customer and accessory notes capability is maintained throughout the life of the equipment.

**FINISHED ROOM HEIGHT:**  
 The finished room height is to be 8 feet. The contractor is responsible for ensuring that the finished room height is maintained throughout the life of the equipment.

**ARCHITECTURAL NOTES:**

- Verify all room dimensions prior to installation.
- Ensure that the equipment is installed in the correct location and orientation.
- Ensure that the equipment is protected from damage during installation and operation.
- Ensure that the equipment is maintained throughout the life of the equipment.

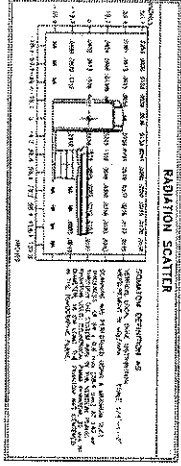
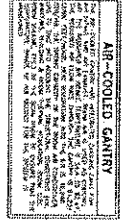
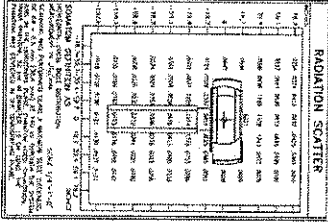
**SITE READINESS GUIDELINES:**

- Verify that the room meets the environmental requirements.
- Verify that the room has adequate power and ventilation.
- Verify that the room has fire protection.
- Verify that the room has a remote system diagnostics capability.
- Verify that the room has a customer and accessory notes capability.

**RESOURCE LIST (SAS USE ONLY)**

Resource	Quantity
Server	1
Console	1
Network	1

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION



**POWER REQUIREMENTS**

Equipment	Power (kW)	Voltage (V)	Current (A)
Control Panel	1.5	230	6.5
Motor	5.0	230	21.7
Transformer	10.0	230	43.5
Generator	15.0	230	65.2
Control System	2.0	230	8.7
Power Supply	3.0	230	13.0
Emergency Stop	0.5	230	2.2
Lighting	1.0	230	4.3
Heating	5.0	230	21.7
Cooling	10.0	230	43.5
Compressor	15.0	230	65.2
Motor	20.0	230	87.0
Generator	25.0	230	108.7
Control Panel	1.5	230	6.5
Motor	5.0	230	21.7
Transformer	10.0	230	43.5
Generator	15.0	230	65.2
Control System	2.0	230	8.7
Power Supply	3.0	230	13.0
Emergency Stop	0.5	230	2.2
Lighting	1.0	230	4.3
Heating	5.0	230	21.7
Cooling	10.0	230	43.5
Compressor	15.0	230	65.2
Motor	20.0	230	87.0
Generator	25.0	230	108.7

**ATTENTION:**

Technical specifications and safety notes regarding the radiation scatter system, including maximum weight, dimensions, and safety protocols.

**BRISTOL HOSPITAL**

**SIEMENS**

**R-501**

1100309

Form with fields for name, address, and contact information.

REFERENCE DOCUMENT - NOT FOR CONSTRUCTION

**ATTACHMENT R**  
**EQUIPMENT VENDOR QUOTE**

# SIEMENS

Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway, Malvern, PA 19355  
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE  
Tegan Gonzalez - (781) 454-5132

Customer Number: 0000004874

Date: 7/5/2011

**BRISTOL HOSPITAL INC**  
41 BREWSTER RD  
BRISTOL, CT 06010

Siemens Medical Solutions USA, Inc. is pleased to submit the following quotation for the products and services described herein at the stated prices and terms, subject to your acceptance of the terms and conditions on the face and back hereof, and on any attachment hereto.

<u>Table of Contents</u>	<u>Page</u>
SOMATOM Definition AS 40-slice Configuration .....	2
General Terms and Conditions .....	5
Warranty Information .....	11
Detailed Technical Specifications .....	12
Cut Sheets .....	following page 19

Proposal valid until 8/19/2011

This Quotation is specific to Bristol Hospital and contains information which is confidential and proprietary to Siemens, including but not limited to discounts and pricing. The Customer may not distribute or disclose this quotation or any portion hereof to, or discuss any of the information (including pricing) contained herein with, any other customer or consultant, buying group, or other third party.

Pricing in this proposal is contingent upon Customer signing a POS Service contract on the equipment for a period of 5 (five) years.

Bristol Hospital reserves the right to upgrade the same Definition AS-40 as quoted in this offer to a Definition AS-64. The upgrade can only be executed between 18 to 48 months from the date of the AS40 installation and for a price not to exceed \$200,000.00.

This order is contingent upon CON approval from the State of Connecticut for this project. If CON approval is denied by the State of Connecticut for this project, then Bristol Hospital may cancel this order without penalty or recourse from Siemens Medical Solutions.

Accepted and Agreed to by:

**Siemens Medical Solutions USA, Inc.**

By (sign): \_\_\_\_\_  
Name: Tegan Gonzalez  
Title: Account Executive  
Date: \_\_\_\_\_

**BRISTOL HOSPITAL INC**

By (sign): \_\_\_\_\_  
Name: \_\_\_\_\_  
Title: \_\_\_\_\_  
Date: \_\_\_\_\_

All pages of the signed proposal must be returned to Siemens to process the order - Thank you.



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51 Valley Stream Parkway, Malvern, PA 19355  
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Quote Nr:	1-2AF7H6 Rev. 9
Terms of Payment:	00% Down, 80% Delivery, 20% Installation Free On Board: Destination
Purchasing Agreement:	NOVATION (UHC, VHA, Provista)  NOVATION (UHC, VHA, Provista) terms and conditions apply to Quote Nr 1-2AF7H6

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## SOMATOM Definition AS 40-slice Configuration

All items listed below are included for this system: (See Detailed Technical Specifications at end of Proposal.)

Qty	Part No.	Item Description
1	14420859	<b>SOMATOM Definition AS (40 Slice)</b> The SOMATOM Definition AS (AS, 40-slice configuration) is Siemens' state-of-the-art single source CT that offers the possibility to maximize clinical outcome and to minimize radiation dose. The ultimate goal is to provide medical professionals more time to take better care of their patients. With this, it is set to raise the standard of patient-centric productivity. Using Siemens' z-Sharp technology the SOMATOM Definition AS can provide fast sub-millimeter volume coverage and very high spatial resolution. The high rotation time of 0.33 seconds delivers excellent temporal resolution. With Siemens' new FAST - Fully Assisting Scanner Technologies - the SOMATOM Definition AS can simplify typically time consuming and complex procedures: the scanning process gets more intuitive and the results become more reproducible. Its comprehensive low dose portfolio includes many unique features like CARE kV that sets the ideal voltage for every examination or industry's first Adaptive Dose Shield that prevents clinically irrelevant over radiation in spiral scanning. Additionally, its large bore of 78 cm opens CT to all patients, meaning that virtually no patient is excluded.
1	14428075	<b>IRIS #AWP</b> Iterative Reconstruction in Image Space (IRIS) allows to enhance spatial resolution and to reduce image noise by introducing multiple iterative steps in the reconstruction process, thus allowing dose reduction
1	14420773	<b>FAST CARE Platform</b> Siemens' unique FAST CARE platform is set to raise the standard of patient-centric productivity. Utilizing FAST - Fully Assisting Scanner Technologies -, typically time-consuming and complex procedures during the scan process are extremely simplified and automated, not only improving workflow efficiency, but optimizing the overall clinical outcome by creating reproducible results, making diagnosis more reliable and reducing patient burden through streamlined examinations. Siemens' desire for as little radiation exposure as possible lies at the heart of the CARE - Combined Applications to Reduce Exposure - research and development philosophy offering a unique portfolio of dose saving features, many of them being introduced as industry's first.
1	14420771	<b>CARE Child</b> Dedicated pediatric CT imaging, including 70 kV scan modes and specific CARE Dose4D curves and protocols
1	14428058	<b>Gantry tilt incl. tilted spiral</b> Allows for sequential scanning with a tilted gantry between +/- 30°, depending on the vertical position of the table. Using the gantry tilt sensitive organs (like eye lenses) can be moved out of the scan range or it eases access during interventional procedures. The tilted spiral allows to utilize the gantry tilt for spiral scan modes.
1	14408152	<b>UHR</b> UHR mode delivers Ultra High resolution in plane of up to 24lp/cm for high defined imaging of small structures such as inner ear, joints or fractures of the bone
1	14410057	<b>SOMATOM Definition AS</b> SOMATOM Definition AS Basic configuration
1	14408032	<b>Rear cover incl. gantry panels</b> Rear Cover including gantry control panels with control functionality from the backside.

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Qty	Part No.	Item Description
1	14408094	<b>Keyboard English</b> Keyboard in the above-mentioned language.
1	14408022	<b>Cooling System Air</b> SOMATOM Definition AS air cooling for the dissipation of heat generated in the gantry.
1	14408031	<b>Cable loom 25 m</b> Cable loom used to connect the power distribution system (PDS) with the gantry.
1	14420777	<b>Patient Table 2000 mm</b> Patient table to support up to 200cm scan range. Motor-driven table height adjustment from min. 48 cm to max. 92 cm, longitudinal movement of the tabletop 200 cm in increments of 0.5 mm, positioning accuracy +/- 0.25 mm from any direction. Horizontal scan range 200 cm. Table height can be controlled alternatively by means of foot switch (2 each on both sides of the patient table). In the case of emergency stop or power failure, the tabletop can also be moved manually in horizontal direction. Max. table load: 227 kg/500 lbs, Table feed speed: 2-200 mm/s, Distance between gantry front and table base 40 cm. Positioning aids: Positioning mattress, mattress protector, head-arm support (inclusive cushion), and non-tiltable head holders with positioning cushion set, patient restraining system for head fixation, restraining-strap set with body fixation strap that can be directly connected to the patient table top, headrest, table extension with positioning mattress, knee-leg support.
1	14408181	<b>Headrest #D</b> For the comfortable positioning of the patient's head on the tabletop of the patient table.
1	14408182	<b>Tiltable Head Holder</b> Tiltable Head Holder for the fixation of the patient's head. Tilt range between +30 (ill) - 15 degree.
1	14408142	<b>Mat for table extension #D</b> For the comfortable positioning of the patient on the CT table extension.
1	14408101	<b>Computer Desk #AWP</b> New CT desk to accommodate the control components and color monitor. Width: 1200 mm, Depth: 800 mm, Height: 720 mm.
1	14408102	<b>Computer Cabinet #AWP</b> New cabinet to accommodate the computer system and UPS. Matched to the design of the control console table. Width: 800 mm, Depth: 800 mm, Height: 720 mm
1	14408106	<b>syngo Security Package #AWP</b> Software option for syngo based SOMATOM systems, providing enhanced security features including user management and audit trail functionality.
1	CT_PM	<b>CT Project Management</b>
1	CT_STD_RIG_JNST	<b>CT Standard Rigging and Installation</b>
1	CT_INITIAL_32	<b>Initial onsite training 32 hrs</b>
2	CT_INT_SYN_BCLS	<b>Basic syngo Class</b>
1	CT_FOLLOWUP_P_12	<b>Follow-up training 12 hrs</b>
1	CT_JKMSUITE_ECLS	<b>CT syngo Security Virtual Instructor Led</b>
1	CTSP4002	<b>CT SLICKER; SENSATION AND VOLUME ZOOM</b>
1	CTSDEF01	<b>CT SLICKER; SOMATOM Definition</b>
1	4SPAS014	<b>Low Contrast CT Phantom &amp; Holder</b>
1	CT_ADDL_RIGGING	<b>Additional Rigging CT for Leveling kit and off-hours delivery @ \$4,000</b>
		<b>System Total: \$595,000</b>

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**OPTIONS:**

Qty	Part No.	Item Description	Extended Price	Initial to Accept
1	14420772	<b>X-CARE</b> Partial scanning to reduce direct X-ray exposure for the most dose-sensitive body regions, e.g. the breasts, thyroid gland or eye lens	+ \$17,500	X
1	14420778	<b>Multi Purpose Table</b> Patient table to support up to 200cm scan range. Motor-driven table height adjustment from min. 48 cm to max. 92 cm, longitudinal movement of the tabletop 200 cm in increments of 0.5 mm, positioning accuracy +/- 0.25 mm from any direction. Horizontal scan range 200 cm. Table height can be controlled alternatively by means of foot switch (2 each on both sides of the patient table). In the case of emergency stop or power failure, the tabletop can also be moved manually in horizontal direction. Max. table load: 227 kg/500 lbs. Table feed speed: 2-200 mm/s, Distance between gantry front and table base 40 cm. Positioning aids: Positioning mattress, mattress protector, head-arm support (inclusive cushion), and non-tiltable head holders with positioning cushion set, patient restraining system for head fixation, restraining-strap set with body fixation strap that can be directly connected to the patient table top, headrest, table extension with positioning mattress, knee-leg support.	+ \$42,000	X
1	14408217	<b>High Cap. Patient &amp; Trauma Tab.Top</b> The high capacity and trauma table top offers the capability to support up to 300 kg/660 lbs of patient weight. It allows easy positioning and transfer from and to the table, due to its flat surface. Special accessories and an extended table top width of 530 mm ensure a safe and comfortable positioning for obese patients.	+ \$35,000	X
1	14408218	<b>High Cap. Patient &amp; Trauma Acc Kit</b> The High capacity and Trauma accessory kit contains additional Patient restraint set with a width of 400mm and additional table extensions for feet and head.	+ \$2,800	X
1	14414734	<b>Mattress for Bariatric Table Top</b> This mat is used for scanning non-bariatric patients on the flat, bariatric table top. Placing this mat on the bariatric table top eliminates the need to exchange the table top when non-bariatric patients are scanned. This mat has a curved profile and enables comfortable positioning of non-bariatric patients.	+ \$2,100	X

**FINANCING:** The equipment listed above may be financed through Siemens. Ask us about our full range of financial products that can be tailored to meet your business and cash flow requirements. For further information, please contact your local Sales Representative.

**ACCESSORIES:** Don't forget to ask us about our line of OEM imaging accessories to complete your purchase. All accessories can be purchased or financed as part of this order. To purchase accessories directly or to receive our accessories catalog, please call us directly at 1-888-222-9944 ext. 7 or contact your local Sales Representative.

**COMPLIANCE:** Compliance with legal and internal regulations is an integral part of all business processes at Siemens. Possible infringements can be reported to our Helpdesk "Tell us" function at [www.siemens.com/tell-us](http://www.siemens.com/tell-us).

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## Siemens Medical Solutions USA, Inc. General Terms and Conditions

### 1. GENERAL

**1.1 Contract Terms.** These terms and conditions constitute an integral part of any contract between the Seller identified on the first page hereof to sell products ("Products") and Purchaser and shall govern the sale of the Products. Seller shall not be bound by, and specifically objects to, any terms, conditions or other provisions which are different from or in addition to the provisions of this Agreement (whether or not it would materially alter this Agreement) which is proffered by Purchaser in any purchase order, receipt, acceptance, confirmation, correspondence or otherwise (even if provided to Seller concurrently with this Agreement), unless Seller specifically agrees to any such provision in a writing signed by Seller. Neither Seller's lack of objection to any such terms, nor delivery of the Products or provision of any services hereunder, shall constitute the agreement of Seller to any such terms. Purchaser acknowledges that this is a commercial and not a consumer transaction.

**1.2 Acceptance.** Purchaser shall be deemed to have assented to, and waived any objection to, this Agreement upon the earliest to occur of any of the following: Purchaser's completion or execution of this Agreement; Purchaser's acceptance of all or any part of the Products subject to this Agreement; Purchaser's issuance of a purchase order for any Products identified on Seller's quotation or proposal; or delivery of the Products to the common carrier for shipment pursuant hereto.

**1.3 Refurbished/Used Products.** For Products identified on the Agreement as used or refurbished Products, these Products have been previously owned and used. When delivered to Purchaser, the Products may have received mechanical, electrical and/or cosmetic reconditioning, as needed, and will comply with the manufacturer's specifications. Since pre-owned Products may be offered simultaneously to several customers, the sale of such Products to Purchaser cannot be guaranteed and is subject to continuing availability at the time Purchaser accepts Seller's offer to sell the Products. If the Products are no longer available, Seller will use its best efforts to identify other products in its inventory that may be suitable for purchase by Purchaser, and if substitute products are not acceptable to Purchaser, then Seller will cancel the order and refund to Purchaser any deposits previously paid. The warranty period for any used or refurbished Products will be separately stated on the quotation.

**1.4 Third Party Products.** If this Agreement includes the sale of third party products not manufactured by Seller, then Purchaser agrees and acknowledges that (a) Purchaser has made the selection of these products on its own, (b) the products are being acquired by Seller solely at the request of and for the benefit of Purchaser, in order to eliminate the need for Purchaser to issue a separate purchase order to the manufacturer of the products, (c) no representation, warranty or guarantee has been made by Seller with respect to the products, (d) the obligation of Purchaser to pay Seller for the products is absolute and unconditional, (e) Purchaser will assert no claim whatsoever against the Seller with respect to the products, and will look solely to the manufacturer regarding any such claims, (g) Purchaser will indemnify and hold Seller harmless from and against any and all claims, regardless of the form of action, related to, resulting from or caused by the products or any work or service provided by the manufacturer of the products or any other party, (h) use of the products may be subject to the Purchaser's agreement to comply with any software licensing terms imposed by the manufacturer, as well as any applicable laws, rule and regulations; and (i) the manufacturer, and not Seller, is solely responsible for any required installation, testing, validation, tracking, product recall, warranty service, maintenance, support, and complaint handling, as well as any other applicable FDA regulatory requirements.

### 2. PRICES

**2.1 Quotations.** Unless otherwise agreed to in writing or set forth in the quotation, all prices quoted by Seller are based on U.S. dollars, and include standard and customary packaging. F.O.B. terms are set forth in Section 5.2 hereof. Domestic prices apply only to purchasers located in, and who will use the Products in, the U.S. International prices apply to all purchasers located outside of, or who will use or ship or facilitate shipment of the Products outside of, the U.S. Unless otherwise stated, the quotation shall only be valid for forty-five (45) days from the date of the quotation.

**2.2 Delay in Acceptance of Delivery.** Should the agreed delivery date be postponed by Purchaser, Seller shall have the right to deliver to storage at Purchaser's risk and expense, and payments due upon delivery shall become due when Seller is ready to deliver.

**2.3 Escalation.** Unless otherwise agreed to in writing, except as to goods to be delivered within six (6) months of Seller's acceptance of Purchaser's order, Seller reserves the right to increase its prices to those in effect at the time of shipment.

### 3. TAXES

**3.1** Any sales, use or manufacturer's tax which may be imposed upon the sale or use of Products, or any property tax levied after readiness to ship, or any excise tax, license or similar fee required under this transaction, shall be in addition to the quoted prices and shall be paid by Purchaser. Notwithstanding the foregoing, Seller agrees to honor any valid exemption certificate provided by Purchaser.

### 4. TERMS OF PAYMENT

**4.1 Payments; Due Date.** Unless otherwise set forth in the quotation, Seller's payment terms are as follows: an initial deposit of 10% of the purchase price for each Product is due upon submission of the purchase order, an additional 80% of the purchase price is due upon delivery of each Product, and the final 10% of the purchase price is due upon completion of installation or when the Products are available for first patient use, whichever occurs first. Unless otherwise agreed, all payments other than the initial deposit are due net thirty (30) days from the date of invoice. Seller shall have no obligation to complete installation until the payment due upon delivery of the Product is received. All amounts payable pursuant to this Agreement are denominated in United States dollars, and Purchaser shall pay all such amount in lawful money of the United States. Partial shipments shall be billed as made, and payments for such shipments will be made in accordance with the foregoing payment terms. In the event that Purchaser makes any payments hereunder by credit card, Seller has the right to charge the Purchaser any credit card fees imposed on the Seller by the financial institution.

**4.2 Late Payment.** A service charge of 1 1/2% per month, not to exceed the maximum rate allowed by law, shall be made on any portion of Purchaser's outstanding balance which is not paid within thirty (30) days after invoice date, which charge shall be determined and compounded on a daily basis from the due date until the date paid. Payment of such service charge shall not excuse or cure Purchaser's breach or default for late payment. In addition, in the event that Purchaser fails to make any payment to Seller within this thirty (30) day period, including but not limited to any payment under any service contract, promissory note or other agreement with Seller, then Seller shall have no obligation to continue performance under any agreement with Purchaser.

**4.3 Payment of Lesser Amount.** If Purchaser pays, or Seller otherwise receives, a lesser amount than the full amount provided for under this Agreement, such payment or receipt shall not constitute or be construed other than as on account of the earliest amount due Seller. Seller may accept any check or payment in any amount without prejudice to Seller's right to recover the balance of the amount due or to pursue any other right or remedy. No endorsement or statement on any check or payment or in any letter accompanying a check or payment or elsewhere shall constitute or be construed as an accord or satisfaction.

**4.4 Where Payment Due Upon Installation or Completion.** Should any terms of payment provide for either full or partial payment upon installation or completion of installation or thereafter, and the installation or completion is delayed for any reason for which Seller is not responsible, then the Products shall be deemed installed upon delivery and, if no other terms were agreed upon in writing signed by the parties, the balance of payments shall be due no later than thirty (30) days from delivery regardless of the actual installation date.

**4.5 Default/Termination.** Each of the following shall constitute an event of default under this Agreement: (i) a failure by Purchaser to make any payment due Seller within ten (10) days of receipt of notice of non-payment from Seller; (ii) a failure by Purchaser to perform any other obligation under this Agreement within thirty (30) days of receipt of notice from Seller; (iii) a default by Purchaser or any affiliate of Purchaser under any other obligation to or agreement with Seller, Siemens Financial Services, Inc. or Siemens Medical Solutions Health Services Corporation, or any assignee of the foregoing (including, but not limited to, a promissory note, lease, rental agreement, license agreement or purchase contract); or (iv) the commencement of any insolvency, bankruptcy or similar proceedings by or against the Purchaser (including any assignment by Purchaser for the benefit of creditors). Upon the occurrence of any event of default, at Seller's election: (a) the entire amount of any indebtedness and obligation due Seller under this Agreement and interest thereon shall become immediately due and payable without notice, demand, or period of grace; (b) Seller may suspend the performance of any of Seller's obligations hereunder, including, but not limited to, obligations relating to delivery, installation and warranty services; (c) Purchaser shall put Seller in possession of the Products upon demand; (d) Seller may enter any premises where the Products are located and take possession of the Products without notice or demand and without legal proceedings; (e) at the request of Seller, Purchaser shall

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assemble the Products and make them available to Seller at a place designated by Seller which is reasonable and convenient to all parties; (f) Seller may sell or otherwise dispose of all or any part of the Products and apply the proceeds thereof against any indebtedness or obligation of Purchaser under this Agreement (Purchaser agrees that a period of 10 days from the time notice is sent to Purchaser shall be a reasonable period of notification of sale or other disposition of the Products by or for Seller); (g) if this Agreement or any indebtedness or obligation of Purchaser under this Agreement is referred to an attorney for collection or realization, Purchaser shall pay to Seller all costs of collection and realization (including, without limitation, a reasonable sum for attorneys' fees, expenses of title search, all court costs and other legal expenses) incurred thereby; and (h) Purchaser shall pay any deficiency remaining after collection or realization by Seller on the Products. In addition, Seller may terminate this Agreement upon written notice to Purchaser in the event that Purchaser is not approved for credit or upon the occurrence of any material adverse change in the financial condition or business operations of Purchaser.

**4.6 Financing.** Notwithstanding any arrangement that Purchaser may make for the financing of the purchase price of the Products, the parties agree that any such financing arrangement shall have no effect on the Purchaser's payment obligations under this Agreement, including but not limited to Sections 4.1 and 4.2 above.

## 5. EXPORT TERMS

**5.1** Unless other arrangements have been made, payment on export orders shall be made by irrevocable confirmed letter of credit, payable in U.S. dollars against Seller's invoice and standard shipping documents. Such letter of credit shall be in an amount equal to the full purchase price of the Products and shall be established in a U.S. bank acceptable to Seller. Purchaser shall procure all necessary permits and licenses for shipment and compliance with any governmental regulations concerning control of final destination of Products.

**5.2** Purchaser shall not, directly or indirectly, violate any U.S. law, regulation or treaty, or any other international treaty or agreement, relating to the export or reexport of any Product or associated technical data, to which the U.S. adheres or with which the U.S. complies. Purchaser shall defend, indemnify and hold Seller harmless from any claim, damage, liability or expense (including but not limited to reasonable attorney's fees) arising out of or in connection with any violation of the preceding sentence. If Purchaser purchases a Product at the domestic price and exports such Product, or transfers such Product to a third party for export, outside of the U.S., Purchaser shall pay to Seller the difference between the domestic price and the international retail price of such Product pursuant to the payment terms set forth herein. Purchaser shall deliver to Seller, upon Seller's request, written assurance regarding compliance with this section in form and content acceptable to Seller.

## 6. DELIVERY, RISK OF LOSS

**6.1 Delivery Date.** Delivery and completion schedules are approximate only and are based on conditions at the time of acceptance of Purchaser's order by Seller. Seller shall make every reasonable effort to meet the delivery date(s) quoted or acknowledged, but shall not be liable for any failure to meet such date(s). Partial shipments may be made.

**6.2 Risk of Loss; Title Transfer.** Unless otherwise agreed to in writing, the following shall apply:

(a) For Products that do not require installation by Seller or its authorized agent or subcontractor, and for options and add-on products purchased subsequent to delivery and installation of Products purchased under this Agreement, delivery shall be complete upon transfer of possession to common carrier, F.O.B. Shipping Point, whereupon title to and all risk of loss, damage to or destruction of the Products shall pass to Purchaser.

(b) For Products that require installation by Seller or its authorized agent or subcontractor, delivery shall be complete upon delivery of the Products to Purchaser's designated site, F.O.B. Destination; title to and all risk of loss, damage to or destruction of such Products shall pass to Purchaser upon completion of the installation by Seller or its authorized agent or subcontractor.

(c) All freight charges and other transportation, packing and insurance costs, license fees, custom duties and other similar charges shall be the sole responsibility of the Purchaser unless included in the purchase price or otherwise agreed to in writing by Seller. In the event of any loss or damage to any of the Products during shipment, Seller and Purchaser shall cooperate in making a claim against the carrier.

## 7. SECURITY INTEREST/FILING

**7.1** From the F.O.B. point, Seller shall have a purchase money security interest in the Products (and all accessories and replacements thereto and all proceeds thereof) until payment in full by Purchaser and satisfaction of all other obligations of Purchaser hereunder. Purchaser hereby (i) authorizes Seller to file (and Purchaser shall promptly execute, if requested by Seller) and (ii)

irrevocably appoints Seller its agent and attorney-in-fact to execute in the name of Purchaser and file, with such authorities and at such locations as Seller may deem appropriate, any Uniform Commercial Code financing statements with respect to the Products and/or this Agreement. Purchaser also agrees that an original or a photocopy of this Agreement (including any addenda, attachments and amendments hereto) may be filed by Seller as a Uniform Commercial Code financing statement. Purchaser further represents and covenants that (a) it will keep the Products in good order and repair until the purchase price has been paid in full, (b) it will promptly pay all taxes and assessments upon the Products or the use thereof, (c) it will not attempt to transfer any interest in the Products until the purchase price has been paid in full, and (d) it is solvent and financially capable of paying the full purchase price for the Products.

## 8. CHANGES, CANCELLATION, AND RETURN

**8.1** Orders accepted by Seller are not subject to change except upon written agreement.

**8.2** Orders accepted by Seller are noncancellable by Purchaser except upon Seller's written consent and payment by Purchaser of a cancellation charge equal to 10% of the price of the affected Products, plus any shipping, insurance, inspection and refurbishment charges; the cost of providing any training, education, site evaluation or other services; and any return, cancellation or restocking fees with respect to any Third Party Products ordered by Seller on behalf of Purchaser. Seller may retain any payments received from Purchaser up to the amount of the cancellation charge. In no event can an order be cancelled by Purchaser or Products be returned to Seller after shipment has been made.

**8.3** Seller shall have the right to change the manufacture and/or design of its Products if, in the judgment of Seller, such change does not alter the general function of the Products.

## 9. FORCE MAJEURE

**9.1** Seller will make every effort to complete shipment, and installation where indicated, but shall not be liable for any loss or damage for delay in delivery, inability to install or any other failure to perform due to causes beyond its reasonable control including, but not limited to, acts of government or compliance with any governmental rules or regulations, acts of God or the public, war, civil commotion, blockades, embargoes, calamities, floods, fires, earthquakes, explosions, storms, strikes, lockouts, labor disputes, or unavailability of labor, raw materials, power or supplies. Should such a delay occur, Seller may reasonably extend delivery or production schedules or, at its option, cancel the order in whole or part without liability other than to return any unearned deposit or prepayment.

## 10. WARRANTY

**10.1** Seller warrants that the Products manufactured by Seller and sold hereunder shall be free from defects in material or workmanship under normal use and service for the warranty period. The final assembled Products shall be new although they may include certain used, reworked or refurbished parts and components (e.g., circuit boards) that comply with performance and reliability specifications and controls. Seller's obligation under this warranty is limited, at Seller's option, to the repair or replacement of the Product or any part thereof. Unless otherwise set forth in the Product Warranty attached hereto and incorporated herein by reference, the warranty period shall commence upon the earlier of the date that the Products have been installed in accordance with 12.6 hereof, which date shall be confirmed in writing by Seller, or first patient use, and shall continue for 12 consecutive months. Seller makes no warranty for any Products made by persons other than Seller or its affiliates, and Purchaser's sole warranty therefor, if any, is the original manufacturer's warranty, which Seller agrees to pass on to Purchaser, as applicable. The warranty provided by Seller under this Section 10 extends only to the original Purchaser, unless the Purchaser obtains the Seller's prior written consent with respect to any sale or other transfer of the Equipment during the term of the warranty.

**10.2** No warranty extended by Seller shall apply to any Products which have been damaged by fire, accident, misuse, abuse, negligence, improper application or alteration or by a force majeure occurrence as described in Section 9 hereof or by the Purchaser's failure to operate the Products in accordance with the manufacturer's instructions or to maintain the recommended operating environment and line conditions; which are defective due to unauthorized attempts to repair, relocate, maintain, service, add to or modify the Products by the Purchaser or any third party or due to the attachment and/or use of non-Seller supplied equipment, parts or software, without Seller's prior written approval; which failed due to causes from within non-Seller supplied equipment, parts or software; which have been damaged from the use of operating supplies or consumable parts not approved by Seller. In addition, no warranty extended by Seller shall apply to any transducer or probe failure due to events such as cracking from high impact drops, cable rupture from rolling equipment over the cable, or delamination from cleaning

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51 Valley Stream Parkway, Malvern, PA 19355  
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE  
Tegan Gonzalez - (781) 454-5132

with inappropriate solutions. Seller's obligation under this warranty is limited to the repair or replacement, at Seller's option, of defective parts. Seller may effectuate such repair at Purchaser's facility, and Purchaser shall furnish Seller safe and sufficient access for such repair. Repair or replacement may be with parts or products that are new, used or refurbished. Repairs or replacements shall not interrupt, extend or prolong the term of the warranty. Purchaser shall, upon Seller's request, return the noncomplying Product or part to Seller with all transportation charges prepaid, but shall not return any Product or part to Seller without Seller's prior written authorization. Purchaser shall pay Seller its normal charges for service and parts for any inspection, repair or replacement that is not, in Seller's sole judgment, required by noncompliance with the warranty set forth in Section 10.1. Seller's warranty does not apply to consumable materials, disposables, supplies, accessories and collateral equipment, except as specifically stated in writing or as otherwise set forth in the Product Warranty attached hereto and incorporated herein by reference, nor to products or parts thereof supplied by Purchaser.

10.3 This warranty is made on condition that immediate written notice of any noncompliance be given to Seller and Seller's inspection reveals that the Purchaser's claim is valid under the terms of the warranty (i.e., that the noncompliance is due to traceable defects in original materials and/or workmanship).

10.4 Purchaser shall provide Seller with full and free access to the Products, network cabling and communication equipment as is reasonably necessary for Seller to provide warranty service. This access includes establishing and maintaining connectivity to the Products via VPN IPsec Tunneling (non-client) Peer-to-Peer connection, modem line, internet connection, broadband internet connection or other secure remote access reasonably required by Seller, in order for Seller to provide warranty service, including remote diagnostics, monitoring and repair services.

10.5 Warranty service will be provided without charge during Seller's regular working hours (8:30-5:00), Monday through Friday, except Seller's recognized holidays. If Purchaser requires that service be performed other than during these times, such service can be made available at an additional charge, at Seller's then current rates. The obligations of Seller described in this section are Seller's only obligations and Purchaser's sole and exclusive remedy for a breach of product warranty.

10.6 SELLER MAKES NO WARRANTY OTHER THAN THE ONE SET FORTH HEREIN AND IN THE ATTACHED PRODUCT WARRANTY COVERING THE APPLICABLE PRODUCT CATEGORY. SUCH WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING BUT NOT LIMITED TO ANY EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR PARTICULAR PURPOSES, AND SUCH CONSTITUTES THE ONLY WARRANTY MADE WITH RESPECT TO THE PRODUCTS AND ANY DEFECT, DEFICIENCY OR NONCONFORMITY IN ANY PRODUCT, SERVICE OR OTHER ITEM FURNISHED UNDER THIS AGREEMENT.

10.7 In the event of any inconsistencies between the terms of this Section 10 and the terms of the attached Product Warranty, the terms of the attached Product Warranty shall prevail.

## 11. LIMITATION OF LIABILITY

11.1 In no event shall Seller's liability hereunder exceed the actual loss or damage sustained by Purchaser, up to the purchase price of the Products. The foregoing limitation of liability shall not apply to claims for bodily injury or damages to real property or tangible personal property arising as a result of Seller's negligence or a product defect.

11.2 SELLER SHALL NOT BE LIABLE FOR ANY LOSS OF USE, REVENUE OR ANTICIPATED PROFITS, COST OF SUBSTITUTE PRODUCTS OR SERVICES, LOSS OF STORED, TRANSMITTED OR RECORDED DATA, OR FOR ANY INDIRECT, INCIDENTAL, UNFORESEEN, SPECIAL, PUNITIVE OR CONSEQUENTIAL DAMAGES WHETHER BASED ON CONTRACT, TORT (INCLUDING NEGLIGENCE), STRICT LIABILITY OR ANY OTHER THEORY OR FORM OF ACTION, EVEN IF SELLER HAS BEEN ADVISED OF THE POSSIBILITY THEREOF, ARISING OUT OF OR IN CONNECTION WITH THIS AGREEMENT OR THE SALE OR USE OF THE PRODUCTS. THE FOREGOING IS A SEPARATE, ESSENTIAL TERM OF THIS AGREEMENT AND SHALL BE EFFECTIVE UPON THE FAILURE OF ANY REMEDY, EXCLUSIVE OR NOT.

## 12. INSTALLATION - ADDITIONAL CHARGES

12.1 General. Unless otherwise expressly stipulated in writing, the Products covered hereby shall be installed by and at the expense of Seller except that Seller shall not provide rigging or site preparation services unless otherwise agreed to in writing by Seller for an additional charge. Seller will not install accessory items such as cabinets, illuminators, darkroom equipment or processors for X-Ray and CT equipment, unless otherwise agreed to in writing by Seller.

12.2 Installation by Seller. If Seller specifies it will install the Products, the following applies: subject to fulfillment of the obligations set forth in 12.4 below, Seller shall install the Products covered hereby and connect same to the requisite safety switches and power lines to be installed by Purchaser. Except as otherwise specified below, if such installation and connection are performed by Seller's technical personnel, prices shown include the cost thereof, provided that the installation and connection can be performed within the Continental United States or Puerto Rico and during normal business hours. Any overtime charges or other special expenses shall be additional charges to the prices shown.

12.3 Trade Unions. In the event that a trade union, or unions, or other local labor conditions prevent Seller from performing the above work with its own employees or contractors, then Purchaser shall either make all required arrangements with the trade union, or unions, to permit Seller's completion of said work or shall provide the personnel, at Purchaser's sole cost and expense. Moreover, any additional cost incurred by Seller and related to such labor disputes shall be paid by the Purchaser and Seller's obligations under such circumstances will be limited to providing engineering supervision of installation and connection of Seller equipment to existing wiring.

12.4 Purchaser's Obligations. Purchaser shall, at its expense, provide all proper and necessary labor and materials for plumbing service, carpentry work, conduit wiring, and other preparations required for such installation and connection. All such labor and materials shall be completed and available at the time of delivery of the Products by Seller. Additionally, the Purchaser shall provide free access to the premises of installation and, if necessary, safe and secure space thereon for storage of Products and equipment prior to installation by Seller. Purchaser shall be responsible, at its sole cost and expense, for obtaining all permits, licenses and approvals required by any federal, state or local authorities in connection with the installation and operation of the Products, including but not limited to any certificate of need and zoning variances. Purchaser shall provide a suitable environment for the Products and shall ensure, at its sole cost and expense, that its premises are free of asbestos, hazardous conditions and any concealed, unknown or dangerous conditions and that all site requirements are met. Seller shall delay its work until Purchaser has completed the removal of the asbestos or other hazardous materials or has taken any other precautions and completed any other work required by applicable regulations. Purchaser shall reimburse Seller for any increased costs and expenses incurred by Seller that are the result of or are caused by any such delay. In the event that Seller is requested to supervise the installation of the Products, it remains the Purchaser's responsibility to comply with local regulations. Seller is not an architect and all drawings furnished by Seller are not construction drawings.

12.5 Regulatory Reporting. In the event that any regulatory activity is performed by other than Seller authorized personnel, Purchaser shall be responsible for fulfilling any and all reporting requirements.

12.6 Completion of Installation. Installation shall be complete upon the conclusion of final calibration and checkout under Seller's standard procedures to verify that the Products meet applicable written performance specifications. Notwithstanding the foregoing, first use of the Products by Purchaser, its agents or employees for any purpose after delivery shall constitute completion of installation.

## 13. PATENT, TRADEMARK AND OTHER INFRINGEMENT CLAIMS

13.1 Infringement by Seller. Seller warrants that the Products manufactured by Seller and sold hereunder do not infringe any U.S. patent or copyright. If Purchaser receives a claim that any such Product, or parts thereof, infringe upon the rights of others under any U.S. patent or copyright, Purchaser shall notify Seller immediately in writing. As to all infringement claims relating to Products or parts manufactured by Seller or one of its affiliates:

(a) Purchaser shall give Seller information, assistance and exclusive authority to evaluate, defend and settle such claims.

(b) Seller shall then, at its own expense, defend or settle such claims, procure for the Purchaser the right to use the Products, or remove or modify them to avoid infringement. If none of these alternatives is available on terms reasonable to Seller, then Purchaser shall return the Products to Seller and Seller shall refund to Purchaser the purchase price paid by the Purchaser less reasonable depreciation for Purchaser's use of the Products. The foregoing states Seller's entire obligation and liability, and the Purchaser's sole remedy, for claims of infringement.

13.2 Infringement by Purchaser. If some or all of the Products sold hereunder are made by Seller pursuant to drawings or specifications furnished by the Purchaser, or if Purchaser modifies or combines, operates or uses the Products other than as specified by Seller or with any product, data, software, apparatus or program not provided or approved by Seller, then the indemnity obligation of Seller under Section 13.1 shall be null and void and should a claim be made that such Products infringe the rights of any third party under patent, trademark or otherwise, then Purchaser shall indemnify and hold Seller

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harmless against any liability or expense, including reasonable attorneys' fees, incurred by Seller in connection therewith.

## 14. DESIGNS AND TRADE SECRETS; LICENSE; CONFIDENTIALITY

14.1 Any drawings, data, designs, software programs or other technical information supplied by Seller to Purchaser in connection with the sale of the Products are not included in the sale of the Products to Purchaser, shall remain Seller's property and shall at all times be held in confidence by Purchaser. Such information shall not be reproduced or disclosed to others without Seller's prior written consent.

14.2 For all goods purchased hereunder which utilize software for their operation, such "Applications Software" shall be licensed to Purchaser under the terms of Seller's Software License Schedule as attached hereto.

14.3 Diagnostic/Maintenance Software is not included under 14.2 above, is available only as a special option under a separate Diagnostic Materials License Agreement and may be subject to a separate licensing fee.

14.4 Seller and Purchaser shall maintain the confidentiality of any information provided or disclosed to the other party relating to the business, customers and/or patients of the disclosing party, as well as this Agreement and its terms (including the pricing and other financial terms under which the Purchaser will be purchasing the Products hereunder). Each party shall use reasonable care to protect the confidentiality of the information disclosed, but no less than the degree of care it would use to protect its own confidential information, and shall only disclose the other party's confidential information to its employees and agents having a need to know this information. The obligations of confidentiality set forth herein shall not apply to any information in the public domain at the time of disclosure or that is required to be disclosed by court order or by law.

## 15. ENGINEERING CHANGES

15.1 Seller makes no representation that engineering changes which may be announced in the future will be suitable for use on, or in connection with, the Products.

## 16. ASSIGNMENT

16.1 Neither party may assign any rights or obligations under this Agreement without the written consent of the other and any attempt to do so shall be void, except that Seller may assign this Agreement without consent to any subsidiary or affiliated company, and may delegate to authorized subcontractors or service suppliers any work to be performed under this Agreement so long as Seller remains liable for the performance of its obligations under this Agreement. This Agreement shall inure to and be binding upon the parties and their respective successors, permitted assigns and legal representatives. Seller shall have no obligations under this Agreement to any assignee of Purchaser that is not approved by Seller in advance.

## 17. DAMAGES, COSTS AND FEES

17.1 In the event that any dispute or difference is brought arising from or relating to this Agreement or the breach, termination or validity thereof, the prevailing party shall NOT be entitled to recover from the other party any punitive damages. The prevailing party shall be entitled to recover from the other party all reasonable attorneys' fees incurred, together with such other expenses, costs and disbursements as may be allowed by law.

## 18. MODIFICATION

18.1 This Agreement may not be changed, modified or amended except in writing signed by duly authorized representatives of the parties.

## 19. GOVERNING LAW; WAIVER OF JURY TRIAL

19.1 This Agreement shall be governed by the laws of the Commonwealth of Pennsylvania.

19.2 EACH OF THE PARTIES EXPRESSLY WAIVES ALL RIGHTS TO A JURY TRIAL IN CONNECTION WITH ANY DISPUTE UNDER THIS AGREEMENT.

## 20. COST REPORTING

20.1 Purchaser agrees that it will fully and accurately account for and report in all cost reports and otherwise fully and accurately disclose to federal and state health care program payors and fully and accurately reflect where and as appropriate to the applicable reimbursement methodology, all services and other items, including any and all discounts, received from Seller under this Agreement, in compliance with all applicable laws, rules and regulations, including but not limited to the Social Security Act and implementing regulations relating to Medicare, Medicaid and other federal and state health care reimbursement programs.

## 21. INTEGRATION

21.1 These terms and conditions, including any attachments or other documents incorporated by reference herein, constitute the entire agreement and the complete and exclusive statement of agreement with respect to the subject matter hereof, and supersede any and all prior agreements, understandings and communications between the parties with respect to the Products.

## 22. SEVERABILITY; HEADINGS

22.1 No provision of this Agreement which may be deemed unenforceable will in any way invalidate any other portion or provision of this Agreement. Section headings are for convenience only and will have no substantive effect.

## 23. WAIVER

23.1 No failure and no delay in exercising, on the part of any party, any right under this Agreement will operate as a waiver thereof, nor will any single or partial exercise of any right preclude the further exercise of any other right.

## 24. NOTICES

24.1 Any notice or other communication under this Agreement shall be deemed properly given if given in writing and delivered in person or mailed, properly addressed and stamped with the required postage, to the intended recipient at its address specified on the face hereof. Either party may from time to time change such address by giving the other party notice of such change in accordance with this section.

## 25. RIGHTS CUMULATIVE

25.1 The rights and remedies afforded to Seller under this Agreement are in addition to, and do not in anyway limit, any other rights or remedies afforded to Seller by any other agreement, by law or otherwise.

## 26. END USER CERTIFICATION

26.1 Purchaser represents, warrants and covenants that it is acquiring the Products for its own end use and not for reselling, leasing or transferring to a third party (except for lease-back financings).

# SIEMENS

Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway, Malvern, PA 19355  
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE  
Tegan Gonzalez - (781) 454-5132

## Software License Schedule to the Siemens Medical Solutions USA, Inc. General Terms and Conditions

### 1. DEFINITIONS: The following definitions apply to this Schedule:

"Agreement" shall mean the attached (i) Quotation for Products and/or Services including the Terms and Conditions of Sale and applicable schedules; and/or (ii) Software License Agreement describing the software licensed herein and the specific system for which the license is issued.

"Licensor" shall mean Siemens Medical Solutions USA, Inc.

"Licensee" shall mean the end-user to whom Licensor provides Software or Documentation for its internal use under the Agreement.

"Software" shall mean the software described in the attached Agreement, including the following as contained therein: (i) software programs consisting of a series of statements or instructions to be used directly or indirectly in a programmable controller or computer to bring about a certain result and (ii) databases consisting of systemized collections of data to be used or referenced directly or indirectly by a programmed controller or computer. Notwithstanding the foregoing, "Software" does not include "firmware" as such term is conventionally understood. Diagnostic/Maintenance Software also is not included within the scope of the Software licensed under this Schedule, and is available only as a special option under a separate Diagnostic Materials License Agreement and may be subject to a separate licensing fee.

"Documentation" shall mean the documents and other supporting materials which are intended to support the use of an associated product, including (but not limited to) instructions, descriptions, flow charts, logic diagrams and listings of the Software, in text or graphic form, on machine readable or printed media.

"Designated Unit" shall mean a single control unit or computer identified on the first page of the Agreement, on which Software licensed hereunder may be used by Licensee.

2. SCOPE: The following terms and conditions shall apply to all Software and Documentation provided by Licensor to Licensee under the Agreement (whether included with other products listed in the Agreement or listed separately in the Agreement), together with any updates or revisions thereto which Licensor may provide to Licensee, and all copies thereof, except any Software and/or Documentation licensed directly by Licensor's supplier under a separate end-user license agreement accompanying the Software or the Documentation, in which case Licensee agrees to be bound by that license agreement as a condition to using the Software and/or Documentation. Except as expressly provided herein, and provided that in no event shall the warranties or other obligations of Licensor with respect to such Software or Documentation exceed those set forth in this Schedule, this Schedule shall be subject to the liability limitations and exclusions and other terms and conditions set forth in the Agreement. **ANY USE OF THE SOFTWARE, INCLUDING BUT NOT LIMITED TO USE ON THE DESIGNATED UNIT, WILL CONSTITUTE LICENSEE'S AGREEMENT TO THIS SOFTWARE LICENSE SCHEDULE (OR RATIFICATION OF ANY PREVIOUS CONSENT).**

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5. UPDATES AND REVISIONS: During the warranty period or under a separate service contract or software update subscription, revised or updated versions of the Software licensed under this Schedule may be made available, at Licensor's option, to Licensee to use or to test while Licensee continues use of a previous version. Licensee has the right to decide whether to install any such revised or updated versions or to continue use of the previous version after giving due regard to the United States Food and Drug Administration rules and regulations. However, Licensee shall pay Licensor for any services necessitated by any modifications of the Software by Licensee or by Licensee's failure to utilize the current non-investigational version of the Software provided by Licensor. Software updates that provide new features or capabilities or that require hardware changes will be offered to Licensee at purchase prices established by Licensor. Licensor retains the sole right to determine whether an update represents an enhancement of a previously purchased capability or a new capability for which the Licensee will be charged. In addition, some updates may require Applications Training performed by Licensor's personnel that will be offered at Licensor's prevailing rates. Licensor retains the sole right to determine whether an update requires such training.

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Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway, Malvern, PA 19355  
Fax: (866) 309-6992

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Tegan Gonzalez - (781) 454-5132

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Revised 03/15/05

# SIEMENS

Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway, Malvern, PA 19355  
Fax: (866) 309-6992

SIEMENS REPRESENTATIVE  
Tegan Gonzalez - (781) 454-5132

## CT Warranty Information

<u>Equipment</u> (New Systems and "Proven Excellence" Refurbished Systems Only)	<u>Period of Warranty</u> <sup>1</sup>	<u>Coverage</u>	
CT System (not including consumables)	12 month	Full Warranty (parts & labor, including all tubes)	
<b><u>Post-Warranty (after expiration of system warranty) – Replacement parts only!</u></b>			
Straton	Prorated to a maximum of 160,000 scan seconds or 12 month whichever occurs first	Prorated credit given to customer against replacement cost	credit percentage = $(160,000 - \text{scan-seconds used}) / 160,000 * 100$
Single Tank tube with rotating anode (non spiral) (Rotanx)	Prorated to a maximum of 60,000 scans or 12 month whichever occurs first	Prorated credit given to customer against replacement cost	credit percentage = $(60,000 - \text{scans used}) / 60,000 * 100$
Single Tank tube with rotating anode (spiral) (Rotanx)	Prorated to a maximum of 130,000 scanseconds or 12 months whichever occurs first	Prorated credit given to customer against replacement cost	credit percentage = $(130,000 - \text{scanseconds used}) / 130,000 * 100$
Opti 151 and Opti 157 tube	Prorated to a maximum of 60,000 scans or 12 months whichever occurs first	Prorated credit given to customer against replacement cost	credit percentage = $(60,000 - \text{scans used}) / 60,000 * 100$
All other Dura tubes and Opti 131 tube	Prorated to a maximum of 130,000 scanseconds or 12 months whichever occurs first	Prorated credit given to customer against replacement cost	credit percentage = $(130,000 - \text{scanseconds used}) / 130,000 * 100$
Dura Akron B tubes	Prorated to a maximum of 150,000 scanseconds or 12 months whichever occurs first	Prorated credit given to customer against replacement cost	credit percentage = $(150,000 - \text{scanseconds used}) / 150,000 * 100$
Dura Akron Q tubes	Prorated to a maximum of 120,000 scanseconds or 12 months whichever occurs first	Prorated credit given to customer against replacement cost	credit percentage = $(120,000 - \text{scanseconds used}) / 120,000 * 100$
Cathode-ray tubes (CRT)	12 months		
Spare Parts	6 months	Parts only	
Consumables	Not covered		

Note: Optional extended warranty coverage can be obtained by purchase of a service agreement.

<sup>1</sup> Period of warranty commences from the date of first use or completion of installation, whichever occurs first. In the event the completion of installation is delayed for reasons beyond Siemens' control, the stated warranty period shall commence 60 days after delivery of equipment.

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SIEMENS REPRESENTATIVE  
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## Detailed Technical Specifications

### SOMATOM Definition AS 40-slice Configuration

Part No. / Product	Description
14420859 SOMATOM Definition AS (40 Slice)	<p>The SOMATOM Definition AS (AS, 40-slice configuration) is founded on Siemens' proprietary UFC detector system and the revolutionary STRATON X-ray source. In combination with Siemens' z-Sharp Technology, FAST (Fully Assisting Scanner Technologies) and CARE (Combined Applications to Reduce Exposure) solutions as well as Siemens exclusive CT Clinical Engines options, the SOMATOM Definition AS (AS, 40-slice configuration) offers unprecedented image quality and detail at significantly reduced patient exposure, as well as substantially increased diagnostic speed and confidence thus raising the standard of patient-centric productivity.</p> <p>The STRATON source provides direct oil cooling of the anode, eliminating the need for heat storage capacity (0 MHU). The resulting small and compact design enables an unprecedented cooling rate of 7.3 MHU/min as well as reliable performance even when operating at a high rotation time of 0.33 sec. In combination with the HeartView CT option temporal resolution of 165 ms of the SOMATOM Definition AS (AS, 40-slice configuration) allows to reliably scan even high heart rates, e.g. in acute chest pain evaluation, in coronary visualization, and in functional analysis of the heart.</p> <p>Together with the unique z-Sharp Technology that routinely enables the industry's highest isotropic and scan field position independent spatial resolution of up to 0.24 mm voxel size, it visualizes the smallest anatomical structures with exceptional quality, whether the complex inner-ear bones, the finest details of the coronary tree or intracranial, pulmonary, mesenteric, renal and peripheral vessels. It also helps to perform accurate stenosis measurements or stent planning with outstanding precision. Neuro head image quality is significantly improved with Neuro BestContrast, by optimizing grey/white matter differentiation without increase in radiation dose.</p> <p>The UFC (Ultra Fast Ceramics) detector of the SOMATOM Definition AS (AS, 40-slice configuration) acquires 40 slices per rotation.</p> <p>In combination with a 78 cm large bore, 200 cm scan range (optional), and the 80 kW generator power, it adapts to virtually any patient independent of size or condition, helping to save precious time from scan to diagnosis to treatment. When doing interventional CT for example, the easy patient access enables fast positioning of interventional instruments and thus provides a larger and more comfortable sterile environment. Or for emergency room examinations, the large bore of the SOMATOM Definition AS (AS, 40-slice configuration) virtually eliminates the necessity to reposition and adjust life support equipment. Additionally, positioning and scanning of bariatric patients is significantly simplified while improving patients comfort.</p> <p>With all this, the SOMATOM Definition AS (AS, 40-slice configuration) offers the unique combination of industry's highest image detail and a very high sub-millimeter volume coverage enabling fast whole body examinations - adapting to challenging patients such as poly-trauma and incautious or uncooperative patients, leading to an improvement in image quality and patient comfort.</p> <p>Siemens has developed many significant products and protocols that follow the "As Low as Reasonably Achievable" (ALARA) principle to reduce radiation dose to the lowest possible level. This desire for as little radiation exposure as possible lies at the heart of our CARE - Combined Applications to Reduce Exposure - research and development philosophy. The SOMATOM Definition AS (AS, 40-slice configuration) consequently offers a unique portfolio of dose saving features, many of them being industry's first like the Adaptive Dose Shield, CARE kV or 70kV scan modes. Using Siemens' CARE solutions radiation dose can be significantly reduced compared to conventional CT systems.</p> <p>With the introduction of Siemens' unique FAST CARE platform, the SOMATOM Definition AS (AS, 40-slice configuration) is set to raise the standard of patient-centric productivity. Utilizing FAST - Fully Assisting Scanner Technologies -, typically time-consuming and complex procedures during the scan process are extremely simplified and automated, not only improving workflow efficiency, but optimizing the overall clinical outcome by creating reproducible results, making diagnosis more reliable and reducing patient burden through streamlined examinations.</p> <p>With its unique Adaptive 4D Spiral scan mode (optional) the SOMATOM Definition AS (AS, 40-slice configuration) overcomes the coverage limitations in dynamic CT imaging when using a static detector and allows for up to 8 cm coverage in dynamic CT imaging.</p>

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Fax: (866) 309-6992

SIEMENS REPRESENTATIVE  
Tegan Gonzalez - (781) 454-5132

Part No. / Product	Description
<p>(Continued) 14420859 SOMATOM Definition AS (40 Slice)</p>	<p>In addition the SOMATOM Definition AS (AS, 40-slice configuration) optionally offers a built in 3D minimal invasive suite, enabling 3D guided interventions with full control of the radiologist due to the all new wireless in-room control.</p> <p>Also the SOMATOM Definition AS (AS, 40-slice configuration) offers the widest range of clinical applications options, which allow performing everything from fast and confident diagnoses to comprehensive reporting in only a matter of minutes, reviewing results before the patient is off the table.</p> <p>1. Gantry: Aperture: 78 cm; power supplied via low-voltage slip ring. Scanning system: Detector system based on Siemens' proprietary UFC (ultra fast ceramics) with 23,552 elements, 40 detector electronic channels (DAS) utilized for up to 40 slices/rotation acquisition, and 1,472 measuring channels per slice (The measuring system can contain replacement components).</p> <p>In cases of very low signal at the detector (e.g. when scanning bariatric patients), the Adaptive Signal Boost improves image quality by amplifying individual pixels based on an analysis of the surrounding image data. It reduces streaks and noise and maintains the correct HU values for large patients.</p> <p>Spiral acquisition modes 40-slice configuration: 16 x 0.3 mm (optional with z-UHR), 40 x 0.6 mm, 8 x 0.6 mm (UHR), 16 x 1.2 mm.</p> <p>Sequence acquisition modes 40-slice configuration: 40x0.6mm, 20x0.6 mm, 8x0.6 mm (UHR), 2x1mm, 6x1.2 mm, 16x1.2 mm, 12x1.2mm, 1x5 mm, 1x10 mm</p> <p>Three laser light markers: Horizontal, sagittal, and vertical laser light that shows the isocenter position of the scan plane.</p> <p>2. Tube Assembly: Source: STRATON high performance X-ray source. Tube current range: Single source 20-666 mA; Tube anode heat storage capacity 0 MHU. Cooling rate 7.3 MHU/min (5,400 kJ/min). Focal spot size according to IEC 60336: 0.7 x 0.7 mm/7°, 0.9 x 1.1 mm/7°. Computer controlled monitoring of anode temperature. Multifan principle with flying focal spot.</p> <p>3. High Power X-ray Generator: Microprocessor-controlled, low-noise high-frequency generator with integrated, automatic self-testing system for continuous monitoring of operation. Settings: High-voltage range 70, 80, 100, 120 and 140 kV; power max. 80 kW (depends on clinic network), adjustable in fine steps.</p> <p>4. z-Sharp Technology: The unique STRATON X-ray source utilizes an electron beam that is accurately and rapidly deflected, creating two precise focal spots alternating 4,608 times per second. This doubles the X-ray projections reaching each detector element. The two overlapping projections result in an oversampling in z-direction. The resulting measurements interleave half a detector slice width, doubling the scan information without a corresponding increase in dose. Siemens' proprietary UFC (Ultra Fast Ceramic) detectors and the corresponding 40-slice detector electronics enable a virtually simultaneous readout of two projections for each detector element – resulting in a full 40-slice acquisition. z-Sharp Technology, utilizing the STRATON X-ray sources and the UFC detectors, provides scan speed independent visualization of 0.33 mm isotropic voxels and a corresponding elimination of spiral artifacts in the daily clinical routine at any position within the scan field.</p> <p>5. Control and Evaluation Unit: Control box: CT control with patient intercom, user-recordable patient instruction system, 30 automatic patient instruction (API) text pairs are available in nine languages.</p> <p>syngo Acquisition Workplace: The syngo Acquisition Workplace provides an intelligent and reliable workflow for data acquisition, image reconstruction and routine post-processing at the CT scanner. Built on the unique syngo platform, the syngo Acquisition Workplace is intuitive and user friendly. Computer system: High-performance computer with 1x Xeon Q6700, 2.66GHz, NVIDIA Quadro FX 1700 DVI graphics card for fast 3D post-processing. High resolution, flicker free, 19-inch (48 cm) color flat panel display for medical diagnostic applications combining the demanding requirements of medical imaging with the advantages of liquid crystal displays. This display provides a resolution of 1280 x 1024 and has a wide viewing angle, features high contrast even under high ambient light conditions. Display light output stability is ensured by controlled backlight throughout the whole lifetime. Keyboard and mouse. 8 Gbyte RAM, 146 Gbyte image storage for 260,000 uncompressed images, CD-R 700 MB for 1,100 images. DVD DICOM with 4.7 GB media for 8,400 images.</p>

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<p>(Continued) 14420859 SOMATOM Definition AS (40 Slice)</p>	<p>External USB 2.0 devices for data storage are supported (recommended: Iomega 160 Gbyte External Hard Drive Hi-Speed USB 2.0; Maxtor One Touch 160 Gbyte External Hard Drive).</p> <p>6. CT Image Computer System: Reconstruction computer for the preprocessing and reconstruction of the CT raw data. The reconstruction computer contains of a cluster of 2.2 GHz dual kernel high-performance processors performing the preprocessing and reconstruction of the CT data with up to 40 images per second. The raw data memory is 750 Gbyte.</p> <p>7. Cooling System: SOMATOM Definition AS (AS, 40-slice configuration) can be equipped with either air or water cooling adapting to your room requirements. This optimizes system availability independently of the ambient conditions and reduces expensive reconstruction costs. System operating temperature: 18-28°C, 18 - 75 % rel. humidity (not condensing).</p> <p>8. syngo User Software: syngo features an intuitive and thus easy-to-learn user interface developed from prototypes in close cooperation with users. syngo visualizes the examination in individual process steps on so-called task cards, such as patient registration or examination card. A large number of functions and input parameters as well as the language used can be selected according to individual requirements. Frequently repeated processes can be automated and saved.</p> <p>Patient registration: The system can accept patient data in different ways. These include entering the data via keyboard or transfer of a worklist via network. DICOM Worklist: Software module for accepting lists of patient data and exam. requirements from a Radiology Information Systems (RIS) via DICOM Get Worklist functionality. The program enables very efficient working and ensures consistent patient data. In emergency cases, fast registration is possible. Here the system automatically assigns an emergency number which can later be replaced by the actual patient number. The input profile can be designed individually.</p> <p>Examination card: The SOMATOM Definition AS (AS, 40-slice configuration) is delivered with a large number of predefined examination protocols (e.g. for pediatric applications), making examination planning a very fast and efficient procedure. Example: A three-phase examination of the liver available as independent protocol only needs to be adapted to the patient's individual situation. Each examination is represented pictorially as a so-called "chronicle", which views the individual phases of the examination separately. This has the advantage that the individual phases of the examination can be accessed quickly and selectively and changes to the protocol can be made easily in graphical mode via drag-and-drop using the mouse. With a so-called routine window, it is possible to adapt individual examination parameters, representing a submenu of the essential parameters and giving information at a glance about the parameterization of the examination.</p> <p>Viewing card: On the viewing card it is possible to move interactively with the mouse through the image volume of the ongoing examination. The images of different examinations can be displayed simultaneously for comparison. A large number of functions are available for evaluation, documentation and archiving.</p> <p>Filming card: A virtual film sheet shows a 1:1 display of the film sheets to be printed out, thus enabling an effective preview of filming jobs and rewindowing of the images, as well as providing a large number of evaluation functions. Layout changes are possible interactively with up to 64 images. The printout parameters for the autofilming process running in parallel to acquisition or reconstruction are also defined with the filming card. Freely selectable positioning of images onto film sheet, configurable image text.</p> <p>3D card: Secondary reconstruction calculation: Real-time MPR for real-time reformatting of secondary reconstructions. Slice orientation: coronal, sagittal, oblique and double-oblique. Secondary reconstructions can be determined from the topogram, other MPR views or from a 3D surface reconstruction. Reconstruction with selectable slice thickness.</p> <p>CT Angio: Software for the reconstruction of angular projections from the images of a spiral data record for the display and diagnosis e.g. of aneurysms, plaques, stenoses, vascular anomalies or vascular origins. MIP: Maximum Intensity Projection, MiniP: Minimum Intensity Projection and Thin MIP available. Interfering or irrelevant parts of the image can be eliminated with the integrated volume editor. The angular projections are reconstructed around a definable axis, whereby the maximum CT values in this direction are selected for each angular projection. The resulting images can be viewed with the CINE function as a series of images with a 3D</p>

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Siemens Medical Solutions USA, Inc.  
51 Valley Stream Parkway, Malvern, PA 19355  
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SIEMENS REPRESENTATIVE  
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<p>(Continued) 14420859 SOMATOM Definition AS (40 Slice)</p>	<p>image effect.</p> <p>3D Display: Software for the three-dimensional display of surfaces of a body region from a series of continuous slices, for display and analysis of complex anatomies, e.g. the visceral cranium, pelvis, hips, for the purpose of planning surgical interventions. The 3D objects can be tilted and rotated interactively on the monitor and can also be displayed in relation to multiplanar reconstruction (MPR).</p> <p>Volume card: Volume scans of tissues and organs, based on a "region-growing" algorithm and interactive ROI definition.</p> <p>DynEva card: Software for dynamic evaluation of the contrast enhancement in organs and types of tissues, enabling the reconstruction of</p> <ul style="list-style-type: none"> <li>- Time-density curves (up to 5 ROIs)</li> <li>- Peak-enhancement images</li> <li>- Time-to-peak images.</li> </ul> <p>Video Capture and Editing Tool: Software contains integrated solution for imaging and visualization of 4D information, allowing the generation and editing of video files for improved diagnoses, recording and teaching. A wide range of multimedia formats is supported, e.g. AVI, Flash (SWF), GIF, QuickTime (MOV), streaming video.</p> <p>Additional task cards available as an option.</p> <p>9. Examination and Evaluation Functions:</p> <p>Topogram: Scanning perspectives: a.p., p.a., lat.; length of scan field: 128 – 1574mm (optional up to 1974 mm), width of scan field: 512 mm, 1.5 - 16s (optional 20.22s). The topogram can be switched off manually when the desired examination length is reached.</p> <p>Tomogram: Scan field size: 50 cm. Standard scan times: 0.33, 0.5 and 1 seconds. Slice thickness in sequence: 0.6, 0.75, 1, 1.2, 1.5, 2.0, 2.4, 3.3, 6, 4.0, 4.8, 5, 6, 7, 7.2, 8, 9, 10, 12, 14.4, 15, 20 mm Slice thickness in spiral: 0.4", 0.5", 0.6, 0.75, 1.0, 1.5, 2, 3, 4, 5, 6, 7, 8, 10 mm Real-time image display. Immediate image reconstruction and display without time delay simultaneously to data acquisition in 512 x 512 matrix size.</p> <p>Spiral: Scanning technique for continuous volume scans with continuous table feed in multirotation mode. Max. scan time 100 seconds with full low-contrast resolution. Volume length 1540 mm (optional 1940mm) with full low-contrast resolution (max. 200 cm scan range possible using multiple automatic ranges). Selection of the pitch factor between 0.3 and 1.5 depending on scan mode. Selection of up to 33 separately parameterizable examination ranges in a patient protocol. In addition individual anatomic sections can be successively combined and then scanned automatically. Storage of up to 10,000 examination protocols. Rotation times/cycle: 0.33 sec, 0.5 sec and 1 sec.</p> <p>Adaptive 4D Spiral (optional): Continuous multirotational data acquisition with continuous smooth bi-directional table movement. Quantitative evaluation and graphical display of time-density curves over entire organs.</p> <p>The intelligent algorithm Neuro BestContrast improves native head image quality especially grey/white matter differentiation. Images are decomposed into high and medium/low spatial frequencies. While relevant tissue information is contained in medium and low frequencies noise is dominated by high frequencies. Separate processing of medium and low frequency information improves the tissue contrast without amplifying image noise resulting in a better signal to noise ratio.</p> <p>Dynamic: Program for functional dynamic examinations. Serial scanning technique in one slice position with variable scans cycle times.</p> <p>Multiscan spiral examination without table feed: Continuous multirotational data acquisition in one slice position. Quantitative evaluation and graphical display of time-density curves.</p> <p>WorkStream4D with Asynchronous Recon: 4D workflow with direct generation of axial, sagittal, coronal, or double-oblique images from standard scanning protocols. Elimination of manual reconstruction steps. Asynchronous Recon allows for multiple image reconstructions and reformats, parallel to scanning. With this feature, up to eight reconstructions job requests can be loaded into a scan protocol. Immediately upon completion of the scan acquisition, these reconstruction jobs are automatically executed in the background without delaying the start of next patient examination.</p> <p>Image reconstruction and storage: Image reconstruction in full resolution (512 x 512 matrix) takes place during</p>

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<p>(Continued) 14420859 SOMATOM Definition AS (40 Slice)</p>	<p>the examination with up to 40 images per second, with full cone beam reconstruction, z-Sharp Technology and full image quality. Reconstruction fields of 5 cm to 50 cm through raw data zoom with the possibility of freely selecting the image center either prospectively before each scan or retrospectively. Reconstructions of different slice thicknesses from a single raw data record, e.g. lung soft tissue and lung high-contrast with CombiScan, with simultaneous suppression of partial volume artifacts. Up to 8 reconstructions per scan range can be predefined with the examination protocol. Patient-related storage of the image and raw data.</p> <p>Image display: 1024 x 1024 display matrix; screen splitting configurable up to 64 image segments; CT value scale from -1024 to +3071 HU. For very dense objects, the CT value scale can be extended from -10240 to +30710 HU (extended CT scale) e.g. for suppressing metal artifacts.</p> <p>Image evaluation: Complete software-controlled image evaluation program for all diagnostic requirements.</p> <p>CINE Display: Dynamic display technique for the visualization of time or volume series. A series of up to 1024 images can be displayed at a frame rate of at least 30 f/s. Automatic or interactive mouse-operated control.</p> <p>Multitasking functions: Simultaneous processing during operation of the scanner.</p> <p>Real-time Display: Image reconstruction in pace with the examination in full image quality (512 x 512 matrix) with up to 40 images/second (with full cone beam reconstruction and z-Sharp Technology).</p> <p>Metro Display: Simultaneous display, processing and evaluation of images from other patients while the current patient is being scanned.</p> <p>Metro Documentation: Simultaneous documentation of images from any previously examined patient while the current patient is being scanned.</p> <p>Metro Copy: Automatic transfer of image data to the syngo CT Workplace (optional) or a DICOM network node.</p> <p>10. Network Module: For the connection to a local Ethernet (10, 100 Mbit or 1-Gigabit) in order to communicate with networked printers, diagnostic and therapy workstations, RIS or HIS systems and teleradiology routers.</p> <p>Scope of functions:</p> <ul style="list-style-type: none"> <li>- Configurable network stations.</li> <li>- Unlimited selection of stations.</li> <li>- DICOM Standard (Digital Imaging and Communications in Medicine) for the transfer of information between DICOM-compatible units from different manufacturers. The scope of functions is described in detail in the DICOM Conformance Statement, and the standard version comprises the functions Send/Receive, Query/Retrieve and BasicPrint, Worklist, Storage Commitment, MPPS (Modality Performed Procedure Step).</li> </ul> <p>11. Integrated CARE Solutions: UFC Detector: Up to 30% dose reduction compared to conventional CT detectors. High efficiency for low mAs requirements enable best possible image quality with low patient dose.</p> <p>Adaptive Dose Shield: world's first dynamic tube collimation that protects the patient from clinically irrelevant radiation in every spiral scan.</p> <p>CARE Filter: Specially designed X-ray exposure filter installed at the tube collimator. Up to 25% dose reduction with increased image quality.</p> <p>Pediatric Protocols: Special examination protocols with 80 kV and a large range of adjustable mAs values for optimum adaptation of the radiation exposure to the age and weight of the child to be examined.</p> <p>CARE Topo: Real-time topogram. Manual interruption possible once desired anatomy has been imaged.</p> <p>CARE Bolus: Operating mode for CM-enhancement triggered data acquisition. The objective is optimum utilization of the contrast medium bolus in its "plateau" phase in the target organ. This option has been especially adapted to the increased speed and timing requirements resulting from the multitrow capability and faster rotation. The CM enhancement is observed via monitoring scans in a user-defined ROI with a trigger threshold. As soon as the enhancement reaches its predefined threshold, the spiral scan is triggered as quickly as possible. License for software use on one modality.</p>

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<p>(Continued) 14420859 SOMATOM Definition AS (40 Slice)</p>	<p>12. Siemens Remote Service: Siemens Remote Service (SRS) offers a wide range of medical equipment-related remote services resulting in increased system availability and efficiency. SRS employs sophisticated authentication and authorization procedures, state-of-the-art encryption technologies and logging routines together with strictly enforced organizational measures that provide optimal patient data security and access protection. The following SRS services are included for all service agreement customers and during warranty period:</p> <p>Remote Diagnosis &amp; Repair: In case of an unforeseen system malfunction, Siemens competent experts may directly connect with the CT system in order to identify the problem quickly. Moreover the remote repair function enables Siemens to often correct software errors immediately. Should an engineer on site be required, Remote Diagnosis &amp; Repair allows Siemens to identify defective parts efficiently and accelerate their delivery, thereby keeping repair times to a minimum.</p> <p>Event Monitoring: Event Monitoring screens the performance of the system. If a parameter deviates from a predefined value, a status message is automatically sent to the Siemens UPTIME Service Center. Service Engineers may evaluate the status message at periodic intervals and may initiate appropriate action within the scope of the service agreement.</p> <p>SOMATOM LifeNet: An information and service portal directly at the CT Scanner consoles, featuring up to date information on CT products, application guides, accessories and training schedules as well as download of the latest scan protocols and 90 day free trial licenses on available software applications.</p> <p>Notes on software use: Use of the entire integrated software, including optional software programs, is restricted exclusively to the application with this system.</p> <p>Note: This product is in compliance with IEC60601-1-2 and fulfills CISPR 11 Class A. Note: In a domestic environment this product may cause radio interference in which case the user may be required to take adequate measures.</p>
<p>14428075 IRIS #AWP</p>	<p>Dose reduction with CT has been limited by the currently used filtered back projection (FBP) reconstruction algorithm. When using this conventional reconstruction of acquired raw data into image data, a trade-off between spatial resolution and image noise has to be considered. High spatial resolution increases the ability to see the smallest detail; however, it is directly correlated with increased image noise in standard filtered back projection reconstructions</p> <p>Iterative reconstruction approaches allow decoupling of spatial resolution and image noise. In an iterative Reconstruction in Image Space (IRIS), a correction loop is introduced into the image generation process. To avoid long reconstruction times iterative Reconstruction in Image Space first applies a raw data reconstruction only once. During this initial raw data reconstruction, a newly developed master image is generated that contains the full amount of raw data information, but at the expense of significant image noise. During the following iterative corrections the image noise is removed without degrading image sharpness. In addition, the noise texture of the images is comparable to standard well-established convolution kernels. IRIS clinical benefits are then noise reduction, increased image sharpness, or dose</p>
<p>14420773 FAST CARE Platform</p>	<p>Siemens has always been at the forefront to deliver highest image quality and reduce radiation dose at the same time to the lowest possible level. But today, an additional barrier has to be mastered to maximize clinical outcome: overcome the growing restrictions and limitation of resources. With FAST CARE, Siemens opens a new chapter in CT, explicitly focusing on the optimization of patient-centric productivity in modern healthcare delivery. With FAST CARE, time-consuming and complex procedures such as scan or recon preparations are extremely simplified – ideally reduced to a single click. The scanning process gets more intuitive and the results become more reproducible.</p> <p>The FAST CARE platform consists the following features:</p> <p>FAST Scan Assistant: An intuitive user interface for solving conflicts by changing the scan time, resp. the pitch and/or the maximum tube current manually.</p> <p>CARE kV: First automated, organ-sensitive voltage setting to improve image quality and contrast-to-noise-ratio while optimizing dose and potentially reducing it by up to 60%.</p> <p>CARE Child: Dedicated pediatric CT imaging, including 70 kV scan modes and specific CARE Dose4D curves and protocols</p>



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Tegan Gonzalez - (781) 454-5132

Part No. / Product	Description
(Continued) 14420773 FAST CARE Platform	<p>CARE Profile: Visualization of the dose distribution along the topogram prior to the scan</p> <p>CARE Dashboard: Visualization of activated dose reduction features and technologies for each scan range of an examination to analyze and manage the dose to be applied in the scan</p> <p>CARE Dose Configurator: Enhancement of Siemens' renowned real-time dose modulation CARE Dose4D, introducing new reference curves for each body region and for each body habitus allowing to adjust the configuration even more precisely to the patient's anatomy.</p> <p>Dose Notification: As requested by the new release of the standard IEC 60601 3rd edition, the SOMATOM Definition AS (AS+ Excel Edition, 128-slice configuration) provides the ability to set dose reference values (CTDIvol, DLP) for each scan range. If these reference values are exceeded the Dose Notification window informs the user.</p> <p>Dose Alert: As requested by the new release of the standard IEC 60601 3rd edition, the SOMATOM Definition AS (AS+ Excel Edition, 128-slice configuration) automatically adds up CTDIvol and DLP depending on z-position (scan axis). The Dose Alert window appears, if either of these cumulative values exceeds a user-defined threshold.</p>
14420771 CARE Child	<p>With Siemens' unique STRATON tubes, the tube voltage can now be reduced to 70kV which helps to reduce radiation exposure to patients. With prior tube technology, the minimum tube voltage setting was 80 kV. The new tube voltage setting of 70 kV helps to further reduce the radiation dose to small pediatric or neonate patients.</p> <p>CARE Child consists of:</p> <ul style="list-style-type: none"> <li>- dedicated 70 kV scan modes</li> <li>- new CARE Dose4D curves for children</li> <li>- respective Children Protocol utilizing these features</li> </ul>
14408106 syngo Security Package #AWP	<p>Software license enabling system to support Enhanced User and System management, including:</p> <ul style="list-style-type: none"> <li>- User authentication to prohibit unauthorized access</li> <li>- Privileges to define user/role based functionality</li> <li>- Permissions to control data access</li> <li>- Audit trails to log system and data access.</li> </ul>
CT_PM CT Project Management	<p>A Siemens Project Manager (PM) will be the single point of contact for the implementation of your Siemens equipment. The assigned PM will work with the customer's facilities management, architect or building contractor to assist you in ensuring that your site is ready for installation. Your PM will provide initial and final drawings and will coordinate the scheduling of the equipment, installation, and rigging, as well as the initiation of on-site clinical education.</p>
CT_STD_RIG_INST CT Standard Rigging and Installation	<p>This quotation includes standard rigging and installation of your CT new system.</p> <p>Standard rigging into a room with reasonable access, as determined by Siemens Project Management, during standard working hours (Mon. - Fri. / 8 a.m. to 5 p.m.)</p> <p>It remains the responsibility of the Customer to prepare the room in accordance with the SIEMENS planning documents.</p> <p>Any special rigging requirements (Crane, stairs, etc.) and/or special site requirements (e.g. removal of existing systems, etc.) is an incremental cost and the responsibility of the Customer.</p> <p>All other "out of scope" charges (not covered by the standard rigging and installation) will be identified during the site assessment and remain the responsibility of the Customer.</p>
CT_INITIAL_32 Initial onsite training 32 hrs	<p>Up to (32) hours of on-site clinical education training, scheduled consecutively (Monday - Friday) during standard business hours for a maximum of (4) imaging professionals. Training will cover agenda items on the ASRT approved checklist. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.</p>

# SIEMENS

Siemens Medical Solutions USA, Inc.  
 51 Valley Stream Parkway, Malvern, PA 19355  
 Fax: (866) 309-6992

SIEMENS REPRESENTATIVE  
 Tegan Gonzalez - (781) 454-5132

Part No. / Product	Description
CT_INT_SYN_BCLS Basic syngo Class	Tuition for (1) imaging professional to attend Siemens Classroom Course at Siemens Training Center. The objectives of this class are to introduce the user interface of the common <i>syngo</i> platform, scanning parameters and their effect on image quality, and instructions on building protocols, demonstration of software functions, and hands-on sessions. This class includes lunch, economy airfare, and lodging for (1) imaging professional. All arrangements must be arranged through Siemens designated travel agency. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
CT_FOLLOWUP_12 Follow-up training 12 hrs	Up to (12) hours of follow-up on-site clinical education training, scheduled consecutively (Monday – Friday) during standard business hours for a maximum of (4) imaging professionals. Uptime Clinical Education phone support is provided during the warranty period for specified posted hours. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
CT_IKMSUITE_ECLS CT syngo Security Virtual Instructor Led	Tuition for up to (4) professionals to participate in a Siemens instructor led virtual class. The objectives of this virtual class are to introduce the user interface and configuration options of the <i>syngo</i> Security Package. The training is best suited for the IT 6 and/or PACS administrator. The virtual setting allows the participant to benefit from a 4 hour online-virtual training session without the need to travel to a Siemens training center. This educational offering must be completed (12) months from install end date. If training is not completed within the applicable time period, Siemens obligation to provide the training will expire without refund.
CTSDEF01 CT SLICKER; SOMATOM Definition	<p>Thermoseal seams and flaps deflect fluids, reducing contaminant penetration into the cushion and table. Contaminants are retained on the tabletop or shunted to the floor. Cleanup is faster, more thorough, and contaminant build-up is reduced.</p> <p>Built using heavy, clear, micro matte vinyl, and top grade hook and loop fastening strips (Velcro) to better fit the specified table. Custom vinyl resists tears and minimizes radiologic interference. Expected life is 1 to 2 years depending on usage. Latex free. Set includes CT Skirts.</p> <p>Shipped with main cover, a catheter bag holder, and 3 restraining belts unless otherwise noted.</p> <p>Includes warranty from RADSCAN Medical.</p> <p>This product has been verified for compatibility with the following Siemens' products: SOMATOM Definition. Compatibility with other products cannot be assured and may void service contracts and/or system warranties.</p>

**ATTACHMENT S**

**DESIGNATED STROKE CENTERS**

**DPH PRIMARY STROKE CENTER DASHBOARD – BRISTOL HOSPITAL**

## **PRIMARY STROKE CENTER (PSC) DESIGNATION PROGRAM**

The Primary Stroke Center (PSC) Designation Program is a quality initiative that addresses the public health need for acute care hospitals to ensure rapid diagnostic evaluation and treatment of stroke patients. To be designated a Primary Stroke Center a hospital must demonstrate the capacity to meet criteria adapted from the American Stroke Association practice standards and recommendations from the Brain Attack Coalition. The goal of the program is to decrease premature deaths and disabilities associated with stroke. For more information click on the link below.

### **CONNECTICUT PRIMARY STROKE CENTERS [As of March 2012]**

Bradley Memorial Hospital	Southington
Bridgeport Hospital	Bridgeport
Bristol Hospital	Bristol
Danbury Hospital	Danbury
Day Kimball Hospital	Putnam
Greenwich Hospital	Greenwich
Griffin Hospital	Derby
Hartford Hospital	Hartford
Hospital of Central Connecticut	New Britain
Hospital of Saint Raphael	New Haven
Lawrence & Memorial Hospital	New London
Middlesex Hospital	Middletown
MidState Medical Center	Meriden
New Milford Hospital	New Milford
Norwalk Hospital	Norwalk
Sharon Hospital	Sharon
St. Francis Hospital & Medical Center	Hartford
St. Mary's Hospital	Waterbury
St. Vincent's Medical Center	Bridgeport
Stamford Hospital	Stamford
Waterbury Hospital	Waterbury
William W. Backus Hospital	Norwich
Yale-New Haven Hospital	New Haven

Number of CT Scanners in Connecticut Hospitals

Town	Hospital	Phone #	# of CT Scanners	Bed Capacity	Stroke Center
1 Bridgeport	Bridgeport Hospital	(203) 304-3533	2	373	✓
2 Bridgeport	St. Vincent's Medical Ctr	(203) 576-6000	3	396	✓
Bristol	Bristol Hospital	(203) 585-3300	1	134	✓
3 Danbury	Danbury Hospital	(203) 739-7000	3	326	✓
4 Derby/Shelton	Griffin Hospital	(203) 732-7650	2	119	✓
5 Farmington	UConn Hospital	(860) 679-2000	2	204	✓
6 Greenwich	Greenwich Hospital	(203) 863-3000	3	184	✓
7 Hartford	CT Childrens Medical Ctr	(860) 545-9000	2	147	✓
8 Hartford	Hartford Hospital	(860) 545-2115	3	792	✓
9 Hartford	St. Francis Hospital	(860) 714-4000	3	572	✓
10 Manchester	Manchester Memorial	860-946-1222	2	249	✓
11 Meriden	Middlesex Medical Ctr	(203) 694-8200	2	150	✓
12 Middletown	Middlesex Hospital	(860) 344-6000	2	208	✓
13 Milford	Milford Hospital	(203) 876-4000	1	106	✓
14 New Britain	THCC- New Britain General	(860) 224-5011	3	337	✓
15 New Haven	St. Raphael	(203) 789-3000	2	587	✓
16 New Haven	Yale New Haven	(203) 688-4242	6	879	✓
17 New London	Lawrence & Memorial Hospital	(860) 442-0711	2	242	✓
18 New Milford	New Milford Hospital	(860) 355-2611	1	85	✓
19 Norwalk	Norwalk Hospital	(203) 852-2000	2	292	✓
Putnam	Day Kimball Hospital	(860) 928-6541	1	90	✓
20 Sharon	Sharon Hospital	(860) 394-4000	1	78	✓
21 Southington	THCC- Bradley Memorial	(860) 276-5000	1	42	✓
22 Stafford Springs	Johnson Memorial Medical Ctr	(860) 884-4251	1	101	✓
23 Stamford	Stamford Hospital	(203) 276-1000	2	289	✓
24 Torrington	Charlotte Hungerford	(860) 498-6666	1	109	✓
25 Vernon	Rockville General Hospital	(860) 872-0501	1	234	✓
26 Waterbury	St. Mary's Hospital	(203) 709-6000	2	174	✓

Affiliated with Danbury

Affiliated with THCC

\*\*Bed Capacity stats via: American Hospital Directory-ahd.com 7/2012

\*\*Stroke Center stats via: Department of Public Health-ct.gov/dph 3/2012

**DPH PRIMARY STROKE CENTER DASHBOARD: 2011-2012 Bristol Hospital**

	THRESHOLD	SEPT	OCT	NOV	DEC	JAN	FEB	6 Month Mean 2011/2012	
<b>Emergency Dept. Time Targets (Mean Time)</b>								<b>2011</b>	<b>2012 (MEP)</b>
Door to MD eval.	10	15	24	18	32	17	15	22 min	16 min
Door to Stroke Team Contact	15	15	24	18	32	17	15	22 min	16 min
Door to CT	25	39	50	45	80	62	32	54 min	47 min
Door to CT Interpretation	45	61	71	58	95	72	50	71 min	61 min
Door to Labwork Resulted	45	100	53	106	88	78	79	87 min	79 min
Door to RX Treatment	60	N/A	52	N/A	43	N/A	78	48 min	78 min
<b>Emergency Dept. Percentage of Patients That Met the Time Benchmark Threshold</b>								<b>2011</b>	<b>2012 (MEP)</b>
Door to MD eval.	100%	67%	60%	34%	27%	22%	40%		
Door to Stroke Team Contact	100%	67%	60%	50%	27%	67%	70%		
Door to CT	100%	50%	60%	0%	17%	30%	50%		
Door to CT Interpretation	100%	20%	75%	60%	25%	30%	32%		
Door to Labwork Resulted	100%	0%	20%	0%	9%	11%	50%		
Door to RX Treatment	100%	N/A	100%	N/A	100%	N/A	0%		

**FINANCIAL ATTACHMENT I**

12. C (i). Please provide one year of actual results and three years of projections of Total Facility revenue, expense and volume statistics without, incremental to and with the CON proposal in the following reporting format:

Description	FY 2012 Actual Results		FY 2013 Projected		FY 2014 Projected		FY 2014 Projected		FY 2015 Projected		FY 2015 Projected	
	Revenue	Expense	With CON	Without CON	With CON	Without CON	With CON	Without CON	With CON	Without CON	With CON	Without CON
<b>NET PATIENT REVENUE</b>												
Net Government	\$3,525,000	\$3,525,000	\$3,525,000	\$3,525,000	\$3,525,000	\$3,525,000	\$3,525,000	\$3,525,000	\$3,525,000	\$3,525,000	\$3,525,000	\$3,525,000
Medicare	\$51,141,289	\$51,141,289	\$51,141,289	\$51,141,289	\$51,141,289	\$51,141,289	\$51,141,289	\$51,141,289	\$51,141,289	\$51,141,289	\$51,141,289	\$51,141,289
Medicaid and Other Medical Assistance	\$15,444,361	\$15,444,361	\$15,444,361	\$15,444,361	\$15,444,361	\$15,444,361	\$15,444,361	\$15,444,361	\$15,444,361	\$15,444,361	\$15,444,361	\$15,444,361
Other Government	\$1,132,000	\$1,132,000	\$1,132,000	\$1,132,000	\$1,132,000	\$1,132,000	\$1,132,000	\$1,132,000	\$1,132,000	\$1,132,000	\$1,132,000	\$1,132,000
Total Net Patient Revenue	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000	\$13,000,000
Other Operating Revenue	\$5,188,351	\$5,188,351	\$5,188,351	\$5,188,351	\$5,188,351	\$5,188,351	\$5,188,351	\$5,188,351	\$5,188,351	\$5,188,351	\$5,188,351	\$5,188,351
Revenue from Operations	\$18,188,351	\$18,188,351	\$18,188,351	\$18,188,351	\$18,188,351	\$18,188,351	\$18,188,351	\$18,188,351	\$18,188,351	\$18,188,351	\$18,188,351	\$18,188,351
<b>OPERATING EXPENSES</b>												
Salaries and Fringe Benefits	\$7,216,980	\$7,216,980	\$7,216,980	\$7,216,980	\$7,216,980	\$7,216,980	\$7,216,980	\$7,216,980	\$7,216,980	\$7,216,980	\$7,216,980	\$7,216,980
Professional / Contracted Services	\$12,276,820	\$12,276,820	\$12,276,820	\$12,276,820	\$12,276,820	\$12,276,820	\$12,276,820	\$12,276,820	\$12,276,820	\$12,276,820	\$12,276,820	\$12,276,820
Supplies and Drugs	\$20,119,780	\$20,119,780	\$20,119,780	\$20,119,780	\$20,119,780	\$20,119,780	\$20,119,780	\$20,119,780	\$20,119,780	\$20,119,780	\$20,119,780	\$20,119,780
Bad Debt	\$5,470,262	\$5,470,262	\$5,470,262	\$5,470,262	\$5,470,262	\$5,470,262	\$5,470,262	\$5,470,262	\$5,470,262	\$5,470,262	\$5,470,262	\$5,470,262
Other Operating Expense	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000	\$3,500,000
Subtotal	\$29,583,842	\$29,583,842	\$29,583,842	\$29,583,842	\$29,583,842	\$29,583,842	\$29,583,842	\$29,583,842	\$29,583,842	\$29,583,842	\$29,583,842	\$29,583,842
Depreciation/Amortization	\$5,201,473	\$5,201,473	\$5,201,473	\$5,201,473	\$5,201,473	\$5,201,473	\$5,201,473	\$5,201,473	\$5,201,473	\$5,201,473	\$5,201,473	\$5,201,473
Interest Expense	\$1,061,824	\$1,061,824	\$1,061,824	\$1,061,824	\$1,061,824	\$1,061,824	\$1,061,824	\$1,061,824	\$1,061,824	\$1,061,824	\$1,061,824	\$1,061,824
Lease Expense	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Operating Expense	\$35,847,139	\$35,847,139	\$35,847,139	\$35,847,139	\$35,847,139	\$35,847,139	\$35,847,139	\$35,847,139	\$35,847,139	\$35,847,139	\$35,847,139	\$35,847,139
Gain/(Loss) from Operations	\$1,341,212	\$1,341,212	\$1,341,212	\$1,341,212	\$1,341,212	\$1,341,212	\$1,341,212	\$1,341,212	\$1,341,212	\$1,341,212	\$1,341,212	\$1,341,212
Plus: Non-Operating Revenue	\$4,224,972	\$4,224,972	\$4,224,972	\$4,224,972	\$4,224,972	\$4,224,972	\$4,224,972	\$4,224,972	\$4,224,972	\$4,224,972	\$4,224,972	\$4,224,972
Revenue Over/(Under) Expense	\$5,566,184	\$5,566,184	\$5,566,184	\$5,566,184	\$5,566,184	\$5,566,184	\$5,566,184	\$5,566,184	\$5,566,184	\$5,566,184	\$5,566,184	\$5,566,184
PTEN			854.6	1	855.5	1	855.5	1	854.6	1	855.5	1

Net Patient Revenue  
 Net patient revenue projected without CON includes programmatic CT scan growth of 38, 148 and 153 for FY 2013, 2014, and 2015 respectively  
 Projected incremental net patient revenue is based on 216 cases that will be donated due to CT downtime FY 2010 through FY 2010 includes 171.  
**Salary Expense**  
 Projected incremental salary expenses includes CT recruitment at \$80,000 including benefits less 25,000 of additional salary expenses incurred in 2012 due to CT down time prior to CON. FY 2013 includes 112. FY 2015 includes a 2% inflation factor  
 Projected incremental contracted services includes \$130,000 for the service contracts for the CT unit. FY 2014 includes 172 of the cost  
 Other Operating Expense  
 Projected incremental other operating expense is reduced by \$24,856 which is additional expense incurred due to CT down time prior to the CON. FY 2013 includes 112 and FY 2015 includes 172 of the cost



**FINANCIAL ATTACHMENT II**

12.C(ii). Please provide three years of projections of incremental revenue, expense and volume statistics attributable to the proposal in the following reporting format:

Type of Service Description	CT SCANS Procedure	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Type of Unit Description:	Procedure	# of Months in Operation	Rate	Units	Gross Revenue Col. 2 * Col. 3	Allowances/ Deductions	Charity Care	Bad Debt	Net Revenue Col. 4 - Col. 5 - Col. 6 - Col. 7	Operating Expenses Col. 1 Total *	Gain/(Loss) from Operations Col. 8 - Col. 9
<b>FY 2013</b>											
FY Projected Incremental Total Incremental Expenses:		1	\$2,620								
<b>Total Facility by Payer Category:</b>											
Medicare			\$2,302	8	\$18,416	\$13,321	\$0	\$184	\$4,911	\$1,103	\$3,808
Medicaid			\$2,302	4	\$9,208	\$6,778			\$2,430	\$552	\$1,878
CHAMPUS/Tricare			\$2,302	1	\$2,302	\$1,903			\$399	\$138	\$261
<b>Total Governmental</b>				13	\$29,926	\$22,002	\$0	\$184	\$7,740	\$1,793	\$5,947
Commercial Insurers			\$2,302	0	\$13,812	\$7,963	\$138	\$276	\$5,435	\$827	\$4,608
Uninsured			\$2,302	0	\$0				\$0	\$0	\$0
<b>Total NonGovernment</b>				6	\$13,812	\$7,963	\$138	\$276	\$5,435	\$827	\$4,608
<b>Total All Payers</b>				19	\$43,738	\$29,965	\$138	\$460	\$13,175	\$2,620	\$10,555

Type of Service Description	CT SCANS Procedure	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Type of Unit Description:	Procedure	# of Months in Operation	Rate	Units	Gross Revenue Col. 2 * Col. 3	Allowances/ Deductions	Charity Care	Bad Debt	Net Revenue Col. 4 - Col. 5 - Col. 6 - Col. 7	Operating Expenses Col. 1 Total *	Gain/(Loss) from Operations Col. 8 - Col. 9
<b>FY 2014</b>											
FY Projected Incremental Total Incremental Expenses:		12	\$40,346								
<b>Total Facility by Payer Category:</b>											
Medicare			\$2,302	91	\$209,482	\$148,452	\$0	\$2,095	\$58,935	\$16,998	\$41,937
Medicaid			\$2,302	53	\$122,006	\$92,844			\$29,162	\$9,800	\$19,262
CHAMPUS/Tricare			\$2,302	2	\$4,604	\$3,606			\$796	\$374	\$424
<b>Total Governmental</b>				146	\$336,092	\$245,102	\$0	\$2,095	\$88,895	\$27,271	\$61,624
Commercial Insurers			\$2,302	67	\$154,234	\$82,126	\$1,542	\$3,085	\$67,479	\$12,515	\$54,964

Uninsured	\$2,302	3	\$9,905	\$0	\$4,834	\$345	\$1,727	\$560	\$1,166
<b>Total NonGovernment</b>	\$2,302	70	\$161,140	\$82,126	\$6,377	\$3,430	\$69,206	\$13,075	\$56,130
<b>Total All Payers</b>	\$2,302	216	\$497,232	\$327,230	\$6,377	\$5,525	\$158,101	\$40,346	\$117,755

Type of Service Description: CT SCANS  
 Type of Unit Description: Procedure  
 # of Months in Operation: 12

FY 2015  
 FY Projected Incremental Total Incremental Expenses: \$151,000

Total Facility by Payer Category:

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		Rate	Units	Gross Revenue Col. 2 * Col. 3	Allowances/ Deductions	Charity Care	Bad Debt	Net Revenue Col. 4 - Col. 5 - Col. 6 - Col. 7	Operating Expenses Col. 1 Total * Col. 4 / Col. 4 Total	Gain/(Loss) from Operations Col. 8 - Col. 9
Medicare		\$2,302	91	\$209,482	\$148,452	\$0	\$2,095	\$58,935	\$63,616	(\$4,681)
Medicaid		\$2,302	53	\$122,006	\$92,844			\$29,162	\$37,051	(\$7,889)
CHAMPUS/Tricare		\$2,302	2	\$4,604	\$3,806			\$798	\$1,398	(\$600)
<b>Total Governmental</b>			146	\$336,092	\$245,102	\$0	\$2,095	\$88,895	\$102,065	(\$13,170)
Commercial Insurers		\$2,302	67	\$154,234	\$80,725	\$1,542	\$3,085	\$63,882	\$46,838	\$22,044
Uninsured		\$2,302	3	\$6,905	\$0	\$4,834	\$945	\$1,727	\$2,097	(\$371)
<b>Total NonGovernment</b>		\$2,302	70	\$161,140	\$80,725	\$6,377	\$3,430	\$70,609	\$48,935	\$21,673
<b>Total All Payers</b>		\$2,302	216	\$497,232	\$325,827	\$6,377	\$5,525	\$159,504	\$151,000	\$8,504



**STATE OF CONNECTICUT**  
DEPARTMENT OF PUBLIC HEALTH  
*Office of Health Care Access*

March 5, 2013

VIA ELECTRONIC MAIL ONLY

Ms. Shelia Kempf  
Senior Vice President Patient Care Services  
Chief Nursing Officer  
Bristol Hospital  
41 Brewster Road  
Bristol, CT 06010

Ms. Marie Marciano  
Director of Diagnostic Services  
Bristol Hospital  
41 Brewster Road  
Bristol, CT 06010

RE: Certificate of Need Application; Docket Number:13-31821-CON  
Bristol Hospital  
Proposal to Acquire a 40 Slice Computed Tomography Scanner to be located Bristol  
Hospital, 41 Brewster Road, Bristol, CT

Dear Ms. Kempf and Ms. Marciano:

On February 4, 2013, the Office of Health Care Access ("OHCA") received your initial Certificate of Need ("CON") application filing on behalf of Bristol Hospital, for the acquisition and operation of a 40 slice computed tomography scanner ("CT") scanner to be located at 41 Brewster Road in the city of Bristol. The total capital expenditure related to this proposal is \$795,000.

OHCA has reviewed the CON application and requests the following additional information pursuant to Connecticut General Statutes §19a-639a(c):

1. Please provide the following information regarding the Hospital's existing and proposed CT scanners:
  - a. Age of the CT scanner;
  - b. Has the scanner been refurbished or has it received any hardware or software updates? If so, please explain.
  - c. General condition of the scanner;

*An Equal Opportunity Provider*  
*(If you require aid/accommodation to participate fully and fairly, contact us either by phone, fax or email)*  
410 Capitol Ave., MS#13HCA, P.O.Box 340308, Hartford, CT06134-0308  
Telephone: (860) 418-7001 Fax: (860) 418-7053 Email: OHCA@ct.gov

- d. Are there any add-ons or attachments to the base model CT scanner for specified imaging function?
2. On page 24 of the CON application, the Hospital reported that in 2012 the Siemens CT scanner was down approximately 254 hours; 247 of these were unscheduled downtime hours related primarily to electrical grounding issues. Please provide a discussion if any actions have been taken to avoid downtime in the future.
  3. Will another technologist, in addition to your current staff, be enough to cover the emergency room CT scanner around the clock?
  4. Table 2a on page 31 of the CON application provides actual and projected volumes for the existing and proposed CT scanners. Please address the following with respect to the utilization table:
    - a. Please reconcile and explain the difference between table 2a reported on page 31 and schedule 450 (HRS) reported by Hospital for FY 2009-2012 years;
    - b. Please confirm that the reported volume for the most recently completed year (FY 2012) is actual volume. If the reported volume is annualized, provide the actual utilization;
    - c. Provide actual and annualized volume for current year. Identify the number of actual months covered and the method of annualizing.
  5. On page 17 of the application, the Hospital reports that the current CT operates at 85% capacity during day shifts. Explain the basis for this estimate, providing all calculations and assumptions made in the calculation.
  6. On page 12 of the application, the Hospital provides actual and expected utilization for Emergency room visits and Emergency room CT exams. Please expand this table to include the historical volume for last three fiscal years.
  7. On page 19 of the application, the Hospital reports the increased use of CT guided interventional procedures. Please address the following:
    - a. Provide historical volume of CT guided interventional procedures for the last 3 completed fiscal years and actual volume for current fiscal year. Identify the number of actual months covered;
    - b. Describe the types of CT guided procedures that are provided for the Hospital's patients;
    - c. The Hospital anticipates an increase in CT guided interventional procedures of 15% per year. Explain the basis for this estimate, providing all calculations and assumptions made in calculation.

8. Provide a discussion concerning each of the following:
- a. The capabilities of the proposed CT scanner as compared to hospital's existing scanner;
  - b. The effect of the additional CT scanning availability on existing providers within the service area.
9. The Applicant proposes to finance the proposal using donations and fundraising events. Are these funds currently available? If not, please provide details on the fundraisers planned specifically to finance the proposal. Also please provide the history of your past fundraising ability and results.

In responding to the questions contained in this letter, please repeat each question before providing your response. Paginate and date your response, i.e., each page in its entirety. Information filed after the initial CON application submission (i.e. completeness response letter, prefile testimony, late file submissions and the like) must be numbered sequentially from the Applicant's document preceding it. Please begin your submission using Page 161 and reference "Docket Number: 13-31821-CON." Submit one (1) original and four (4) hard copies of your response. In addition, please submit a scanned copy of your response, in an Adobe format (.pdf) including all attachments on CD. If available, a copy of the response in MS Word should also be copied to the CD.

Pursuant to Section 19a-639a(c) Of the Connecticut General Statutes, you must submit your response to this request for additional information not later than sixty days after the date that this request was transmitted. If you have any questions concerning this letter, please feel free to contact me by email or at (860) 418-7007.

Sincerely,

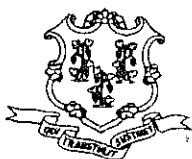


Alla Veyberman  
Health Care Analyst

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\*\*\* TX REPORT \*\*\*  
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STATE OF CONNECTICUT  
OFFICE OF HEALTH CARE ACCESS

FAX SHEET

TO: SHELIA KEMPF & MARIE MARCIANO

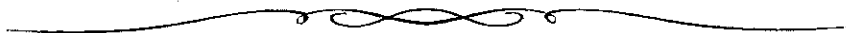
FAX: 860.585.3542

AGENCY: BRIDGEPORT HOSPITAL

FROM: OHCA

DATE: 2/5/13 Time: \_\_\_\_\_

NUMBER OF PAGES: 4  
*(including transmittal sheet)*



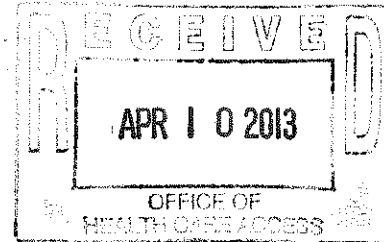
**Comments:**  
Docket Number: 13-31821-CON

**PLEASE PHONE  
TRANSMISSION PROBLEMS**

**IF THERE ARE ANY**

April 4, 2013

Ms. Alla Veyberman  
Health Care Analyst  
State of Connecticut  
Office of Health Care Access  
410 Capital Avenue  
Hartford, CT 06134-0308



Re: Certificate of Need Application; Docket Number: 13- 31821- CON Bristol Hospital  
Proposal to Acquire a 40 Slice Computed Tomography Scanner to be located at Bristol  
Hospital, 41 Brewster Road, Bristol, CT

Dear Ms Veyberman:

The Office of Health Care Access ("OHCA") reviewed Bristol Hospital's CON application and requested the following additional information on March 6, 2013.

1. Please provide the following information regarding the Hospital's existing and proposed CT scanners:
  - a. Age of the CT scanner

The existing scanner is a Siemens Definition AS 64 slice CT scanner that was manufactured and installed in October 2011. The proposed scanner is a new Siemens Definition AS 40 slice CT scanner.

- b. Has the scanner been refurbished or has it received any hardware or software updates? If so, explain.

The existing AS 64 scanner was not refurbished. It was built upon order. There was a manufacturer software update enhancement from "IRIS" to "SAFIRE" installed on 6/12/2012. This software is for low dose image reconstruction.

- c. General condition of the scanner.

The existing AS 64 scanner is in good condition.

- d. Are there any add-ons or attachments to the base model CT scanner for specified imaging functions?



CT Fluoroscopy option was purchased with the AS 64 scanner producing images in order to clearly see the needle position in an instant in any plane. Bristol Hospital selected the CT Fluoroscopy option and the in-room scan control module and monitor because it affords us improved accuracy due to ultrafast image guidance in combination with path planning tools and needle artifact prevention. This allows assurance of improved procedures while delivering minimum possible dose.

The AS 64 CT Fluoroscopy package is equipped with HandCARE, which provides significant dose reduction to the physician operators in all modes. It comes with a toolbar which enables one-click windowing and allows you to switch image views with a single click. From the toolbar, you can also control the precise position of the table whether using the joystick or one click at the CT console offering accuracy in patient positioning.

Bristol Hospital is not planning on adding any additional software packages to the proposed AS 40 scanner.

2. On page 24 of the CON application, the Hospital reported that in 2012 the Siemens CT scanner was down approximately 254 hours; 247 of these were unscheduled downtime hours related primarily to electrical grounding issues. Please provide a discussion if any actions have been taken to avoid downtime in the future.

Although we believe that the majority of the unscheduled downtime hours in FY 2012 were related to electrical grounding issues, we had to replace the x-ray tube three times and the electrical board once. We are not totally confident, nor can the engineers confirm, that the electrical grounding was the only issue. However, a new ground system has been installed within the front "electrical service" entrance for our existing 64 slice CT scanner. The grounding issue, we believe was fixed as of May 2012. However, the existing 64 slice CT scanner experienced an additional 5.5 hours of unplanned downtime for the remainder of FY 2012. In the original CON application, in Attachment I the Hospital reported 132.5 unplanned downtime hours and 8 preventative maintenance (PM) hours for a total of 140.5 downtime hours in FY 2013 to date for the existing 64 slice CT scanner. However, since January 6, 2013 until February 24, 2013, we have had an additional 24 hours of for a total of 156.5 hours of unplanned downtime in FY2013 for the existing 64 slice CT scanner. Refer to *updated* Attachment I – Siemens Downtime FY 2012/FY 2013.

3. Will another technologist, in addition to your current staff, be enough to cover the emergency room CT scanner around the clock?

The addition of another technologist to our current staff will be enough to cover the emergency room CT scanner around the clock. The planned hire for the new technologist is

primarily the day shift to decrease the bottleneck the Hospital has experienced during this shift. The second and third shifts can be managed by the existing 24 hour staff.

4. Table 2a on page 31 of the CON application provides actual and projected volumes for the existing and proposed CT scanners. Please address the following with respect to the utilization table:
  - a. Please reconcile and explain the difference between table 2a reported on page 31 and schedule 450 (HRS) reported by Hospital for FY 2009-2012 years;

We investigated the reconciliation issue between the reported schedule 450 HRS and our CON submitted documentation. It appears that we over reported on the 450 for FY 10 and FY11 due to a miscount of a statistical charge code being added to the CT scan volume. The numbers we reported in the CON are correct. See charts below for detail.

<b>FY 2009</b>	<b><u>Table 2A</u></b>	<b><u>Report 450</u></b>	<b><u>Reconcile</u></b>
Inpatient	3998	3998	
Outpatient	10661	5228	17
ED		5450	
Total	14659	14676	17

FY 2009 difference of 17 CT scans is due to timing and is immaterial.

<b>FY 2010</b>	<b><u>Table 2A</u></b>	<b><u>Report 450</u></b>	<b><u>Reconcile</u></b>
Inpatient	3980	4531	551
Outpatient	5003	4855	-148
ED	6072	8160	2088
Total	15055	17546	2491

FY 2010 Report 450 is overstated by 2491 CT scans. The FY 2010 Report 450 incorrectly included a statistical charge code which resulted in CT scans not broken out correctly in the count.

<b>FY 2011</b>	<b><u>Table 2A</u></b>	<b><u>Report 450</u></b>	<b><u>Reconcile</u></b>
Inpatient	2789	3173	384
Outpatient	3799	3297	-502
ED	5543	9630	4087
Total	12131	16100	3969

FY 2011 Report 450 is overstated by 3969 CT scans. The FY 2011 Report 450 incorrectly included a statistical charge code which resulted in CT scans not broken out correctly in the count.

<b>FY 2012</b>	<b><u>Table 2A</u></b>	<b><u>Report 450</u></b>	<b><u>Reconcile</u></b>
Inpatient	3489	3489	0
Outpatient	2792	2792	0
ED	4028	4028	0
Total	10309	10309	0

There are no differences in Table 2A and Report 450 for FY 2012.

- b. Please confirm that the reported volumes for the most recent completed year (FY 2012) is actual volume. If the reported volume is annualized, provide the actual utilization.

The reported volume for FY 2012 is actual volume.

- c. Provide actual and annualized volume for current year. Identify the number of actual months covered and the method of annualizing.

FY 2013	Actual	
	Oct – Dec (3 months)	Annualized (divide by 3 and multiple by 12 month)
Inpatient	880	3519
Outpatient	716	2864
ED	988	3952
Total	2584	10335*

\*This total does not include the projected 359 CT scans to be performed on the new 40 slice CT scanner (if this application is approved) as report on Table 2A.

- On page 17 of the application, the Hospital reports that the current CT operates at 85% capacity during day shifts. Explain the basis for this estimate, providing all calculations and assumptions made in the calculations.

The basis for the estimated 85% capacity as stated on page 17 of the OHCA CON application is based on the average CT procedure taking approximately 30 minutes during first shift. In “A Study on Medical Imaging Equipment Productivity and Utilization”, 2011 Proceedings Industrial Engineering Research Conference, Mengqu Hu cited an average of 38 – 50 min to conduct a CT scan. Within an 8 hour shift, 16 patients can receive a CT scan provided no interventional procedures are performed. Attachment E, page 70 of the OHCA CON application shows that on average during FY 2012 there were 15 patients completed Monday – Friday during first shift but this also includes interventional procedures. This equates 94% capacity (the Hospital’s more conservative estimate of 85% capacity is understated). The Hospital is currently performing three interventional procedures per week during first shift. The average length of time for a CT interventional procedure is approximately 2 hours. If one assumes each CT interventional procedure is equivalent (in time) to four non-interventional procedures, then the Hospital is performing, on average, 9 more procedures per week (3 extra 30 minute time slots multiplied by 3 CT interventional procedures per week). This adds almost 2 additional CT procedures per day for a total of 17 CT procedures per day during first shift or 106% capacity. Therefore, on the days that even a single interventional procedure is performed, CT patients are delayed. Interventional procedures continue to increase in FY 2013 further adding to patient delays and increase wait times.

6. On page 12 of the application, the Hospital provides actual and expected utilization for Emergency room visits and Emergency room CT exams. Please expand this table to include the historical volume for last three fiscal years.

	<u>ED Visits</u>	<u>CT Scans</u>
FY 2011	39860	5543
FY 2010	38760	6072
FY 2009	39052	5450

Please note that the historical % of CT scans to ED visits in FY 2009-2011 is approximately 14%-16%. However in this CON Application Bristol Hospital has taken a conservative approach in its projections for FY 2013 – FY 2016 estimating only 11% of ED visits will have CT scans (See page 12 of CON Application). As a result, it is possible our projections are understated.

7. On page 19 of the application, the Hospital reports the increased use of CT guided interventional procedures. Please address the following:
- a. Provide historical volume of CT guided interventional procedures for the last 3 completed fiscal years and actual volume for current fiscal year. Identify the number of actual months covered.

**CT Interventional Procedures**

FY 2010	120
FY 2011	127 (5.8% increase)
FY 2012	146 (15% increase)
FY 2013 (Oct – Feb, 5 months)	73 (annualized projection 175, approx 20% increase)

- b. Describe the types of CT guided procedures that are provided for the Hospital's patients.  
(Refer to additional Attachment T – CT Invasive Procedures) These types of CT guided procedures are provided for the Hospital's patients by an Interventional Radiologist.

- c. The Hospital anticipates an increase in CT guided interventional procedures of 15% per year. Explain the basis for this estimate, providing all calculations and assumptions made in this calculation.

This estimate was based on the Hospital's analysis of CT guided interventional procedure volumes increases from FY 2010 through FY 2012. As we continue to evaluate FY 2013 CT guided interventional procedure volumes, it appears that our 15% growth estimate is understated. Based on the first 5 months of FY 2013 the Hospital is experiencing an annualized growth in CT guided interventional procedures of 20%. This increased interventional volume, combined with the two hour minimum procedure time will further exacerbate the delays and associated issues with having only one CT scan available.

Also, as noted on page 20 of the CON application, (Refer to Attachment C, Siemens Healthcare Econometric Analysis, OCHA pg 63) CT use rates for CT outpatient imaging procedures in Connecticut within a 10 mile radius of Bristol Hospital are estimated to increase by 23.2% between 2010 and 2015. Residents within the Bristol Hospital service area between the ages of 60 – 69 are estimated to increase by 14.6% between 2011 – 2016 and residents between the ages of 70 – 79 are estimated to increase by 14.3% in the same time frame. This aging population contributes to health care service demands which in turn will increase CT use rate of CT guided interventional procedures in Bristol Hospital's service area.

8. Provide a discussion concerning each of the following:
  - a. The capabilities of the proposed CT scanner as compared to hospital's existing scanner;

The capabilities of the proposed AS 40 CT scanner are approximately the same as the hospital's existing scanner. However, the proposed AS 40 CT scanner has lower dose radiation and can accommodate bariatric patients with the larger bore diameter. The proposed AS 40 CT scanner does not have the CT Fluoroscopy package or the capability to add additional software packages (for example cardiac and virtual colonoscopy) and does not have the capability to do cardiac imaging because of this. This additional software can be added to the Hospital's existing AS 64 CT scanner, making it more versatile.

- b. The effect of the additional CT scanning availability on existing providers within the service area.

The providers of CT services in the proposed service area are the following: Bradley Memorial Hospital in Southington, CT., Bristol Radiology Center in Bristol, CT. and The University of Connecticut Health Center in Farmington, CT. The proposed additional CT scanner is not anticipated to have any effect on the CT services offered by or volume of the existing providers. The proposed 40 slice CT scanner is intended to address volume and delay issues that exist at Bristol Hospital.

9. The Applicant proposes to finance the proposal using donations and fundraising events. Are these funds currently available? If not, please provide details on the fundraisers planned specifically to finance the proposal. Also, please provide the history of your past fundraising ability and results.

The funds to complete the acquisition of the proposed AS 40 CT scanner and installation are currently available in the Bristol Hospital Development Foundation. In 2011 and 2012, the Hospital Gala, wine tasting and golf tournament proceeds totaled \$262, 153. The remaining funding for this proposal is currently available in the Bristol Hospital Development Foundation unrestricted funds account. There are no additional fund raising activities planned to finance the acquisition of the CT scan as all funds are available today.

**ATTACHMENT I updated**  
**CT EQUIPMENT DOWNTIME**



**Siemens Downtime FY12**

Report number ending..	Date	Downtime Hours Charged by Siemens (Hrs)	New Minutes	Hours before siemens arrived	Down from	Down To	Total downtime hours not on siemens invoice but scanner was down
<b>FY12</b>							
1	ED DT 10/7/2011	5.25	315	2			
2	ED DT 10/18/2011	2.50	150	2			
3	ED DT 10/19/2011	5.50	330	2			
4	7822 10/28/2011	1.00	60	2			
5	7821 10/28/2011	2.50	150	2			
6	1716 10/28/2011	2.50	150	2			
7	7823 11/11/2011	1.00	60	2			
8	12/22/2011		574				
9	7831 12/29/2011	1.50	90	2			24
10	7834 12/30/2011	6.50	390	4			24
	12/31/11-2pm to 1/3/12-10:26am			2	2pm	10:26am	68
12	9041 1/6/2012	2.50	150	2			
13	877 1/10/2012	0.50	50	2			
14	1768 1/11/2012	2.00	120	2			
15	3385 1/13/2012	2.00	120	2			
16	291 1/20/2012	0.50	50	2			
17	5368 2/1/2012	1.00	60	2			
18	5369 2/1/2012	1.00	60	2			
19	3548 2/14/2012	1.50	90	3			
20	3548 2/14/2012	1.50	90	2			
21	7338 2/18/2012	6.00	360	4			
22	7339 2/18/2012	5.50	330	2			
23	4730 4/9/2012	1.00	60	2			
24	7449 4/12/2012	2.00	120	3			
25	5856 4/13/2012	1.00	60	2			
26	6644 4/16/2012	2.50	150	3			
27	7507 4/17/2012	3.00	180	3			
28	6/12/2012	No Charge			5:30a	3:30p	
29	7394 6/26/2012	2.00	120	3			
30	7395 6/26/2012	0.50	50				
31	8403 6/26/2012	0.00					
		<b>74.89</b>	<b>4489</b>	<b>63 hrs</b>			<b>116</b>
<b>Total Downtime Hours FY12</b>		<b>253.81</b>	<b>4489</b>	<b>3780 mins</b>			<b>6960</b>
<b>FY13</b>							
1	5924 10/6/2012	2.00	120	2			5
2	2200 10/15/2012	2.50	150	3	4:30am		
3	2201 10/15/2012	7.00	420	4		17:00	37
4	152 10/23/2012	1.00	60	2			
5	154 10/23/2012	6.00	360 PM	2			
6	2982 10/26/2012	2.00	120	3			5
7	9195 11/2/2012	1.00	60	2			
8	9196 11/2/2012	1.00	60				
9	3124 11/8/2012	1.00	60	2			
10	1/4/13 to 1/6/13				4pm	6pm	50
11	2940 1/9/2013	1.50	110	2			
12	2940 1/9/2013	2.00	120	2			
13	3318 1/31/2013	1.00	60	2			
14	2271 2/23/2013	4.50	290	2			
15	2271 2/24/2013	5.00	300	2			
<b>Total</b>		<b>37.50</b>	<b>2290</b>	<b>30</b>			<b>97</b>
<b>Total Downtime Hours FY13</b>		<b>164.50</b>	<b>2290 mins</b>	<b>1800 mins</b>			<b>5820</b>
Not including PM for 10/23/12			8				
Total unscheduled down time			156.5				

**ATTACHMENT T**  
**CT INVASIVE PROCEDURES**

## CT Invasive Procedures

CT	ABLTBONE	CT ABLATION BONE
CT	ABLT LIV	CT ABLATION LIVER PERC.
CT	ABLTREN L	CT ABLATION RENAL RF
CT	ADRCTHCH	CT ABSCESS DRAIN CATH-CHANGE
CT	ABSDRNCATH	CT ABSCESS DRAIN/CATH
CT	ABSCGM	CT ABSCESSOGRAM(TUBE CHECK)
CT	ASPIRPUNC	CT ASPIR/PUNCTURE CYST/HEM/ABS
CT	ASPIRBNMRW	CT ASPIRATION BONE MARROW
CT	ASPIRDISC	CT ASPIRATION DISC
CT	ASPIRJNT	CT ASPIRATION JOINT-MAJOR
CT	ASPIRLUMB	CT ASPIRATION LUMBAR DISK
CT	ASPIRRENAL	CT ASPIRATION RENAL CYST
CT	BXBONEASP	CT BIOPSY / ASPIR BONE MARROW
CT	BXABDPERC	CT BIOPSY ABDOMEN PERCUTANEOUS
CT	BXBKFKDP	CT BIOPSY BACK/FLANK DEEP
CT	BXBKFKSPFL	CT BIOPSY BACK/FLANK SUPERFICI
CT	BXBONEDP	CT BIOPSY BONE DEEP
CT	BXBNMRW	CT BIOPSY BONE MARROW
CT	BXBONESPFL	CT BIOPSY BONE SUPERFICIAL
CT	BXLIVERCT	CT BIOPSY LIVER PERCUTANEOUS
CT	BXLUNG	CT BIOPSY LUNG PERCUTANEOUS
CT	BXLYMPHNOD	CT BIOPSY LYMPH NODE PERCUTANE
CT	BXMUSCLE	CT BIOPSY MUSCLE PERCUTANEOUS
CT	BXNECK	CT BIOPSY NECK PERCUTANEOUS
CT	BXPANCR	CT BIOPSY PANCREAS PERCUTANEOU
CT	BXPLUERA	CT BIOPSY PLEURA
CT	BXRENAL	CT BIOPSY RENAL PERCUTANEOUS
CT	BXSHLDRDP	CT BIOPSY SHOULDER DEEP
CT	BXTHGKNDP	CT BIOPSY THIGH/KNEE DEEP
CT	CTPLPTX	CT CHEST TUBE PLACEMENT PTX
CT	DRNGLIVER	CT DRAINAGE LIVER ABS/CYST/CTH
CT	DRNGPERIT	CT DRAINAGE PERITONEAL
CT	DRGABS	CT DRAINAGE PLEURA/EMPY ABSC
CT	DRNRTROPER	CT DRAINAGE RETROPERITONEAL
CT	DRNGSDIAP	CT DRAINAGE SUBDIAPHRAGM ABSC
CT	DRNRENAL	CT DRAINAGE, RENAL/PERIRENAL
CT	CTNC	CT FOLLOW-UP VISIT, N/C
CT	CTINJFCTLS	CT INJECT FACET L/S SPINE-SNGL
CT	PARACENTES	CT PARACENTESIS DRAINAGE
CT	PERICARCEN	CT PERICARDIOCENTESIS DRAINAGE
CT	SACRLPLSTY	CT SACROPLASTY - 2NEEDLE
CT	THORACN	CT THORACENTESIS DRAINAGE
CT	VTPYLUMB	CT VERTEBROPLASTY LUMBAR
CT	VTBYTHRCIC	CT VERTEBROPLASTY THORACIC
CT	VTBYADDTL	CT VERTEBROPLASTY-ADDITIONAL



**STATE OF CONNECTICUT**  
DEPARTMENT OF PUBLIC HEALTH  
*Office of Health Care Access*

May 6, 2013

VIA FACSIMILE ONLY

Ms. Shelia Kempf  
Senior Vice President Patient Care Services  
Chief Nursing Officer  
Bristol Hospital  
41 Brewster Road  
Bristol, CT 06010

Ms. Marie Marciano  
Director of Diagnostic Services  
Bristol Hospital  
41 Brewster Road  
Bristol, CT 06010

RE: Certificate of Need Application; Docket Number: 13-31821-CON  
Bristol Hospital  
Proposal to Acquire a 40 Slice Computed Tomography Scanner

Dear Ms. Kempf and Ms. Marciano:

This letter is to inform you that, pursuant to Section 19a-639a (d) of the Connecticut General Statutes, the Office of Health Care Access has deemed that the above-referenced application as complete as of May 6, 2013.

If you have any questions regarding this matter, please feel free to contact me at (860) 418-7007.

Sincerely,

A handwritten signature in cursive script that reads "A. Veyberman".

Alla Veyberman  
OHCA Health Care Analyst

*An Equal Opportunity Provider*

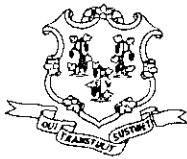
*(If you require aid/accommodation to participate fully and fairly, contact us either by phone, fax or email)*

410 Capitol Ave., MS#13HCA, P.O.Box 340308, Hartford, CT 06134-0308  
Telephone: (860) 418-7001 Fax: (860) 418-7053 Email: OHCA@ct.gov

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STATE OF CONNECTICUT  
OFFICE OF HEALTH CARE ACCESS

FAX SHEET

TO: SHELIA KEMPF & MARIE MARCIANO

FAX: 860.585.3542

AGENCY: BRISTOL HOSPITAL

FROM: OHCA

DATE: 5/6/13 Time: \_\_\_\_\_

NUMBER OF PAGES: 1  
*(including transmittal sheet)*

**Comments:**

Docket Number: 13-31821-CON

**PLEASE PHONE  
TRANSMISSION PROBLEMS**

**IF THERE ARE ANY**



**STATE OF CONNECTICUT**  
DEPARTMENT OF PUBLIC HEALTH  
*Office of Health Care Access*

August 28, 2013

**IN THE MATTER OF:**

An Application for a Certificate of Need filed  
Pursuant to Section 19a-638, C.G.S. by:

Notice of Final Decision  
Office of Health Care Access  
Docket Number: 13-31821-CON

**Bristol Hospital**

**Acquisition of a 40 Slice Computed  
Tomography Scanner**

To:

Ms. Shelia Kempf  
Senior VP Patient Care Services  
Chief Nursing Officer  
Bristol Hospital  
41 Brewster Road  
Bristol, CT 06010

Ms. Marie Marciano  
Director of Diagnostic Services  
Bristol Hospital  
41 Brewster Road  
Bristol, CT 06010

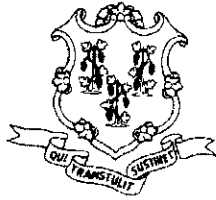
Dear Ms. Kempf and Ms. Marciano:

This letter will serve as notice of the Final Decision of the Office of Health Care Access in the above matter, as provided by Section 19a-638, C.G.S. On August 28, 2013, the Final Decision was rendered as the finding and order of the Office of Health Care Access. A copy of the Final Decision is attached hereto for your information.

---

Kimberly R. Martone  
Director of Operations

Enclosure  
KRM:amv



## Final Decision

**Applicant:** Bristol Hospital, Inc.  
41 Brewster Road, Bristol, CT 06010

**Docket Number:** 13-31821-CON

**Project Title:** Acquisition of a 40 Slice Computed Tomography Scanner

**Project Description:** Bristol Hospital, Inc. (the “Applicant” or “Bristol Hospital”) is proposing the acquisition of a Computed Tomography (“CT”) Scanner to be located at 41 Brewster Road in Bristol, Connecticut. The total capital expenditure associated with this proposal is \$795,000.

**Procedural History:** On February 4, 2013, the Office of Health Care Access (“OHCA”) received a Certificate of Need (“CON”) application from Bristol Hospital for the above-referenced project and deemed the application complete on May 6, 2013. The Applicant published notice of its intent to file the CON Application in the Bristol Press on December 12, 13, and 14, 2013. OHCA received no responses from the public concerning the Applicant’s proposal and no hearing requests were received from the public pursuant to Connecticut General Statutes (“Conn. Gen. Stat.”) § 19a-639a.

### Findings of Fact

1. Bristol Hospital is a 134-bed acute care hospital located at 41 Brewster Road in Bristol, Connecticut and a health care facility or institution as defined by Conn. Gen. Stat. §19a-630. Ex. A. p. 11
2. Bristol Hospital currently operates a 64 slice Siemens CT Scanner (the “existing CT Scanner”). The original CT Scanner was acquired in 1983 (CON decision issued under Docket 83-515) and has since been replaced several times. The existing CT Scanner was installed in October of 2011. Ex. A. p. 161
3. The existing CT scanner is available twenty-four hours a day, seven days a week and serves Emergency Center patients, scheduled and walk-in outpatients, inpatients and interventional special procedure patients (scheduled and urgent). Ex.A. p.11

4. In 2012, Bristol Hospital patients receiving CT scans on the existing CT Scanner came from the towns which represent Bristol Hospital's service area.

**Table 1: Bristol Hospital CT Scans by Town**

Town	2012 Volume	% of Total
Bristol	6,907	67%
Plymouth	1031	10%
Plainville	412	4%
Burlington	309	3%
Wolcott	206	2%
Southington	206	2%
Farmington	103	1%
Other	1,135	12%
Total	10,309	100%

Ex. A. p.33

5. Bristol Hospital seeks authorization to acquire and operate a new 40 slice Siemens CT Scanner for its Emergency Center patients. The Applicant states that the proposed CT Scanner will improve patient flow, decrease patient wait times and enhance patient care. Ex. A. p. 11
6. According to the Applicant, the need for an additional CT Scanner is predicated on: Bristol Hospital's designation as a Primary Stroke Center and the need to accommodate stroke patients in a timely manner; anticipated growth in Emergency Center volume and associated CT scans; continued growth in interventional procedures related to hiring additional breast and bariatric surgeons; current delays in the diagnosis and treatment of Emergency Center patients due to the use of Bristol Hospital's only scanner by all patients; significant wait times; and unanticipated CT Scanner down time. Ex. A. pp. 17-22.
7. Bristol Hospital is designated as a Primary Stroke Center and must ensure rapid diagnostic evaluation and treatment for stroke patients. The standard of care from door to CT Scanner for stroke patients is 25 minutes. According to the Applicant, the existing CT Scanner is operating at a capacity that does not provide sufficient availability required to diagnose and treat stroke patients adequately. If a stroke patient presents during an interventional procedure utilizing the existing CT Scanner, which takes approximately 2 hours, the procedure is interrupted to perform the CT procedure for the stroke patient in a timely manner. Ex. A. pp. 13, 17
8. In FY2010, Bristol Hospital treated 103 stroke patients. This number increased 11% and 5%, respectively, in FY2011 and FY2012. Bristol Hospital anticipates that the number of stroke patients will continue to rise 5% per year. Ex. A. pp. 13, 18



9. The Applicant anticipates that Emergency Center visits will increase by 3% in FY2013 as a result of regaining lost market share, infusion of patients with insurance due to the Affordable Care Act and increasing aging population in its service area. Ex. A. pp. 12, 19
10. In 2012, approximately 11% of Emergency Center patients underwent CT scanning procedures. Ex. A. pp. 11-12
11. Bristol Hospital stated that future demand for the existing CT Scanner will increase. As illustrated in the table below, the Applicant anticipates that the current CT scanning volume will grow due to a projected increase in Emergency Center visits and associated scans, stroke patients and strategic growth initiatives for the Bariatric and Cancer programs.

**Table 2: Historical and Projected Volume for Emergency Center Visits, Stroke Patients and CT Guided Procedures**

DESCRIPTION	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
ED VISITS	38,760	39,860	38,029	39,170	39,562	39,958	39,958
ED CT EXAMS	6,072	5,543	4,028	4,309	4,352	4,395	4,395
STROKE PATIENTS	103	115	121	127	133	140	147
CT INTERVENTIONAL PROCEDURES	120	127	146	168	193	222	255
BARIATRIC SURGERIES**	30	72	96	120	144	168	192
BREAST SURGERIES*	n/a	n/a	80	130	180	230	280

\* Additional breast surgeon was anticipated to start in April of 2013

\*\* Two additional surgeons will be hired for this program in 2013-2014

Note: With the recruitment of an additional breast surgeon, CT volumes are projected to grow by additional 50 cases starting in 2013.

n/a –utilization is not available for this period

Ex. A. pp. 18, 20-21, 166

12. The Applicant stated that Emergency Center patients experience delayed diagnosis and treatment due to CT scans scheduled for outpatients, scheduled biopsies and scheduled and stat inpatient CT scans. In FY 2012, CT scan wait time for Emergency Center patients was 55, 35 and 29 minutes, respectively, for first, second and third shifts. The wait time for an emergency CT scan was 1 hour and 22 minutes when a CT interventional procedure was in process. Ex. A. p. 21
13. Bristol Hospital reports that in FY 2012, the average CT scan wait time for outpatient walk-ins was approximately 50 minutes. Ex. A. p. 27

14. In FY 2012, Bristol Hospital's existing CT Scanner had 254 hours of downtime, of which 247 hours were unscheduled. Since the beginning of FY 2013, the existing CT Scanner has had 157 hours of unscheduled downtime.

**Table 3: CT Scanner Maintenance Downtime**

Description	FY 2010	FY 2011	FY 2012	FY 2013*
Scanner	Philips	Philips	Siemens	Siemens
Preventative maintenance (hrs.)	4.5	14.4	69.5	8
Unscheduled down times (hrs.)	6	164.5	247.3	156.5
Total Downtime (hrs.)	10.5	178.9	253.8	164.5

\*October 1, 2012-February 24, 2013  
 Ex. A. pp.79, 162

15. The Applicant reports that when the existing CT Scanner goes down unexpectedly, Bristol Hospital cancels scheduled CT scans and goes into Emergency Center diversion. Emergency Center patients and inpatients requiring CT scans are transported by ambulance either to the nearest imaging center in Bristol,<sup>1</sup> which operates a 4 slice CT Scanner, or Saint Francis Hospital in Hartford, and then back to Bristol Hospital for treatment. The Bristol 4 slice CT Scanner does not have the technological capability of performing certain CT scans. Such patient transport to a different imaging facility or hospital delays results and subsequent treatment of patients. Ex. A. pp. 11-12, 24
16. During downtime in FY2011 and FY2012, Bristol Hospital had 43 and 26 transports, respectively, for inpatients and Emergency Center patients. Ex. A. p. 24
17. Bristol Hospital's existing CT scanner's historical and current utilization by patient type is as follow:

**Table 4: Historical and Current Volume by Patient Type**

Scanner	Patient Type	FY 2010	FY 2011	FY 2012	FY 2013*
CT Scanner *	IP	3,980	2,789	3,489	3,519
	OP	5,003	3,799	2,792	2,864
	ED	6,072	5,543	4,028	4,309***
<b>Total</b>		15,055	12,131	10,309****	10,692**

\*FY2013 (annualized)

\*\* includes 359 scans projected for a new scanner

\*\*\*Emergency Center volumes decreased in the past, however the changes in physician and nursing leadership has turned this trend around.

\*\*\*\* The decrease in volume is due to the combination of certain CPT codes as a new single code in 2010 and 2011. If the 2010 separate CPT code methodology was in effect in 2012, total CT volume in FY 2012 would have been 12,240.

Ex. A.pp.12, 19, 30, 34

<sup>1</sup> Owned by Bristol Hospital and Bristol Radiologic Associates.

18. Bristol Hospital estimates that by 2016 CT scanning volume will grow by 7.7%, or 793 cases. Bristol Hospital's projected CT Scanner volume by patient type is as follow:

**Table 5: Projected CT Utilization**

Scanner	Patient Type	FY 2014	FY 2015	FY 2016
CT Scanner 64 slice ( <i>existing</i> )	IP	3,549	3,580	3,611
	OP	2,939	3,018	3,101
CT scanner 40 slice ( <i>proposed</i> )	ED	4,352	4,395	4,395
<b>Total</b>		10,840	10,993	11,107

Ex. A. p.31

19. Bristol Hospital stated that having one CT Scanner poses limitations on providing CT scanning services. The competing priorities of scheduled interventional special procedures, scheduled outpatient and walk-in procedures, urgent unscheduled inpatient and emergent procedures from the Emergency Center have increased the need for a second CT Scanner. Ex. A. p. 12
20. The proposed CT Scanner will be used primarily for Emergency Center patients and as back-up for scheduled or add-on patients when the existing CT Scanner is not available. It is intended to address the volume and delay issues that exist at Bristol Hospital and, therefore, is not anticipated to impact volumes of CT scanning services currently performed at other provider sites. Ex. A. pp. 28-29
21. Bristol Hospital stated that by adding the proposed CT Scanner, patients in Bristol Hospital's service area will experience timely and unencumbered access to CT scanning services resulting in quicker diagnosis and treatment and shorter lengths of stay for inpatients and emergency patients. Ex. A. pp. 21, 39
22. Bristol Hospital indicates that the limitation on CT Scanner availability prevents it from providing quality patient care in a timely manner. The addition of a second CT Scanner will eliminate the need for Emergency Center diversion and will enable the Applicant to provide timely urgent CT scans for the Emergency Center. In addition, it will help to shorten the wait time for stroke patients and will increase the efficiency of scheduling outpatient procedures. Ex. A. pp. 21, 168
23. The proposed CT Scanner has lower dose radiation and can better accommodate bariatric patients with its larger bore diameter. Ex. A. p. 167
24. Bristol Hospital stated that its Medicare patient population is projected to increase due to the aging population in its service area. The current and projected patient payer mix is as follows:

**Table 6: Current and Projected Payer mix**

	FY 2012	FY2013	FY2014	FY2015	FY2016
Medicare*	44.17	46.17	47.17	47.17	47.17
Medicaid*	18.28	18.28	18.28	18.28	18.28
CHAMPUS & TriCare					
<b>Total Government</b>	<b>62.45</b>	<b>64.45</b>	<b>65.45</b>	<b>65.45</b>	<b>65.45</b>
Commercial Insurers*	34.13	32.13	31.13	31.13	31.13
Uninsured	1.85	1.85	1.85	1.85	1.85
Workers Compensation	1.57	1.57	1.57	1.57	1.57
<b>Total Non-Government</b>	<b>37.55</b>	<b>35.55</b>	<b>34.55</b>	<b>34.55</b>	<b>34.55</b>
<b>Total Payer Mix</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>	<b>100</b>

\* Includes managed care activity.

Ex. A. p. 39

25. The proposal will be funded through the Bristol Hospital Development Foundation. The proposed total capital expenditure associated with this proposal is as follows:

**Table 7: Total Capital Expenditure**

<b>Medical Equipment Purchase</b>	<b>Cost</b>
Imaging Equipment Purchase	\$595,000
Construction/Renovation	\$200,000
<b>Total Project Cost</b>	<b>\$795,000</b>

Ex. A. pp. 37, 168

26. The Applicant's incremental gains with the proposal indicate a consistent increase in income from operations.

**Table 8: Projected Overall Revenues and Expenditures with the Proposal**

	FY 2013	FY 2014	FY 2015
<b>Revenues From Operations</b>	\$141,250,021	\$144,376,141	\$147,373,905
<b>Total Operation Expense</b>	\$139,446,347	\$142,272,949	\$145,213,406
<b>Overall Gain (Loss) from Operations</b>	<b>\$1,803,674</b>	<b>\$2,103,104</b>	<b>\$2,180,490</b>

Ex.A.p.157

27. OHCA is currently in the process of establishing its policies and standards as regulations. Therefore, OHCA has not made any findings as to this proposal's relationship to any regulations and standards not yet adopted as regulations by OHCA. (Conn. Gen. Stat. § 19a-639(a)(1)).
28. This CON application is consistent with the overall goals of the Statewide Health Care Facilities and Services Plan. (Conn. Gen. Stat. § 19a-639(a)(2))

29. The Applicant has established that there is a clear public need for its proposal. (Conn. Gen. Stat. § 19a-639(a)(3)).
30. The Applicant has demonstrated that the proposal is financially feasible. (Conn. Gen. Stat. § 19a-639(a)(4)).
31. The Applicant has satisfactorily demonstrated that its proposal would improve the accessibility of health care delivery in the region and demonstrated a potential improvement in quality. (Conn. Gen. Stat. § 19a-639(a)(5))
32. The Applicant has shown that there would be no adverse change to the provision of health care services to the relevant populations and payer mix. (Conn. Gen. Stat. § 19a-639(a)(6)).
33. The Applicant has satisfactorily identified the population to be served by this proposal and has satisfactorily demonstrated that this population has a need as proposed. (Conn. Gen. Stat. § 19a-639(a)(7)).
34. The Applicant's historical CT Scanner utilization supports this proposal. (Conn. Gen. Stat. § 19a-639(a)(8)).
35. The Applicant has satisfactorily demonstrated that this proposal would not result in unnecessary duplication of existing CT scanning services in the area. (Conn. Gen. Stat. § 19a-639(a)(9)).

## DISCUSSION

CON applications are decided on a case by case basis and do not lend themselves to general applicability due to the uniqueness of the facts in each case. In rendering its decision, OHCA considers the factors set forth in § 19a-639(a) of the Connecticut General Statutes. The Applicant bears the burden of proof in this matter by a preponderance of the evidence. *Jones v. Connecticut Medical Examining Board*, 309 Conn. 727 (2013).

Bristol Hospital is a 134-bed acute care hospital located in Bristol, Connecticut. *FF1*. Currently, the hospital operates one 64 slice CT Scanner that is available twenty-four hours a day, seven days a week and provides service to Emergency Center patients, outpatients, inpatients and patients requiring special interventional procedures. *FF2&3*. Bristol Hospital is proposing the acquisition of a new 40 slice Siemens CT Scanner for its Emergency Center. *FF5*.

Bristol Hospital has demonstrated a clear public need to acquire an additional CT Scanner due to the following: 1) Bristol Hospital's designation as a Primary Stroke Center and the need to accommodate stroke patients in a timely manner; 2) anticipated growth in Emergency Center volume and associated CT scans; 3) continued growth in interventional procedures related to hiring additional breast and bariatric surgeons; 4) current delays in the diagnosis and treatment of Emergency Center patients due to the use of Bristol Hospital's only scanner by all patients; 5) significant wait times; and 6) unanticipated CT Scanner down time. *FF6*.

Specifically, Bristol Hospital's existing CT Scanner had 247 hours of unscheduled downtime in FY 2012 and 157 hours of unplanned downtime to date this year. *FF14*. When the CT Scanner goes down, the hospital cancels scheduled CT scans and diverts Emergency Center patients and inpatients by ambulance either to the nearest imaging center in Bristol, which operates a 4 slice scanner, or Saint Francis Hospital in Hartford, and then back to Bristol Hospital for treatment. Patient transport to a different imaging facility or hospital delays results and subsequent treatment of patients. *FF15*. During FY 2011 and FY 2012, Bristol Hospital had 43 and 26 transports, respectively, for inpatients and emergency patients. *FF16*.

Additionally, since Bristol Hospital is designated as a Primary Stroke Center, it must ensure rapid diagnostic evaluation and treatment for stroke patients. The standard of care from door to CT Scanner for stroke patients is 25 minutes. The existing CT Scanner is operating at a capacity that does not provide sufficient availability required to diagnose and treat stroke patients adequately. If a stroke patient presents during an interventional procedure utilizing the existing CT Scanner, which takes approximately 2 hours, the procedure is interrupted to perform the CT procedure for the stroke patient in a timely manner. *FF7*.

Further, Bristol Hospital Emergency Center patients are experiencing delayed diagnosis and treatment due to CT scans scheduled for outpatients, scheduled biopsies and

scheduled and stat inpatient CT scans. In FY 2012, CT scan wait time for Emergency Center patients was 55, 35 and 29 minutes, respectively, for first, second and third shifts. The wait time for an emergency CT scan was 1 hour and 22 minutes when a CT special procedure was in process. *FF12*.

Bristol Hospital projects that Emergency Center utilization will increase by 3% in 2013 as a result of regaining market share, an infusion of insured patients due to the Affordable Care Act and an increasing aging population in the Hospital's service area. *FF9*. As a result, it anticipates increased CT scan demand, coupled with demand generated from an increasing number of stroke patients, interventional procedures and strategic growth initiatives in the Bariatric and Cancer Programs. *FF 11*.

The proposed CT Scanner will be designated for Emergency Center patients. *FF20*. It will support Bristol Hospital's projected increased demand for CT scanning and will ensure a smoother flow of patients as a result of fewer CT Scanner delays and unavailability. In addition, adequate CT Scanner availability will allow Bristol Hospital's Stroke Center to perform CT scans for stroke patients in a timely manner without interrupting any CT interventional procedure in progress. The proposed CT Scanner's availability will result in timely treatment and shorter length of stay for inpatient and emergency patients, which will improve and enhance patient safety and care without impacting the volumes of CT scanning services performed by other providers. *FF20-23*.

The proposed CT Scanner will also support the projected increase in demand that will result from adding additional surgeons to the Cancer and Bariatric programs. *FF11*. Additionally, the proposed scanner's lower radiation dose will also improve patient safety. *FF23*.

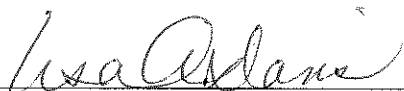
OHCA finds that the Applicant has demonstrated clear public need for its proposal and that its projections are reasonable. As the funds for proposal are currently available in the Bristol Hospital Development Foundation and there will be incremental gains from operations associated with the proposal for the first three years of operation, OHCA finds the proposal to be financially feasible. *FF25&26*.

**Order**

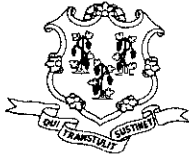
Based upon the foregoing Findings of Fact and Discussion, the Certificate of Need application of Bristol Hospital for the acquisition of a Computed Tomography Scanner to be utilized for its Emergency Center is hereby **APPROVED**.

All of the foregoing constitutes the final order of the Office of Health Care Access in this matter.

8/28/2013  
Date

  
Lisa A. Davis, MBA, BSN, RN  
Deputy Commissioner





STATE OF CONNECTICUT  
OFFICE OF HEALTH CARE ACCESS

FAX SHEET

TO: SHELIA KEMPF & MARIE MARCIANO

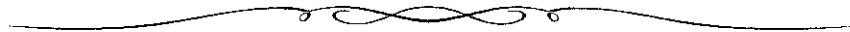
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*Fax: (860) 418-7053*

*410 Capitol Ave., MS#13HCA  
P.O.Box 340308  
Hartford, CT 06134*

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