

**Division of Health Planning and  
Resource Development  
July 2004**

**CON Review HG-MME-0604-016  
University Hospitals and Clinics  
University of Mississippi Medical Center  
Cancer Center Imaging Equipment  
Capital Expenditure: \$10,077,815  
Location: Jackson, Mississippi**

**Staff Analysis**

**I. Project Summary**

**A. Applicant Information**

The University Hospitals and Clinics of the University of Mississippi Medical Center (UMMC) is a state owned not-for-profit acute care teaching inpatient hospital with full emergency and outpatient services. The facility has a management service agreement with Quorum Health Resources of Nashville, Tennessee. The full authority and ultimate control of the hospital remains with the Board of Trustees of State Institutions of Higher Learning, with administrative authority delegated to the Chancellor and Vice Chancellor for Health Affairs of The University of Mississippi Medical Center. The facility is accredited through the Joint Commission on Accreditation of Healthcare Organizations.

The hospital is currently licensed to operate 664 medical/surgical beds, 21 adult psychiatric beds, 12 pediatric psychiatric beds and 25 rehabilitation beds. The total licensed bed capacity is 722.

The University Hospitals and Clinics' occupancy rates, average lengths of stay (ALOS) and the Medicaid utilization rates for the three most recent years are as follows (medical/surgical beds only):

Fiscal Year	Occupancy Rate (%)	ALOS (Days)	Medicaid Utilization Rate (%)
2001	69.61	6.99	46.0
2002	71.73	6.91	49.0
2003	69.15	7.09	49.0

Source: Division of Health Facilities Licensure and Certification, MSDH.

## **B. Project Description**

The University Hospitals and Clinics requests CON authority to purchase and install imaging equipment and radiation therapy equipment to support the University's Cancer Institute. The applicant proposes to renovate space in the Jackson Medical Mall (JMM) to accommodate this equipment. The equipment to be purchased and installed includes the following:

- One nuclear camera
- One 0.7 Telsa MRI
- One multi-slice CT scanner
- One neutron brachytherapy system

Additionally, the applicant proposes to install a PET scanner and Cyclotron previously approved under CON #R-0473. The equipment will be installed in the Cancer Institute's imaging department. The PET scanner was purchased and temporarily installed in the hospital's teaching clinics at the Jackson Medical Mall and will be relocated to the space being renovated to house the imaging equipment. This space will also house support space for personnel, patient holding and academic offices for the medical staff.

The equipment will occupy space divided into three major areas, one for academic (Medical School) space, one for imaging, and one for radiation therapy. The nuclear camera, PET, MRI, CT, and ultrasound equipment will be located in the imaging area and the neutron brachytherapy will be located in the radiation therapy area. The cyclotron will be housed in a transportable building and connected to the main building via a small vestibule.

The applicant proposes that one linear accelerator and related treatment simulators and treatment planning systems will be replaced and relocated from the University's main hospital to the JMM.

The project entails 9,713 square feet of new construction - 3,395 square feet for linear accelerator vaults, 727 square feet for entrance canopy, and 5,591 square feet for mechanical/electrical penthouse. Renovation includes 10,634 square feet for imaging center, 2,740 square feet for radiation oncology academic space,

14,474 square feet for radiation oncology clinical support and research space, and 5,209 square feet for major circulation corridors.

According to the applicant, the project will result in an increase in the use of radiology services. This increase in service relates to an increased number of procedures and does not change the overall scope of services nor does it involve an increase in charges.

UMMC proposes an increase of nine (9) FTE personnel, at an estimated cost of \$440,000 the first year.

The application includes a letter from the MSDH Division of Health Facilities Licensure and Certification, approving the site for the project. UMMC projects that the project will be complete within two months of approval of the CON by the MSDH.

## **II. TYPE OF REVIEW REQUIRED**

This project is reviewed in accordance with Section 41-7-191, subparagraph 1(b), (e), (f), and (j) of the Mississippi Code of 1972, Annotated, as amended, and duly adopted rules, procedures, plans, criteria, and standards of the Mississippi State Department of Health.

In accordance with Section 41-7-197 (2) of the Mississippi Code of 1972, Annotated, any affected person may request a public hearing on this project within 20 days of publication of the staff analysis. The opportunity to request a hearing expires on August 3, 2004.

## **III. CONFORMANCE WITH THE STATE HEALTH PLAN AND OTHER ADOPTED CRITERIA AND STANDARDS**

### **A. State Health Plan (SHP)**

The FY 2004 State Health Plan addresses criteria and standards which an applicant is required to meet before receiving CON authority for construction, renovation and relocation projects. The applicant is in substantial compliance with applicable criteria and standards.

## **B. General Review (GR) Criteria**

Chapter 8 of the Mississippi Certificate of Need Review Manual, May 13, 2000, addresses general criteria by which all CON applications are reviewed. This application is in substantial compliance with general review criteria.

### **GR Criterion 3 – Availability of Alternatives**

The applicant submits that the relocation of the University's cancer clinics to the Primary Care Clinics space at the Jackson Medical Mall and the relocation of the Radiation Therapy to adjacent space made the location of the imaging equipment sought in this application the only feasible solution. No other alternatives to the project were considered.

### **GR Criterion 4 – Economic Viability**

The applicant projects excess revenue over expenses of \$1,386,903 the first year, \$2,898,046 the second year, and \$3,001,178 the third year of operation. Therefore, the project appears to be economically viable.

### **GR Criterion 5 – Need**

The applicant submits that currently the University of Mississippi Medical Center lacks the strong cancer focus that would position it as the state referral center for cancer. This is evidenced by the relatively small number of funded cancer research and education grants and contracts compared to other academic institutions with cancer programs, and by an outflow of Mississippians with private insurance coverage to cancer centers in other states such as the University of Alabama at Birmingham, M.D. Anderson/Houston, and Moffitt Cancer/Tampa.

The applicant states that the Medical Center needs to augment the institution's existing cancer capabilities by recruiting additional experienced investigators who will bring their own funded research grants to Mississippi.

Applicant submits that many patients are being treated by community cancer programs in Jackson and around the state, but the advanced, state-of-the art technologies and tertiary care services are generally found at academic cancer centers not available in Mississippi. As a result, the access to comprehensive care is diminished or compromised for the state's citizens. This is especially true for underserved and disadvantaged populations. These populations have significantly higher rates of incidence and mortality from cancer and tobacco-related diseases and frequently cannot go out of the state for care.

The applicant further states that the University's cancer program is being developed to provide access to care for the underserved and to support the efforts of other cancer programs in the state by increasing the number and type of drug clinical trials. The facility also seeks to obtain National Cancer Institute (NCI) designation. In order to achieve the NCI designation, the University Medical Center must increase both the breadth and depth of its cancer research. The addition of the imaging component of the cancer center will support this effort. The additional knowledge gained from the research will be incorporated into the University's teaching programs and thus translated into improved methods of cancer treatment. The applicant believes that the long term result will be improved methods of preventing and treating cancer and ultimately better medical outcomes for Mississippians with cancer.

#### GR Criterion 6 – Access to the Facility or Service

Applicant submits that all residents of the health planning service area; hospital service area; and/or patient service area, including Medicaid recipients, charity/medically indigent patients, racial and ethnic minorities, women, handicapped persons and the elderly, have access to the services of the existing facility. Access to the facility is not altered with this project.

For the past three fiscal years, the applicant projects that the Medical Center provided 17 percent of gross revenue to care for medically indigent patients.

#### GR Criterion 7 – Information Requirement

UMMC affirmed that it will record and maintain the requested information and make it available to the Mississippi State Department of Health within 15 days of request.

#### GR Criterion 8 – Relationship to Existing Health Care System

The University Hospitals and Clinics states that the objective of this project is to provide diagnostic imaging for patients seen in the cancer clinics and to support the research and teaching mission of the University of Mississippi Medical Center.

The project is not expected to have an adverse impact on any other providers.

#### GR Criterion 9 – Availability of Resources

The University Hospitals and Clinics proposes to recruit radiology technologists, CT technologists and MRI technologists out of its existing radiology technical staff. Additional training will be provided to upgrade the existing radiology technologists to CT and MRI technologists. Radiology technologists will be recruited from the University's Radiology Technologist School and a Nuclear Medicine Technologist will be recruited from the University's School for Nuclear Medicine Technology.

#### GR Criterion 16 – Quality of Care

The applicant is in compliance with the Minimum Standards of Operation of Mississippi Hospitals, according to the Division of Health Facilities Licensure and Certification.

The University Hospitals and Clinics is accredited by the Joint Commission on Accreditation of Healthcare Organizations.

## **IV. FINANCIAL FEASIBILITY**

**A. Capital Expenditure Summary**

New Construction	\$ 1,400,000
Renovation	4,975,000
Non-fixed Equipment	2,928,440
Fees	452,625
Contingency Reserve	318,750
Other Cost (Printing)	3,000
<b>Total Proposed Capital Expenditure</b>	<b>\$10,077,815</b>

The total proposed capital expenditure includes, in addition to the Imaging Department, the cost to build out the Radiation Therapy area, the academic offices of the Department of Radiation Oncology, and the Major Circulation Area (Mall Entrance Foyer). The project includes a total of 9,713 square feet of new construction at an estimated cost of \$161 per square foot, and 33,057 square feet of renovated space at approximately \$169 per square foot. Cost of new construction is within the median range for hospital construction projects listed in the *Building Construction Cost Data*, 2004 edition.

**B. Method of Financing**

According to the Director of Finance for the University Hospitals and Clinics, the project will be self-funded by the hospital revenues for operations, a building lease and an equipment grant of \$2,698,365. The project is expected to break even within the first three years and excluding the equipment funded by the HRSA grant, will be cash flow positive in year 1.

**C. Effect on Operating Cost**

The applicant projects the following expenses, utilization, and results from operation for the first three years following completion of the project:

Expenses	Year 1	Year 2	Year 3
Salaries & Wages	\$ 176,098	\$ 362,761	\$ 373,644
Fringe Benefits	44,025	90,690	93,411

Contractual	261,093	537,851	553,986
Commodities	287,050	591,323	609,063
Depreciation	<u>269,837</u>	<u>539,673</u>	<u>539,673</u>
<b>Total Expenses</b>	<b><u>\$1,038,103</u></b>	<b><u>\$2,122,298</u></b>	<b><u>\$2,169,777</u></b>
Gross Revenue	\$6,928,587	\$14,343,840	\$14,774,155
Deductions	(4,503,582)	(9,323,496)	(9,603,201)
<b>Net Revenue</b>	<b><u>\$2,425,005</u></b>	<b><u>\$5,020,344</u></b>	<b><u>\$5,170,954</u></b>
<b>Net Income</b>	<b><u>\$1,386,902</u></b>	<b><u>\$2,898,046</u></b>	<b><u>\$3,001,178</u></b>
Total Procedures	8,115	16,800	17,304
Cost/Procedure	\$127.92	\$126.33	\$125.39
Charge/Procedure	\$853.80	\$853.80	\$853.80

**D. Cost to Medicaid/Medicare**

Payor	Utilization Percentage	First Year Cost
Medicaid	28.0	\$ 290,669
Medicare	20.0	207,621
<b>Sub-total</b>	<b>48.0</b>	<b>\$ 498,290</b>
Other Payors	52.0	539,813
<b>Total</b>	<b><u>100.0</u></b>	<b><u>\$1,038,103</u></b>

Applicant projects that only one percent of its patients will need inpatient procedures. Applicant projects 10 percent of care for bad debt patients and 17 percent for charity care patients.

**V. RECOMMENDATION OF OTHER AFFECTED AGENCIES**

The Division of Medicaid projects that the project will cost the Medicaid program approximately \$24,998. The Division of Medicaid does not oppose this project.

**VI. CONCLUSION AND RECOMMENDATION**

The project is in substantial compliance with the criteria and standards contained in the FY 2004 State Health Plan; Chapter 8 of the Certificate of Need Review Manual, 2000 revisions; and all adopted rules, procedures, and plans of the Mississippi State Department of Health.

Therefore, the Division of Health Planning and Resource Development recommends approval of this application submitted by the University Hospitals and Clinics for the UMMC Cancer Center Imaging Equipment.