JOINT PATHOLOGY CENTER CONCEPT OF OPERATIONS

Updated: 27 August 2008

A. BACKGROUND FACTS

The Base Realignment and Closure (BRAC) Act of 2005 provides for the disestablishment of all elements of the Armed Forces Institute of Pathology (AFIP) except the National Medical Museum and the Tissue Repository; and the relocation of the Armed Forces Medical Examiner, DNA Registry, and Accident Investigation to Dover Air Force Base, DE. AFIP capabilities not specified in this recommendation will be absorbed into other Department of Defense (DoD), Federal, or civilian facilities, as necessary.

Under the Defense Authorization Act 2008 Section 722, The President shall establish and maintain a Joint Pathology Center (JPC) that shall function as the reference center in pathology for the Federal Government. The NDAA 2008 authorizes establishment of the Joint Pathology Center within the Department of Defense, consistent with the final recommendations of the 2005 Defense Base Closure and Realignment Commission, as approved by the President. The Joint Pathology Center will provide, at a minimum, the following services:

1. Diagnostic pathology consultation services in medicine, dentistry, and veterinary sciences.
2. Pathology education, to include graduate medical education (residency and fellowship programs), and continuing medical education.
3. Diagnostic pathology research.
4. Maintenance and continued modernization of the Tissue Repository and, as appropriate, utilization of the Repository in conducting the activities described in paragraphs (1) through (3).

The JPC Working Group (JPCWG) was formed by the Office of the Secretary of Defense for Health Affairs (OSDHA) to develop options for the establishment of the JPC within DoD. Eight options were considered and a final recommendation was made to and accepted by the Assistant Secretary of Defense for Health Affairs that the JPC be established within the Joint Task Force National Capital Region Medical (JTF CAPMED) in partnership with the Uniformed Services University of Health Sciences (USUHS) for education.

B. VISION

The Joint Pathology Center is the federal government's premier pathology reference center supporting the Military Health System (MHS), DoD and other federal agencies.

C. MISSION

The Joint Pathology Center will provide world class diagnostic subspecialty consultation, education, training, research and maintenance/modernization of the tissue repository in support of the mission of the DoD and other federal agencies.

1. Clinical Scope of Service

   The Diagnostic (consultative) Service will provide subspecialty pathology care for the MHS and other federal agencies in the high volume and military relevant subspecialties. This subspecialty pathology care will employ state-of-the-art interpretive technology including molecular pathology, immunohistochemical staining, telepathology services, and immunofluorescent technology. Cases that require capability beyond the scope of service provided by the JPC will be referred for outside civilian consultation through the Program Management Office (PMO).

   A Molecular Pathology Laboratory will provide state of the art Polymerase Chain Reaction (PCR) and Fluorescent In Situ Hybridization (FISH) technology to directly support the JPC Diagnostic Services and other Military Treatment Facilities (MTF) within the MHS. The Molecular Pathology Laboratory will focus on providing tumor marker and pharmacogenomic diagnostic studies necessary for anatomic pathology diagnoses.

   Pathology telemedicine (telepathology) services will be available through the JPC to provide diagnostic pathology services primarily to MTFs and pathologists in theater.

   Veterinary and Oral Pathology consultative services will be provided in conjunction with the veterinary medicine and oral pathology residency programs.

2. Tissue Repository

   The JPC will assume the assets of the AFIP Tissue Repository and will actively and continuously maintain and modernize the repository in order to provide the MHS and other federal entities access to prior surgical pathology material for clinical care, research, and education. Continuous maintenance of the repository requires an active and robust surgical pathology subspecialty diagnostic service to provide new case material for the repository. This will occur through consultative cases provided to the Diagnostic Service by MTFs.

   The JPC Tissue Repository will be utilized to allow MTFs access to surgical pathology material (glass slide re-cuts, digitized slides, unstained slides for diagnostic studies, pathology reports and other available clinical information) for use in patient care. Additionally, consultations to the JPC where prior surgical pathology material exists in the repository will include review of current and prior material as part of the consultation.

3. Research

The JPC Tissue Repository will be utilized for clinical and basic science research through Investigational Review Board (IRB) approved protocols at the WRNMMC, USUHS and through the United States Military Cancer Institute (USMCI). The JPC staff will be actively engaged in IRB -approved research protocol through WRNMMC and through USUHS. Repository assets will also be available for IRB-approved research at MTFs across the MHS.

4. Education and Training

Opportunities for rotations at the JPC will be available for all residents and fellows at Pathology Residencies within the MHS and other federal institutions. In addition, rotation opportunities for USUHS and Health Profession Scholarship Program (HPSP) medical students will be available. A robust online Continuing Medical Education (CME) program, administered by USUHS, will be available for all pathologists and other providers within the MHS and other federal entities. The JPC Tissue Repository material will be available for educational purposes.

5. Program Management Office

As required under BRAC law, the PMO will manage contracts and provide quality assurance oversight for secondary consultations for the MHS in the civilian sector. Specifically, the PMO will maintain contracts for the JPC and for the rest of the MHS for secondary consultation on difficult cases and for cases that are beyond the scope of service of the JPC.

6. Automated Central Tumor Registry (ACTUR)

As a part of the BRAC mandated tissue repository mission, the JPC will assume management of the ACTUR database.

D. KEY OPERATING ASSUMPTIONS AND PARAMETERS

1. The JPC will be established within the JTF CAPMED.

2. The pathologists assigned to the JPC Tissue Repository will provide pathology subspecialty consultation, education, and research to the MHS and other federal entities.

3. Components of the JPC will be maintained at multiple locations within the JTF Joint Operating Area (JOA). It will be a tenant organization on the Forest Glen Campus.

4. DoD will benefit significantly from efficiencies gained through consolidation of administrative and technical resources at the Walter Reed National Military Medical Center (WRNMMC) (histology, immunohistochemistry, transcription, and case accessioning).

5. The JPC will operate the Program Management Office (PMO) and the DoD Automated Centralized Tumor Registry (ACTUR) as per BRAC law.

6. Modernization of the Tissue Repository includes careful review and disposition of existing tissue and addition of new tissue from the diagnostic service, digitization of paper records and digitization of specimen slides.

7. The JPC will collaborate with other federal entities for education and research.

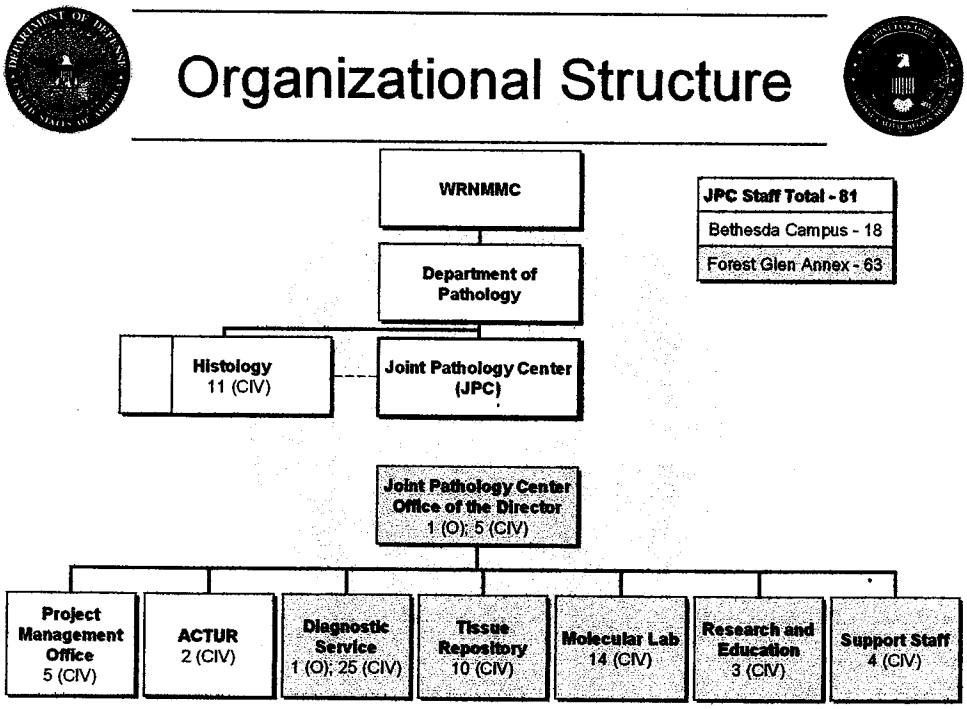
8. Primary source of annual funding will be provided by the Defense Health Program (DHP) / DoD.

9. The Veterans Administration (VA) will provide the same level of support that it currently provides for the AFIP.

E. GOVERNANCE

The JPC will be a service within the Department of Pathology at the Walter Reed National Military Medical Center under the authority of the JTF CAPMED.

F. ORGANIZATIONAL STRUCTURE



G. STAFFING

1. <u>Office of the Director- 6</u>

   Director, Joint Pathology Center (Active Duty O-6) – 1
   Laboratory Manager (GS-13) – 1
   Quality Assurance Officer (GS-11) – 1
   Information Technologist (GS-12) – 1
   Information Technician (GS-09) – 1
   Secretary (GS-7) - 1

2. <u>Diagnostic Service – 26</u>

   Staff Pathologist (AD 0-5/O-6) – 1
   Staff Pathologists (GS-15) -22
   Telepathology Technologists (GS 11) – 2
   Telepathology Information Technologist (GS 12) – 1

3. Molecular Pathology – 14
   Supervisor (GS 12) – 1
   Molecular cytotechs/ medical technologists (GS 12) – 11
   Lead technologist (GS 12) – 1
   Molecular pathologist (GS 15) – 1

4. Tissue Repository – 10
   Supervisor (GS 11) – 1
   Technicians (GS 7) - 9

5. PMO – 5
   Budget Analyst (GS12) – 1
   Administrator (GS11) – 1
   Technicians (GS 7) - 3

6. ACTUR Office- 2
   Tumor Registrar (GS 11) – 2

7. Research and Education – 3
   Protocol Manager (GS 11) – 1
   Education Technicians (GS 8) – 2

8. Support staff – 15
   Transcriptionists (GS 6) – 4
   Couriers (GS 5) – 4
   Histotechnologists (GS 11) – 4
   Accessioning Clerks (GS 5) - 3

18 personnel to be located at WRNMMC

63 personnel to be located at the Forest Glen Annex

Total Requirements: 81

Total Authorizations: 81

H. PROJECTED WORKLOAD

Multi-year historical workload (AFIP workload including case submitted for consultation and for interdepartmental consultation).

Multi-Year Historical Workload (AFIP)			
Year	2005	2006	2007
Total Cases	23,711	23,318	23,955

Estimated Workload for the Joint Pathology Center	
Total cases	23,900 cases per year
Paraffin blocks cut	140,418 blocks per year
Hematoxylin and Eosin slides	57,792 slides per year
Immunoperoxidase stains	75,729 slides per year
Special stains	26,348 slides per year
Total slides per year	159,959 slides per year (not including negative controls)
Molecular Pathology	4,000 tests per year

I. DESIRED LOCATION LAYOUT

1. The Tissue Repository Buildings (Buildings 510 and 606) at the Forest Glen Annex will house the modernized Tissue Repository, The Diagnostic Service, and the Molecular Laboratories (54,500 sq ft).

    a. The Diagnostic Service will require 8,600 sq ft for administrative office space.

    b. The JPC Tissue Repository will require 39,400 sq ft

    c. The Molecular Laboratories will require 6,500 sq ft of laboratory space with the following requirements:

        i. Molecular accessioning room (positive pressure) 1,000 sq ft

        ii. Molecular Analysis room (negative pressure) 2,000 sq ft

        iii. Master specimen room/contamination free room (positive pressure) 500sq ft

        iv. General Laboratory 1,000 sq ft

        v. Validation Laboratory 1,000 sq ft

        vi. Administration 1,000 sq ft

2. Histology (including immunohistochemistry) and case accessioning will be consolidated with the Histology section at the WRNMMC. WRNMMC will provide histology service for the WRNMMC, JPC, and the Community Hospital at FT Belvoir.

3. Transcription services for the WRNMMC, JPC and the Community Hospital at FT Belvoir will be consolidated at the WRNMMC.

4. The PMO will be housed in administrative space on the Bethesda Campus.

5. ACTUR personnel will be co-located with the PMO on the Bethesda Campus.

6. The couriers, providing door-to-door service for the JPC and the Community Hospital at FT Belvoir, will be located at the Forest Glen Annex.

J. MAJOR EQUIPMENT AND SPECIAL DESIGN REQUIREMENTS

Initial start-up costs*	
1. Picture Archiving and Communication System for slide digitization (hardware and licensing fee)	$500,000
2. Molecular Laboratory equipment (remainder on reagent rental contracts)	$125,000
3. Microscopes 32 microscopes at 12,000 per (will use AFIP scopes)	$384,000
4. Telepathology System (hardware and software)	$150,000
5. Voice Recognition Package (software, licensing fee per user and training)	$69,000
6. Online CME Software and licensing	$10,000
7. Renovation Costs of Molecular laboratories (6,500 sq ft - rough estimate)	$1,651,000
Total	**$2,889,000**
Annual Expenses	
1. Immunohistochemistry (reagent rental contract and supplies)	$1,300,000
2. Histology (reagents and supplies)	$525,000
3. Picture Archiving and Communication System (license renewal)	$30,000
4. Voice Recognition (licensing renewal)	$13,800
5. Molecular Testing (reagent rental contract and supplies)	$1,500,000
6. Pathology Program Management Office (secondary consultations)	$1,500,000
7. Educational Administrative Costs (provided for USUHS support)	$250,000
8. Two courier vehicles	$15,000
9. Personnel	$9,000,000
Total	**$14,133,800**

***Costs for IT hardware, electronic administrative support equipment and furniture are not quantified at this time**

K. UNRESOLVED ISSUES

1. Molecular Pathology Services (Anatomic and Clinical) can be expanded to include other clinical laboratory molecular testing with a probable substantial cost savings to the MHS.

2. Immunoperoxidase-only services can be provided to MHS with potential substantial cost savings. Business case analysis to look at return on investment is ongoing.

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