





VA Cooperative Studies Program VA Biorepository (VAB) Brain Bank (CSP501)

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VAB Staff

Boston

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Bedford, MA

• Ann McKee, MD, Chief Neuropathologist

Tucson

- Stephen Renner, MD, Site PI
- Katrina Trevor, Ph.D., Site Co-PI/Technical Director
- Jim Averill, Data Manager
- Reina Flores and Tulshi Bhattacharrya, Histologists
- Sean Walker: Molecular Biology Specialist

VAB Brain Bank Background

- Amyotrophic lateral sclerosis (ALS) is an adult onset, rapidly fatal, neurodegenerative disease of unknown etiology that has been linked to deployment to the Persian Gulf.
 - Deployed Gulf war veterans have nearly double the risk of developing ALS. (Haley, 2003; Horner et al., 2003)
- In response to these findings, the VA launched the VA National Registry of Veterans with ALS in 2003, coordinated at the Durham VA.
 - The registry closed in September, 2007 after enrolling 2050 Veterans aged 23-93 years from combat eras spanning World War II to the 1990-91 Gulf War.
- In 2006, the Scientific Advisory Committee of the VA ALS Registry requested that the VAB Brain Bank be initiated by the VA Cooperative Studies Program to collect brain and spinal cord tissue

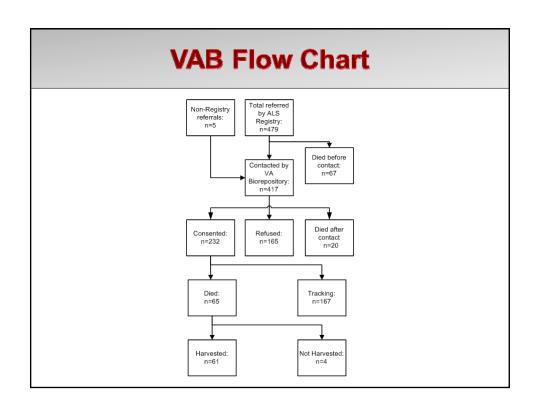
VAB Brain Bank Mission

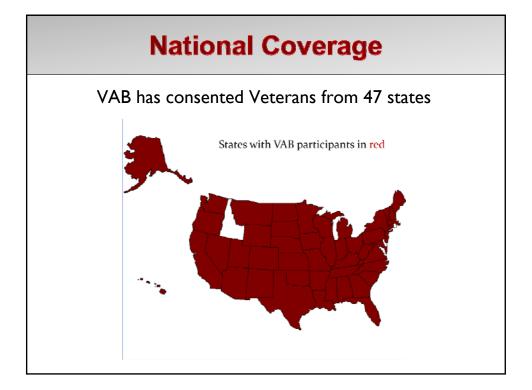
- The VAB Brain Bank (CSP 501) is coordinated at the Massachusetts Veterans Epidemiology Research and Information Center (MAVERIC) at VA Boston Healthcare System(VABHS).
- Tissue is analyzed, processed and stored at the Southern Arizona Core Tissue Laboratory (SACTL) at the Southern Arizona VA Healthcare System (SAVAHCS) in Tucson, AZ.
- Diagnostic neuropathological analyses are conducted by Dr. Ann McKee at the VA in Bedford, MA.

Tracking and Procurement

- Receive names from the ALS Registry:
 - Describe study via phone, and send consent form if Veteran is interested.
- After receiving consent:
 - Review contact information.
 - Assess ALS severity/health.
 - Schedule phone follow-up according to disease severity.

- Developing portfolios:
 - Contact VAMCs as primary harvest site.
 - Private hospitals, dieners, coroners, if VAMC unavailable.
 - Employ funeral home for transport.
 - Send specimen box to harvest facility.
- Brain & spinal cord harvest
 - 24/7 coverage with delivery to Tucson within 48 hours of death.





VAB Enrollment / Harvest Rate

VAB has a

47% success rate in consenting referrals.

<u>100%</u> success rate in brain harvests when we have been contacted.

Tissue Processing and Storage (Tucson)

Specimen Receipt (recording code #, age, gender, PMIs, cause of death)



Grossing (digital imaging, dry ice freezing, formalin fixation/FFPE blocks)



Tissue Monitoring (Luxol/H&E slides; QC: tissue pH, RNA integrity)



Storage (frozen, FFPE blocks, slides; barcode labeling, database input)



Neuropathology report (gross report; diagnostic, Ann McKee, MD)



Distribution (request review, inventory assessment, database tracking)

Tissue Distribution

- Tissue requests are made by investigators to the VAB.
- After reviewing requests for scientific merit and completeness, initial recommendations are relayed to VA Research and Development Central Office.
- VA Research and Development Central Office reviews requests and makes final determinations on approvals and amounts/types of tissue to distribute.
- Tissue and associated clinical data to be released to investigators are de-identified.







VAB Research