

Fukushima Brain Bank:

A Unique Nursing Home-based Project For

Cliniconeuropathological Correlations In Japan

Daita Kaneda¹, Keita Sakurai.^{2,3}, Chie Hishida¹, Takeshi Kanesaka¹, Norihiro Ogawa¹, Hiroyasu Akatsu⁴ , Yoshio Hashizume¹

1) Dept of Neuropathology, Fukushima Hospital, Toyohashi, Japan, 2) Radiology, NHO higashinagoya hospital, Nagoya, Japan, 3) Radiology, National Center for Geriatrics and Gerontology, Obu, Japan, 4)Center for Frailty and Locomotive Syndrome, National Center for Geriatrics and Gerontology, Obu, Japan.

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BACKGROUND	METHODS	RESULTS	CONCLUSIONS	
The Fukushima ("Welfare Village") in Toyohashi, Japan, represents a unique private-sector complex managed by the Sawarabi Medical Cooperative, comprising nursing homes, day-care facilities, and the Fukushima Hospital. The hospital functions as the central medical hub or approximately 800 elderly residents living within the village. Established in 1990, the Fukushima Brain Bank (FBB) was initially guided by Dr. Kenji Kosaka, renowned for the discovery of cortical Lewy bodies. Since receiving governmental grant eligibility in 2004, the FBB has evolved into a research institute focused on neurodegenerative diseases in the super- elderly.	 The FBB operate autopsy-based brain banking and comprehensive donation program based on pre-registered advance directives. Residents receive longitudinal medical care, including detailed serial imaging. We utilize a 1.5T Siemens scanner to acquire MPRAGE T1 volume data and diffusion MRI (dMRI), specifically utilizing multi-shell protocols optimized for Diffusion Tensor Imaging (DTI). At autopsy, clinical data and behavioral/psychological symptoms are collated from medical records.	Blood and CSF(post-mortem) Spinal cord Scalp *Optional consent, Retina (frozen and paraffin) Sampling (Vancouver style) 10mm coronal sectioned slice -80°C frozen 4% PFA-block Detailed clinical information +MRI (MPRAGE, DTI options) 10%Buffered formaline 1week Pathological investigation  Brains are separated into hemispheres; one is processed for frozen storage, while the other undergoes standardized neuropathological examination using immunohistochemistry for beta-amyloid, phosphorylated tau, alpha-synuclein, and TDP-43, alongside modified Gallyas-Braak silver staining. The FBB also offers an optional donation protocol for retinal tissue.	952 donated brains (mean81.2y) 863 frozen cases *median RNA-Integrity Number: 7.6 177 donated retina 89 DTI-MRI scans Neuropathological diagnosis AD: 236 LBD: 139 AGD: 59 PSP:26 TDP43-related: 27 Developmental disorders:30 AD:Alzheimer's disease LBD:Lewy body disease AGD:Argyrophilic grain disease PSP:Progressive supranuclear palsy TDP-43-related: FTLD-TDP or LATE	The Fukushima Brain Bank plays a distinct and vital role in clarifying clinico-neuropathological correlations among nursing home residents who require institutional care due to the inability to live independently. By integrating advanced imaging with gold-standard pathology, the FBB serves as a critical resource for validating biomarkers and understanding the pathology of dementia in real-world geriatric populations. kaneda@chojuken.net 