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# VHAS: The Vietnam Health & Aging

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## Study

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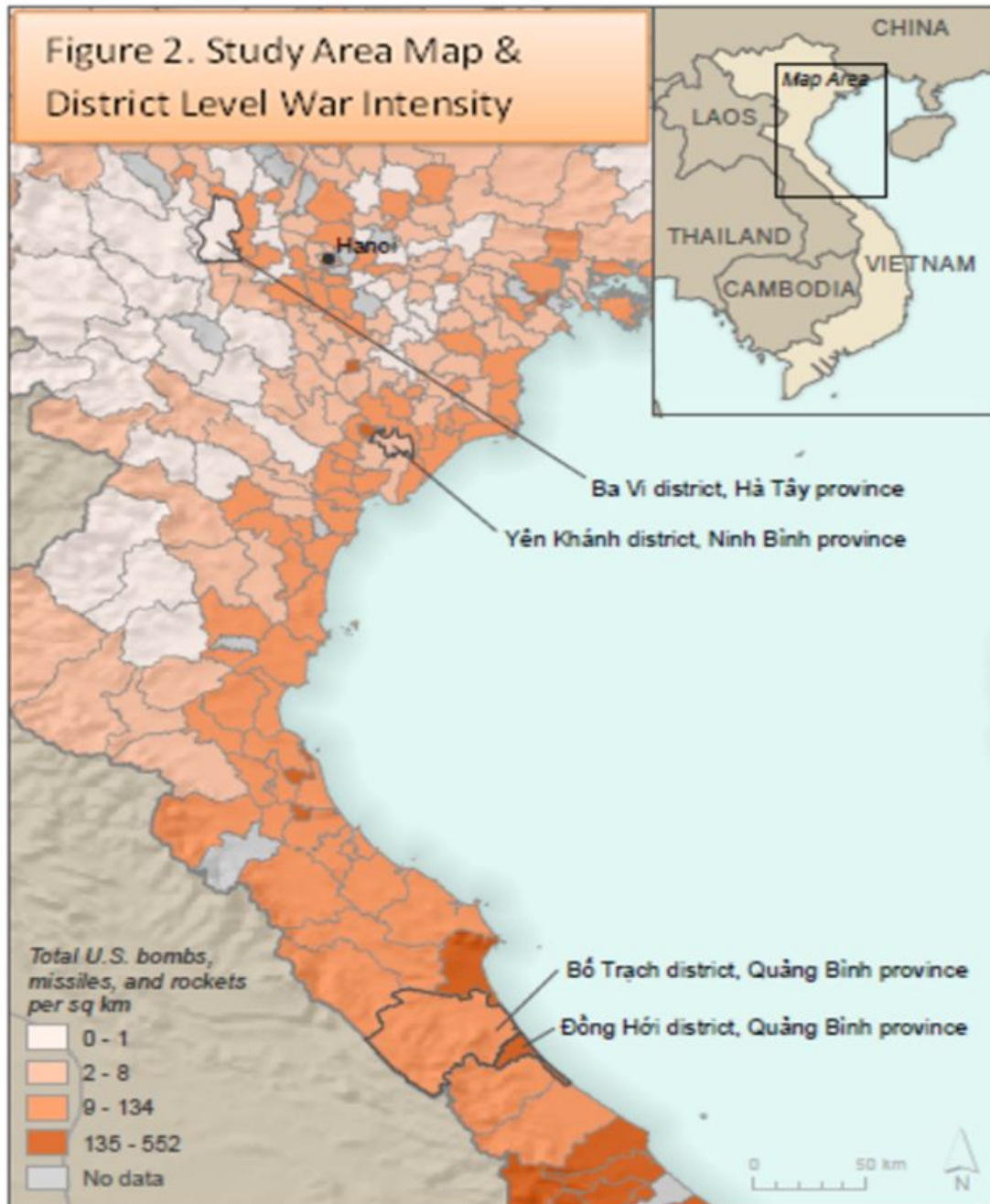
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Vietnam Health and Aging Study is funded by National Institutes of Health/National Institute of Aging (R01AG05237) and the Canadian Institutes of Health Research (175309). We also thank our helpful advisory board members for their guidance on the study: Drs. Eileen Crimmins, Charles Hirschman, Hai T. Nguyen, and Avron Spiro.



# VHAS Overview

Examine linkages between early life war exposure, mortality, morbidity, and aging processes.

Vietnam (N=2,447 adults age 60+)

- Teens/young adults during the American War in Vietnam (1965-75)
- Wave I (2018), Wave II (2021-22)

Multi-stage probability sampling

- Purposive selection of 4 districts
- Random selection in sex/service strata

# VHAS – Study Design

## In-person interview

- Extensive questionnaire
- Quantitative data on health/functioning, military service, war-related stressors, and family and social support
- 36 qualitative in-depth interviews Đồng Hới district (2022)

## Biomarker Collection at Community Health Centers

- Anthropometrics
- Blood pressure
- Grip Strength
- Peak expiratory flow rate (2018)\*
- Vision and Gait Speed (2022)
- Point-of-care analyses (2018)\*
  - HbA1c
  - Complete blood count
- Hair collection
- Whole blood collection
  - Capillary (2018)\*
  - Venous (2021-2022)

\*differs from Wave II

# VHAS – Wave II Biomarker Assays

Sample Type	Biomarkers	Method	Facility
EDTA venous whole blood	Complete blood count, HbA1c	Clinical lab analyzer	District Clinical Labs
EDTA plasma	Lipid panel	Cobas Analyzer	Hanoi Medical University
EDTA plasma	BDNF, IL-1b, IL-6, IL-10, IL-18, TNFa, IFNy, TNFRI, CRP, Ghrelin, Leptin, Resistin, Ferritin, Adiponectin	Quansys Multiplex	Hanoi Medical University
EDTA plasma subset	NG-2, CEA, Eotaxin-3, Fas Ligand, IL-5, IL-7, MCP-1, MIF, MIP-1a, and TIMP-1	Quansys Multiplex	Hanoi Medical University
EDTA plasma	Fibrinogen, DHEAS, ApoB	Conventional ELISA	Hanoi Medical University
EDTA buffy coat	DNA methylation	Illumina chip	UBC, Kabor Lab
Hair	Cortisol	Conventional ELISA	UW, Biodemography Lab