

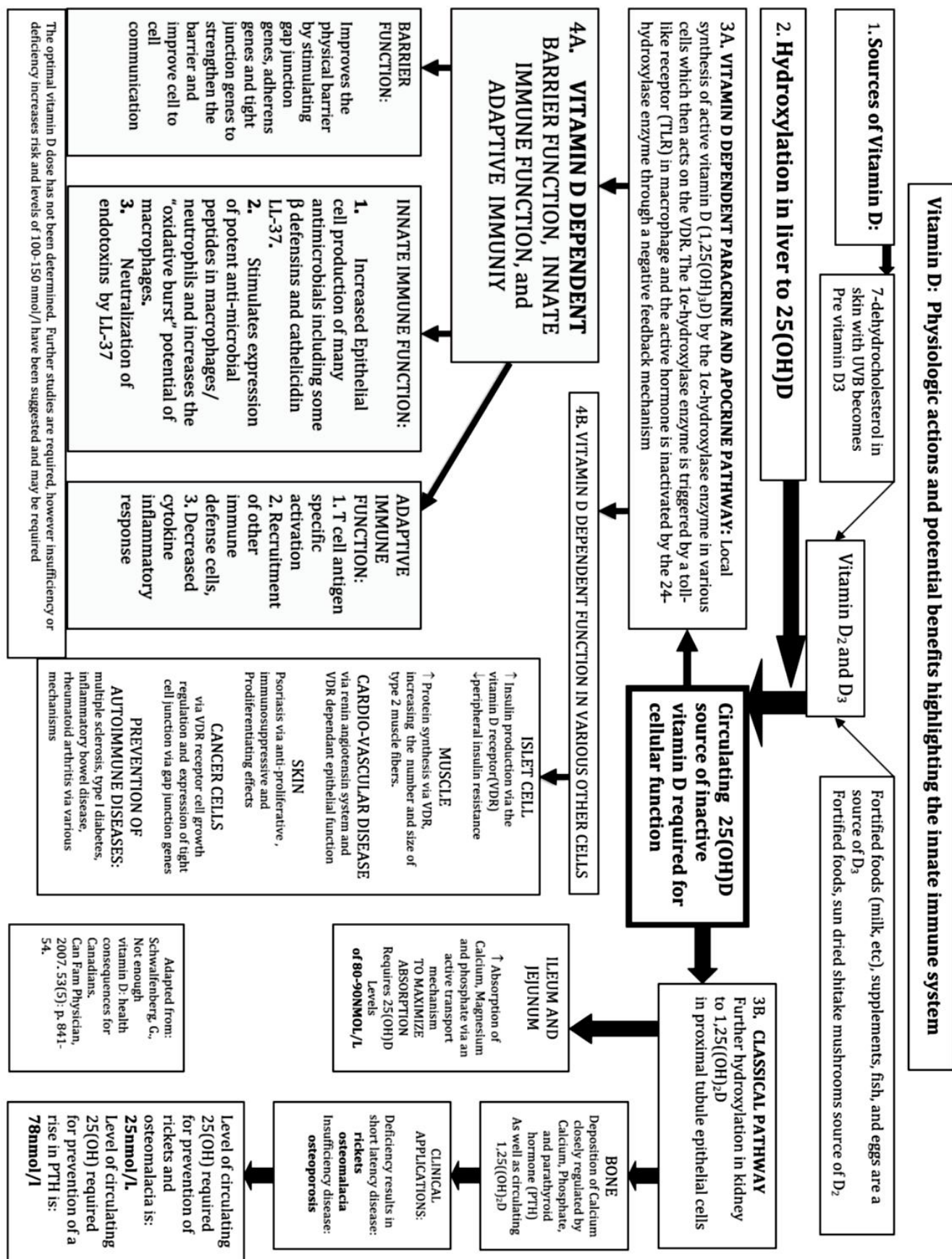
Title: State of the Science: How Does Vitamin D Impact the Health of Older Adults?

Presented by: Lingtak-Neander Chan, PharmD, BCNSP, FACN
Professor of Pharmacy & Interdisciplinary Faculty in Nutritional Sciences
University of Washington, Seattle
(email: neander@uw.edu)

Learning Objectives and Outlines:

1. To provide an updated review of the physiology, disposition, and genomics of vitamin D, and the assessment of its clinical status.
2. To compare the clinical pharmacology between ergocalciferol (vitamin D2) and cholecalciferol (vitamin D3).
3. To discuss the current controversy on the definition of vitamin D deficiency and threshold of initiating vitamin D supplementation in older adults.
4. To evaluate the impact on different vitamin D interventions on the major clinical outcomes in older adults with the following focused areas:
 - Bone health and fracture
 - Stroke/ CVA
 - Cardiovascular and serum lipids
 - Cancer
 - Fall prevention
 - Depression and Poor physical function
 - Functional impairment
 - COPD outcomes
 - Mortality
5. To overview the major ongoing clinical trials involving vitamin D interventions in older adults.

*Note: Conversion of 25(OH)D concentration from nmol/L to ng/mL: divide by 2.5
(e.g., 100 nmol/L = 40 ng/mL)*



Major Ongoing Clinical Trials on Vitamin D Use in the Geriatric Population:

1. **BEST-D** (Biochemical Efficacy and Safety Trial of Vitamin D)- Jane Armitage, Lead investigator, University of Oxford
Study aim: To determine the daily dose of vitamin D needed in older people to maintain blood levels of vitamin D similar to those seen in healthy younger people at the end of the summer months.
2. **VDOP** (Vitamin D supplementation in older people)- Inez Schoemakers, Leading investigator, Medical Research Council Human Nutrition Research, University of Cambridge.
Study aim: To examine the relationship between vitamin D supplementation at a range of doses (12,000 IU/month, 24,000 IU/month or 48,000 IU/month, equivalent to 400 IU/day, 800 IU/day and 1,600 IU/day, respectively) and the change in bone mineral density (BMD) in older people living in private households in the North East of England
3. **VITAL** (Vitamin D and Omega-3 Trial)- JoAnn E. Manson; Shari S. Bassuk, Co-lead investigators, Brigham and Women's Hospital, Harvard Medical School.
Study aim: To determine whether taking daily dietary supplements of vitamin D3 (2000 IU) or omega-3 fatty acids (Omacor® fish oil, 1 gram) reduces the risk for developing cancer, heart disease, and stroke in people who do not have a prior history of these illnesses.
4. **D-Health:** A trial of vitamin D for prevention of mortality and cancer in older Australian adults – Rachel Neale, QIMR Berghofer Medical Research Institute, The University of Queensland, Australia
Study aim: To determine whether increasing the mean 25(OH)D concentration in the general population through widespread supplementation would result in improved health outcomes.
5. **FIND** (Finnish Vitamin D Trial) – Tomi-Pekka Tuomainen, Lead investigator, The University of Eastern Finland.
Study aim: To determine the benefits and risks of vitamin D3 (1600 IU/day, 3200 IU/day, or placebo) in the primary prevention of cardiovascular (CVD) and cancer among 18000 men 60 years or older and women 65 years or older.
6. **VIDAL-** Vitamin D and Longevity Trial - Julian Peto, Lead investigator, The London School of Hygiene & Tropical Medicine.
Study aim: To determine if taking vitamin D (100,000 IU/month or placebo) can reduce mortality and morbidity among older adults the general population between the ages of 64-85.