Our Healthspan Prospects Update Oct. 2018

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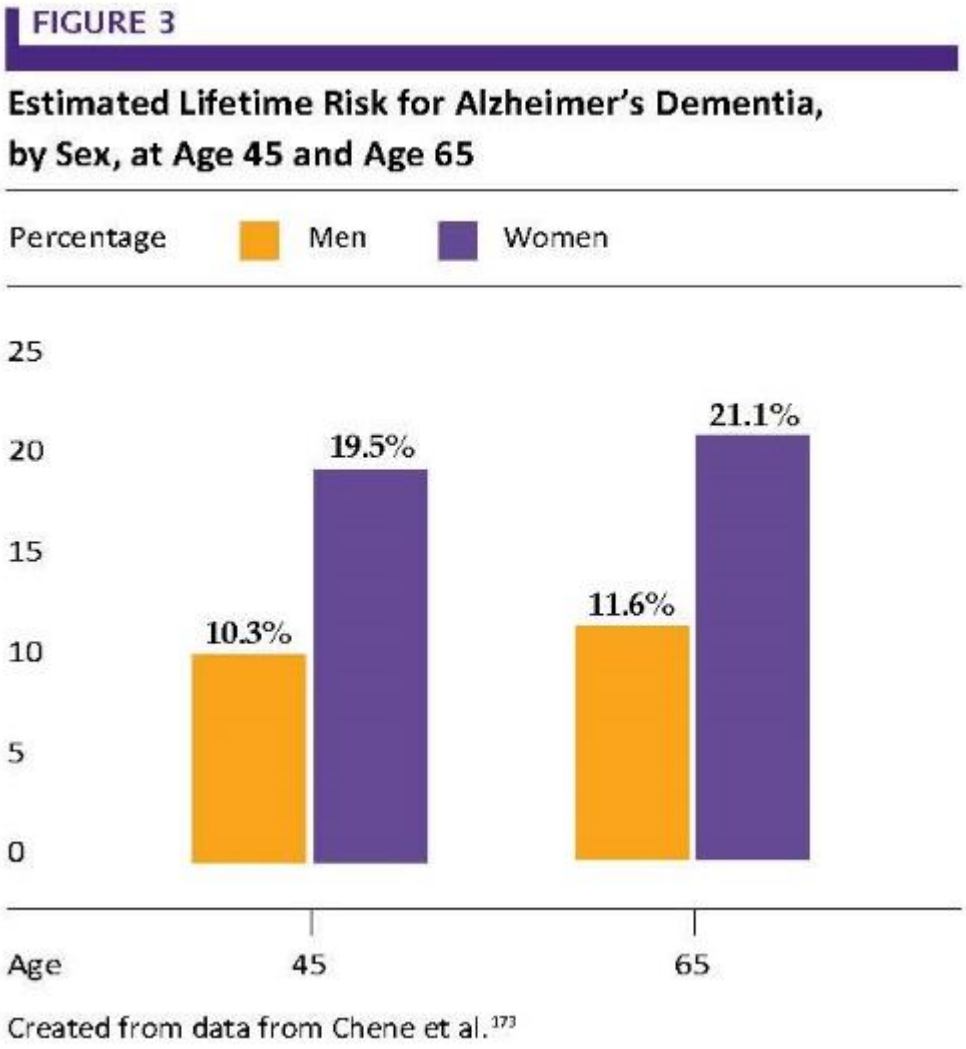
Healthspan and Lifespan Extension Recent Developments

- **AD & other dementias remain the chief threat to our Healthspan**
  - **Is there cause for hope near-term?**
  - **AD has emerged as a multifactorial disorder (many causes in different combinations).**
  - **Early diagnosis and individualized treatments seem to be the most promising approach.**
- **Science of senescent cells, SCs, and the chronic inflammation they cause, has matured, igniting a search for pharmaceutical solutions**
  - **Development of senolytics, SC destroyers, is underway with the aim of far surpassing effects of senolytic dietary supplements, like quercetin and fisetin,**
  - **LA Times article July, 2018, This drug cocktail reduced signs of age-related diseases and extended life in mice and human cells, provides some science background, including recent research progress led by Dr. James Kirkland at the Mayo Clinic, Rochester, MN: http://www.latimes.com/science/sciencenow/la-sci-sn-anti-aging-cocktail-20180710-story.html**

Healthspan and Lifespan Extension Recent Developments, continued

- **The fundamental science of aging and related diseases in humans and other animals has been contentious/confused; currently two prominent hypotheses are:**
  1. **Aging is an evolved adaptation to the environments faced by our ancestors, and**
  2. **Aging is the accumulated damage of life processes degraded late in life, after our reproductive prime, when there has been little or no evolutionary pressure to optimize health.**
  - **These two approaches may be resolved by synthesis, applying evolutionary analysis at a deeper level.**
- **For those interested in this topic, e.g. why animals have such diverse lifespans, how we humans fit in, and implications for our potential lifespan and healthspan, I recommend a recent (2018) book by Kris Verburgh, MD: <u>The Longevity Code: Secrets to Living Well for Longer from the Front Lines of Science</u>**

Practical Risk Information from *2018 ALZHEIMER'S DISEASE FACTS AND FIGURES* (Alzheimer's Association, 2017)



Higher Risks for Women may be skewed by Greater Male Mortality

- Before 45 yrs due risky behavior and more CVD
- Before 65 yrs due to more CVD and a weaker constitution [KB: early male aging is seen in our epigenome, Prof. Steve Horvath, UCLA]

Good News Not Fully Understood:

"A growing number of studies indicate that the age-specific risk of Alzheimer's and other dementias in the United States and other higher-income Western countries may have declined in the past 25 years, though results are mixed. These declines have been attributed to increasing levels of education and improved control of cardiovascular risk factors."

Evidence Has Mounted that there are many Causes/Triggers for AD

- **Independent studies have presented evidence that amyloid plaque deposition is part of the brain's immune response to**
  - **Actual infections, bacterial or viral,**
  - **Perceived infections (auto immunity),**
  - **Chronic inflammation due to environmental toxin exposure, metabolic disorder, dietary deficiencies, vascular disease, etc.**
- **Dr. Dale Bredesen has pioneered this line of research and theory; see his recent book:**

  The End of Alzheimer's: The First Program to Prevent and Reverse Cognitive Decline (2017)
- **If diagnosis and treatment of specific underlying causes of AD is successful, this approach may be useful for other age-related diseases, such as CVD and cancers**