

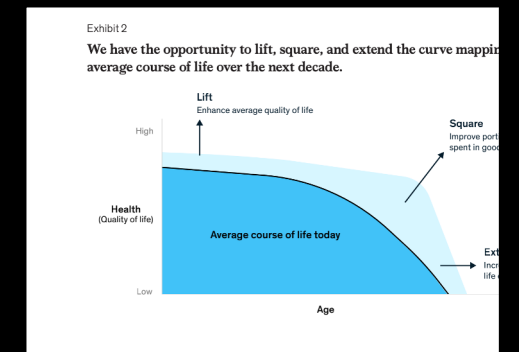
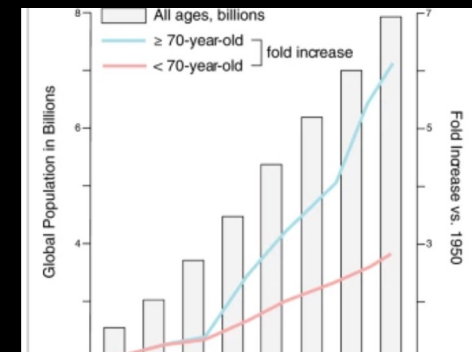
Clinical translations in Longevity

Jyothi Devakumar PhD

Health Span Action Coalition

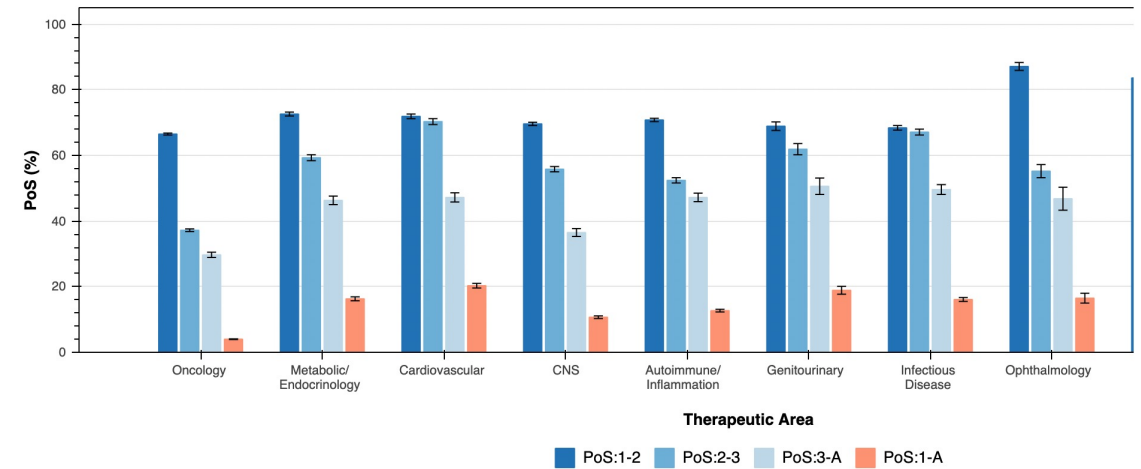
Longevity- challenge/ Opportunity

- Prof. Andrew J. Scott: “We show that a slowdown in aging that increases life expectancy by 1 year is worth US\$38 trillion, and by 10 years, US\$367 trillion”
- The McKinsey Health Institute (MHI) believes that over the next decade humanity could add as many as 45 billion extra years of higher-quality life—roughly six years per person on average, and substantially more in some countries and populations.
- The total value of healthier aging (US population)- current and future - annual rate of \$725 B



Lessons from the History

Overall Estimates of PoS by Therapeutic Area – 2022Q1 Update



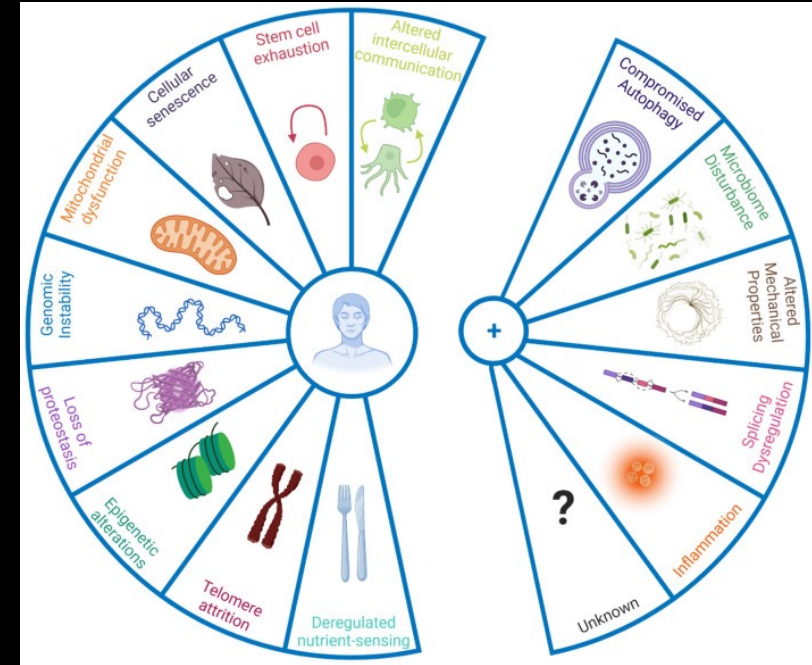
- 300+ theories of Aging
- Reducing the cardiovascular disease and cancer by 20% could increase life expectancy by 2.3 years and 3.1 years
- Eliminating the top five cancer types (lung, colorectal, breast, prostate, and pancreatic) could increase life expectancy by 3.9 years in the United States

Possibilities



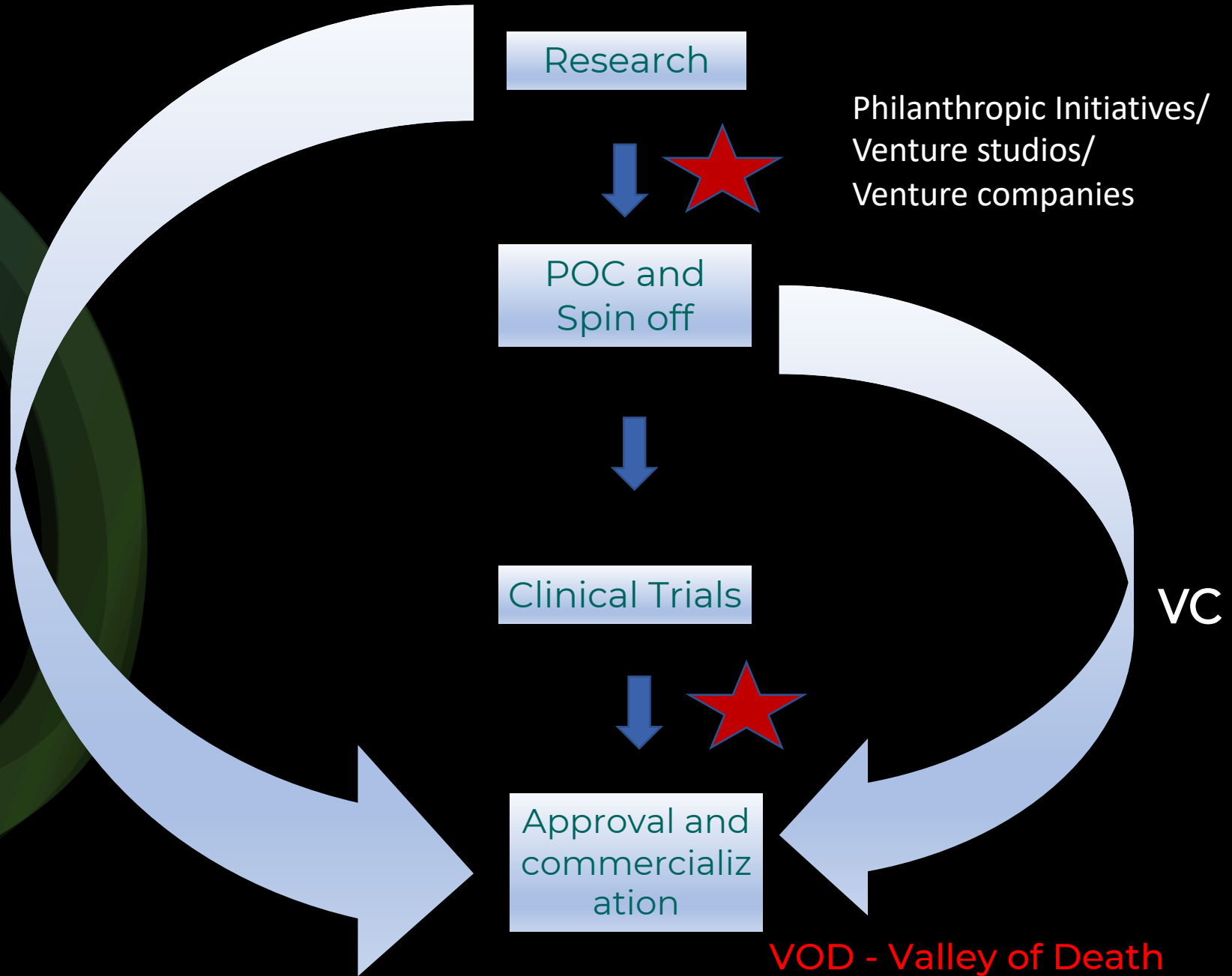
CAR T – disease free ten years later

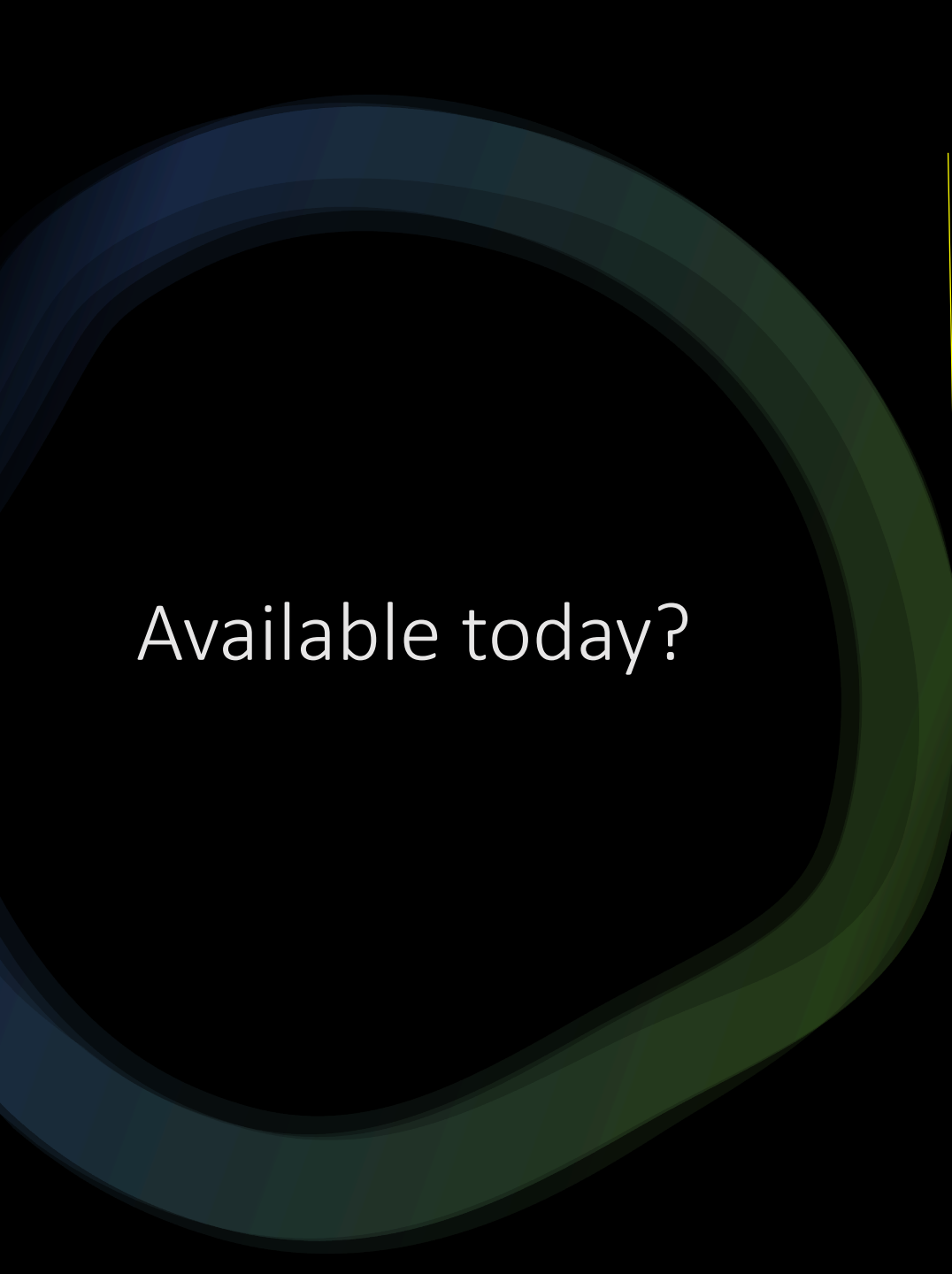
Hallmarks- Transition from 2013 to 2022



- Hallmarks do represent targets to build interventions
- Targeting one hallmark has a network impact

Longevity Ecosystem



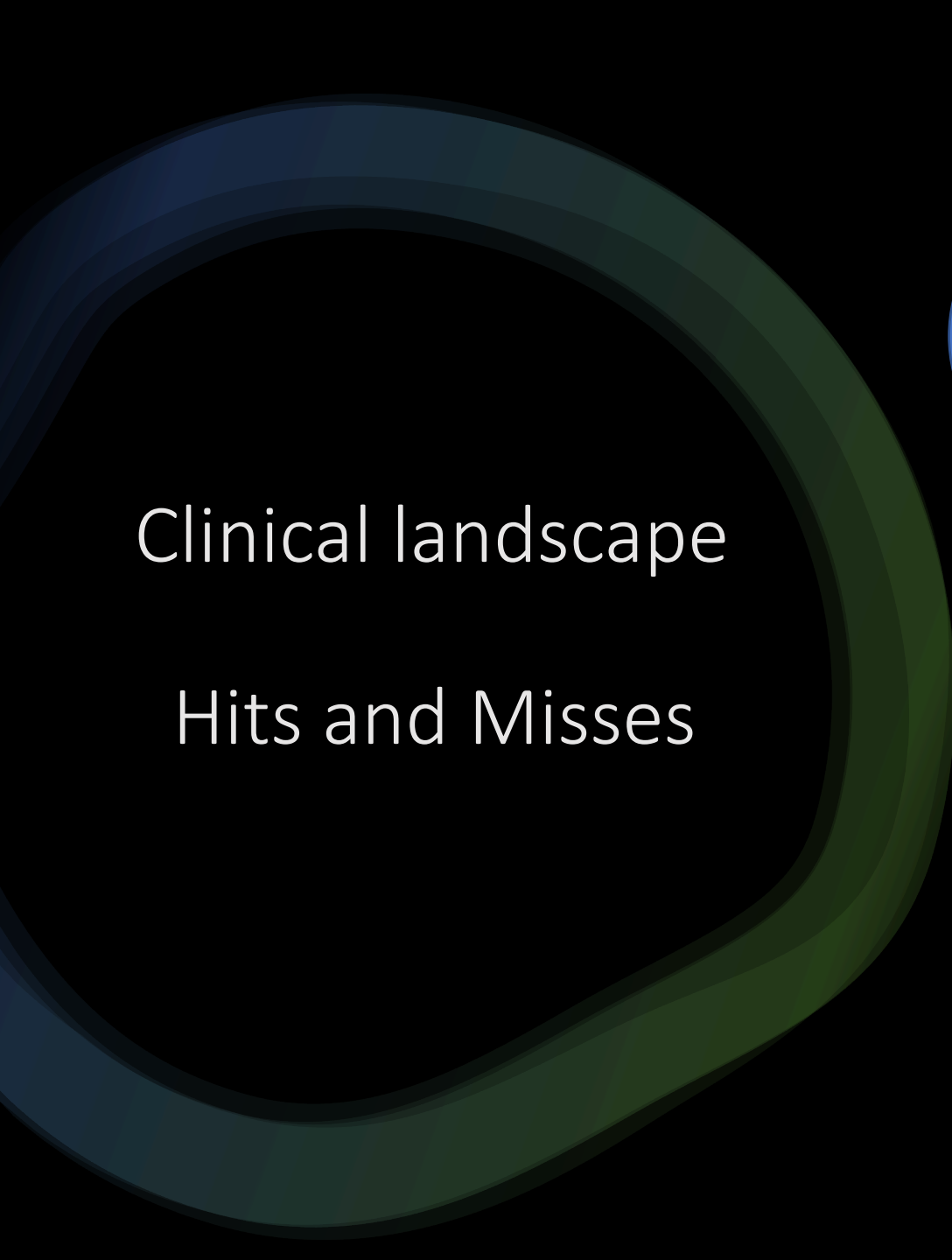


Available today?

- Supplements
- Biohacking
- Open clinical trials
 - Stem cells
 - Exosomes
 - Plasma exchange
 - Plasma dilution
- Lifestyle changes
- Dietary patterns

- Diagnostics
 - omics
- Aging clocks

- Clinical trials



Clinical landscape

Hits and Misses

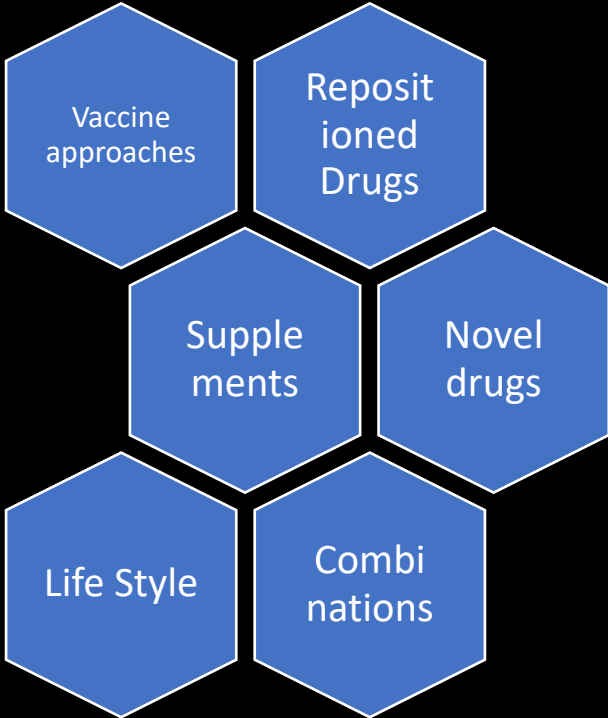


Animal studies

Metformin
Rapamycin
Calorie restriction

Parabiosis
Stem cells for Frailty
Resveratrol
FMT

Senolytics
Vit E
Growth Hormone
Testosterone



Vaccine approaches

Repositioned
Drugs

Supplements

Novel drugs

Life Style

Combinations

Technologies that hold promise

Stem cells –
rejuvenation
and delivery
vehicles

Autophagy
regulators

Antibody based

Companion
/precision
Dx

Senolytics/
senomorphics

Gene
Therapy

Tissue/organ
engineering

CRISPR

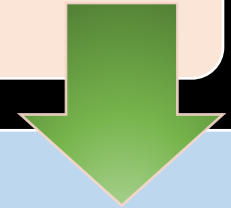
Bio/cryo
Preservation

Designer
nanoparticles
(adsorb/bind/clear)

Longevity drugs

Preventative

- Personalization/acceptability in the wider population
- Minimal to no side effects/toxicity
- Long acting
- Non-Invasive
- Low cost



Curative

Differential dosing

- Polypharmacy
- Minimal side effects
- Low cost



Disease specific

- Overlapping
- Different phases of disease



Longevity medications- Wish List

- Availability
- Low cost
- Supply Chain
- Public Private partnerships
- Patient/physician education



Regulations

- Aging a disease?
- ICD 11

Investment Buzz

Company

Philanthropic
initiatives

Venture funds

NFT

Altos

Longevity
Impetus grants

Hevolution

Hevolution
and
New limit

VitaDao NFT



Longevity Clinics

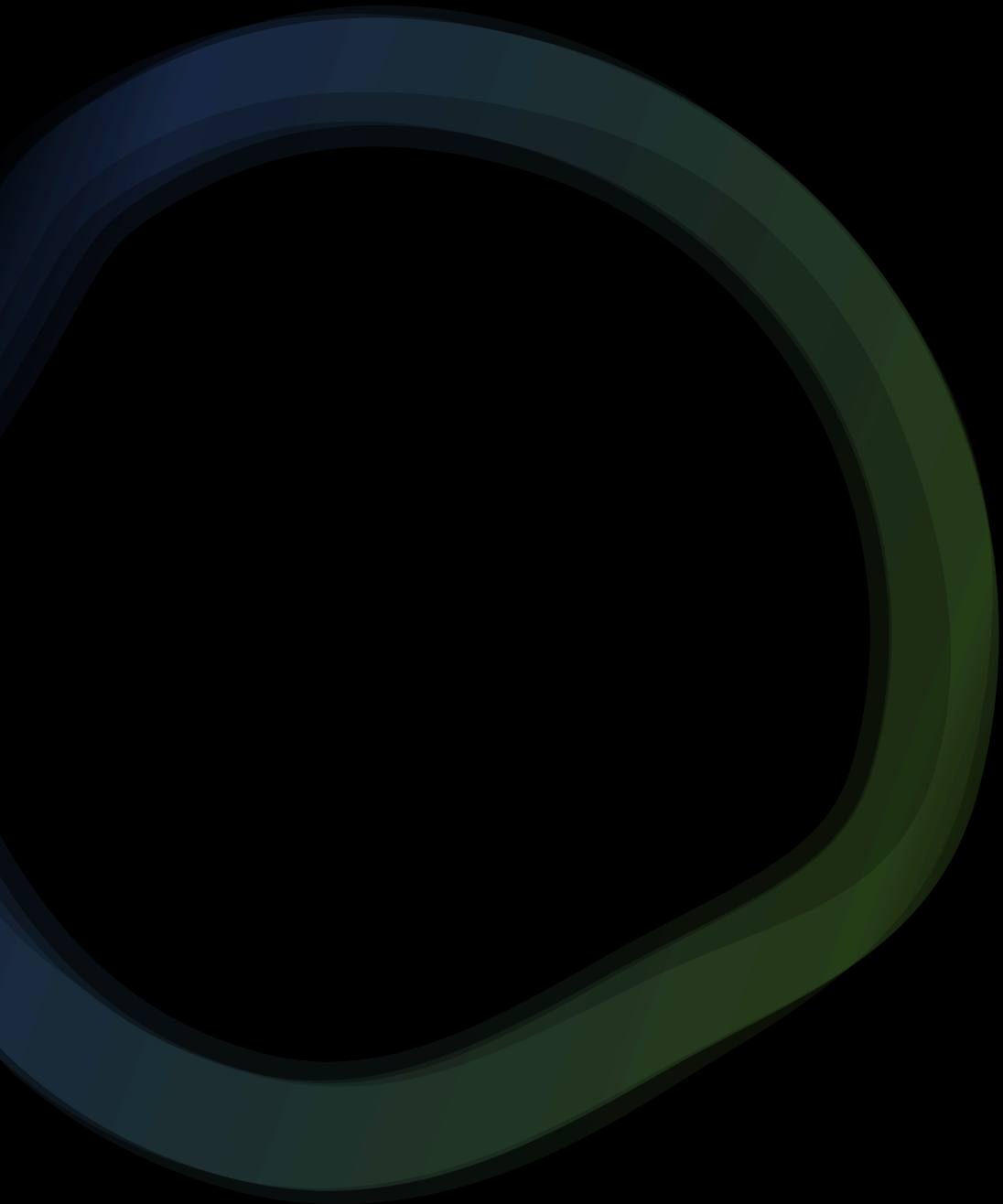
Jurisdiction

Regulations/oversight

Data capture/Standardization

Follow-up

HIPPA compliance



Thank You