



Collaborative Team Science:

Early Detection
& Interception

Mission Statement

Stand Up To Cancer's mission is to raise awareness and fund Research to detect and treat Cancers with the aspiration to cure all patients.

Disclosures

- SU2C President and CEO
- Elicio Pharmaceuticals Chairman of the Board
- Immunxy Board Director

STAND UP TO CANCER

Global Scientific Community

Chaired by William G. Nelson Cancer Center Director at JHU; SU2C's **Scientific Advisory Committee** is comprised of highly accomplished researchers, physicians, and patient advocates.



Executive Committee

William G. Nelson, MD, PhD, Chair
John D. Carpten, PhD, Vice Chair
Arnold J. Levine, PhD, Vice Chair

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Luis A. Diaz, Jr., MD
S. Gail Eckhardt, MD
Michael Fischbach, PhD
Richard B. Gaynor, MD
Nancy F. Goodman
James Gulley, MD, PhD
David G. Kirsch, MD, PhD
Guillermina (Gigi) Lozano, PhD

Tomas J. Philipson, PhD
Lecia Sequist, MD, MPH
Arlene Sharpe, MD, PhD
Laura K. Shawver, PhD
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David A. Tuveson, MD, PhD

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Lisa Diller, MD
Judy Garber, MD, MPH
Laurie H. Glimcher, MD
William N. Hait, MD, PhD
William G. Kaelin, Jr., MD
Tak W. Mak, PhD
Andre Nussenzweig, PhD
Roderic I. Pettigrew, PhD, MD
Cecil B. Pickett, PhD
Carol L. Prives, PhD
Phillip A. Sharp, PhD
Arlene Sharpe, MD, PhD

Our curated scientific community includes:

- **4** Nobel laureates
- **45+** scientific advisors
- **130+** Team awards
- **140+** patient advocates on Team grants
- **150+** expert reviewers
- **210** unique institutions
- **270+** clinical trials
- **300+** industry collaborations
- **3,000+** funded scientists

STAND UP TO CANCER

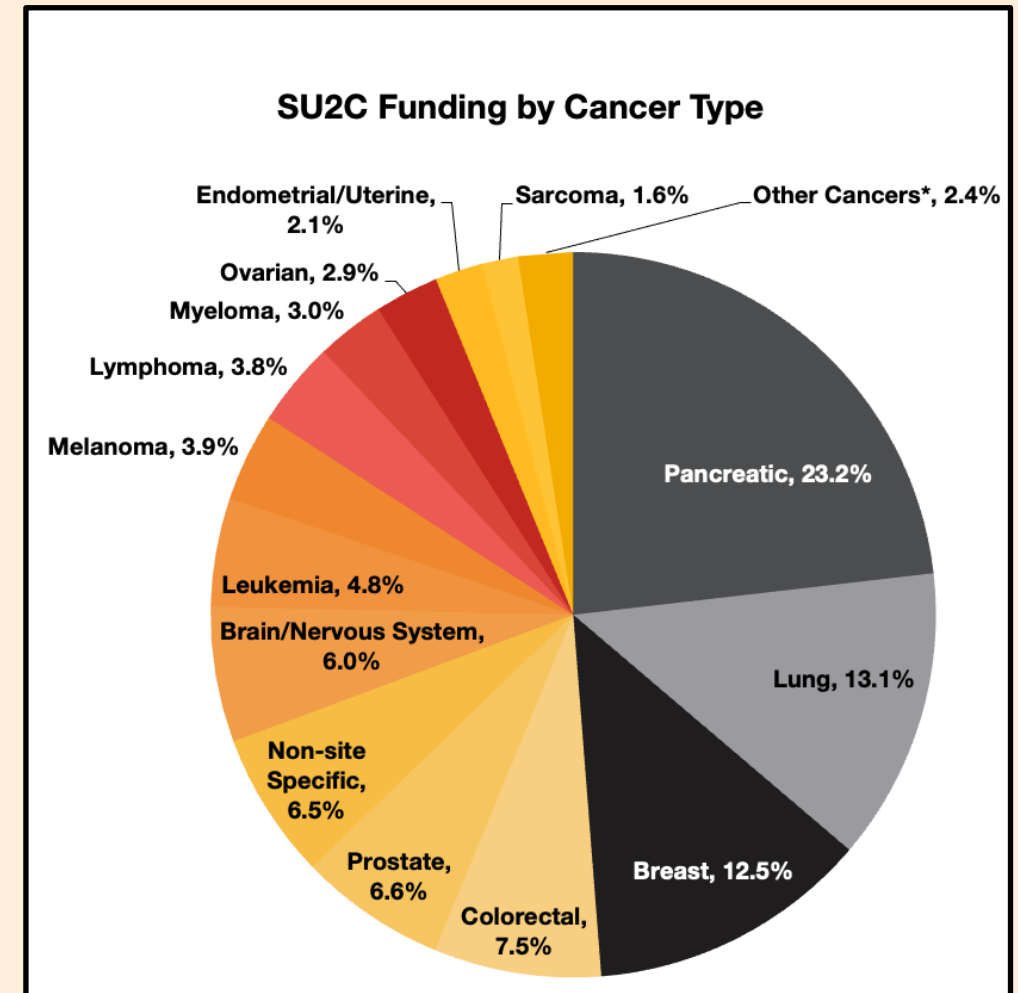
- SU2C collaborates with non-profit, commercial industry, and government research organizations
- SU2C sustains a global network of research organizations to investigate areas of interest while maintaining focus on research goals
- SU2C partners with over **100** key advocacy groups and trusted community voices to support clinical trial engagement and education



STAND UP TO CANCER

Cutting-Edge Portfolio

- Expert selection and oversight for over **\$800 million** in direct funded cancer research
- Supports translational and clinical research into all common cancers and most rare cancers occurring in the US
- SU2C grantees have over **1,650** publications across **350+** journals spanning many disciplines, including **220+** publications in highest impact and most widely read journals



STAND UP TO CANCER SCIENCE

Selected Breakthroughs

- **Pioneering Immunotherapy Combinations:** First CAR T therapy for Acute lymphoblastic leukemia
- **Metastatic Prostate Cancer sensitive to PARP inhibitors:** Studies expand use of Olapraib to HRR deficient mCRPC
- **Pioneering Immunotherapy Combinations:** CTLA4 blockade plus other immunotherapies yield breakthroughs in three cancer types
- **TIL Therapy in NSCLC:** Breakthroughs lead to multiple registration trials
- **Rectal Cancer Trial:** PD-1 blockade in Rectal Cancer shows 100% clinical response in patients with MSI-H tumors
- **Pancreatic Cancer Vaccine:** Successful demonstration of an mRNA vaccine
- **Radiation plus immunotherapy for sarcoma:** Clinical trial met primary endpoint leading to new standard of care

STAND UP TO CANCER

Colorectal Cancer Dream Team



TARGETING GENOMIC, METABOLIC AND IMMUNOLOGICAL VULNERABILITIES OF COLORECTAL CANCER

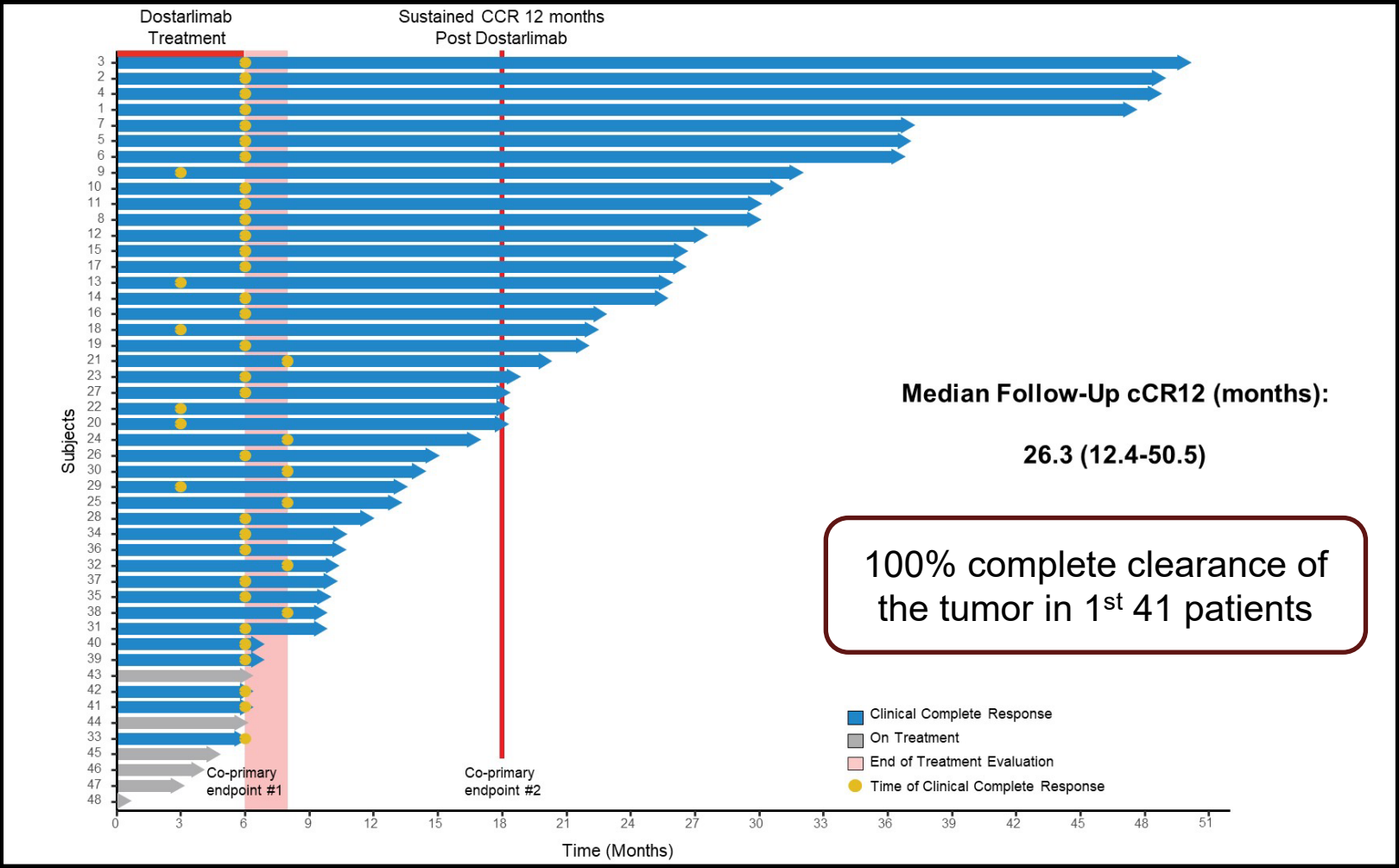
Luis A. Diaz, MD, Memorial Sloan Kettering Cancer Center

Lewis C. Cantley, PhD, Harvard Medical School

Zhenge J. Wang, PhD, Case Western Reserve University

Grant Term: June 2017 – January 2024

Phase 2 Study of Induction PD-1 Blockade (Dostarlimab) in Patients With Locally Advanced Mismatch Repair Deficient Solid Tumors (stage II or III rectal adenocarcinoma)

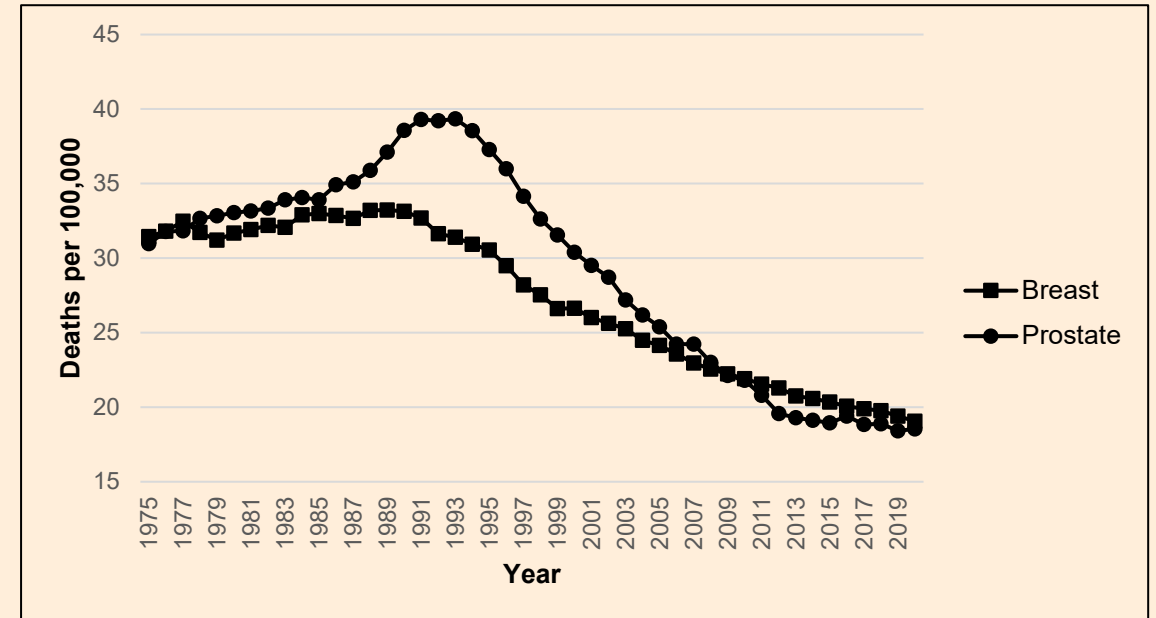


ASCO Cercek, A et al (2024)

FUTURE DIRECTIONS

Early Detection and Interception

- May reduce cancer cell deaths over the next five to ten years
- Extend this hypothesis to all tumor types

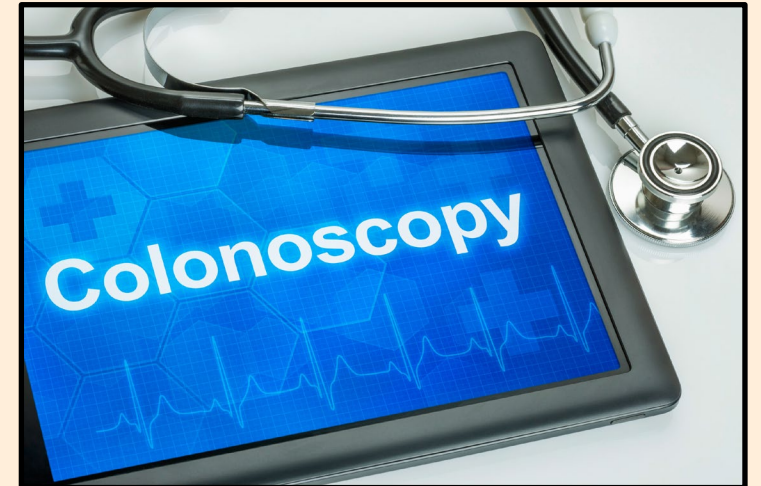
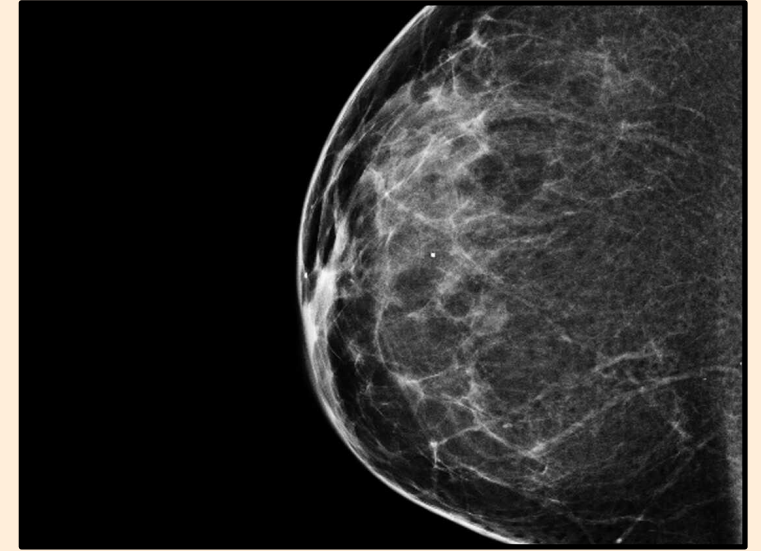


Decreased mortality as a result of Improved Screening and early Intervention: Breast¹ and Prostate²: 1979-2020

FUTURE DIRECTIONS

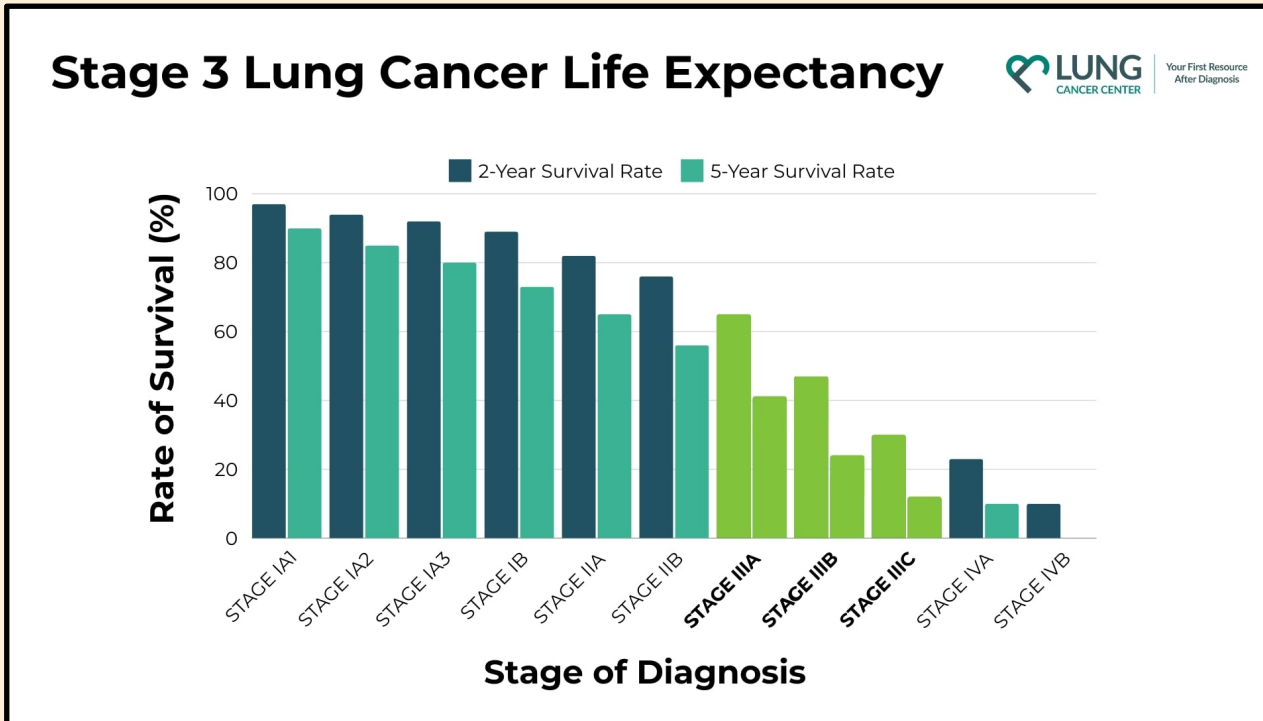
Early Detection Platforms

- Mammograms and colonoscopies have improved outcomes for patients diagnosed with breast and colon cancers.
- The need for additional blood- or imaging-based diagnostic platforms is significant and should take advantage of machine learning and AI technologies.

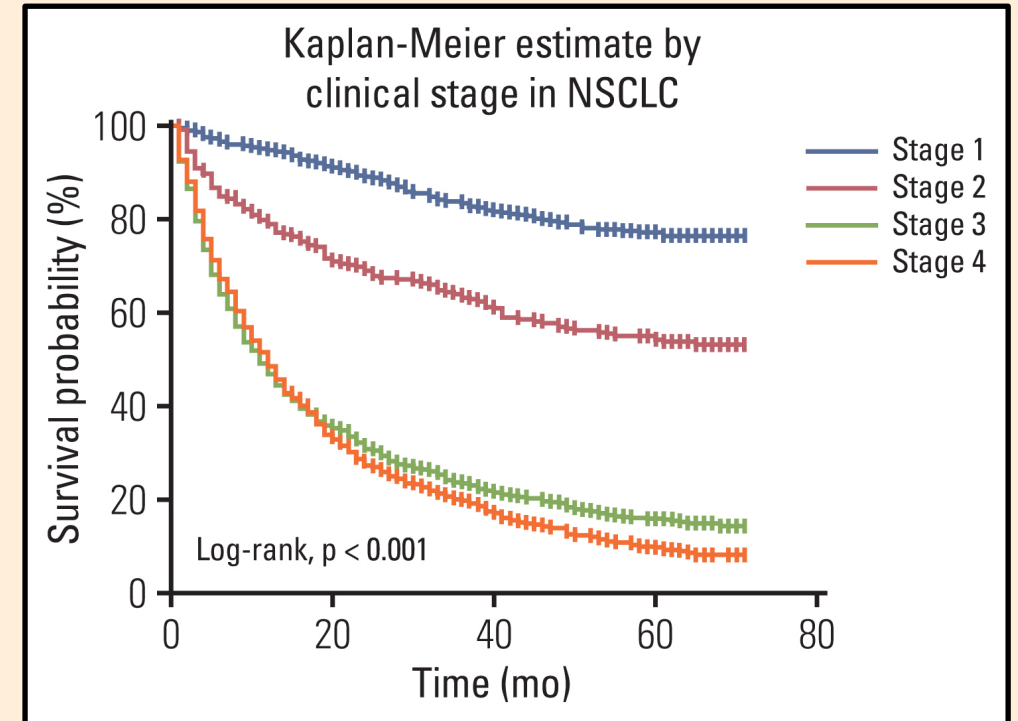


FUTURE DIRECTIONS

Early Detection and Interception



Source: <https://www.lungcancercenter.com/news/stage-3-life-expectancy/>



Jeon DS, Kim HC, et al; Korean Association for Lung Cancer; Korea Central Cancer Registry. Five-Year Overall Survival and Prognostic Factors in Patients with Lung Cancer: Results from the Korean Association of Lung Cancer Registry (KALC-R) 2015. *Cancer Res Treat.* 2023;55(1):103-111. doi: 10.4143/crt.2022.264

FUTURE DIRECTIONS

Early Detection and Interception

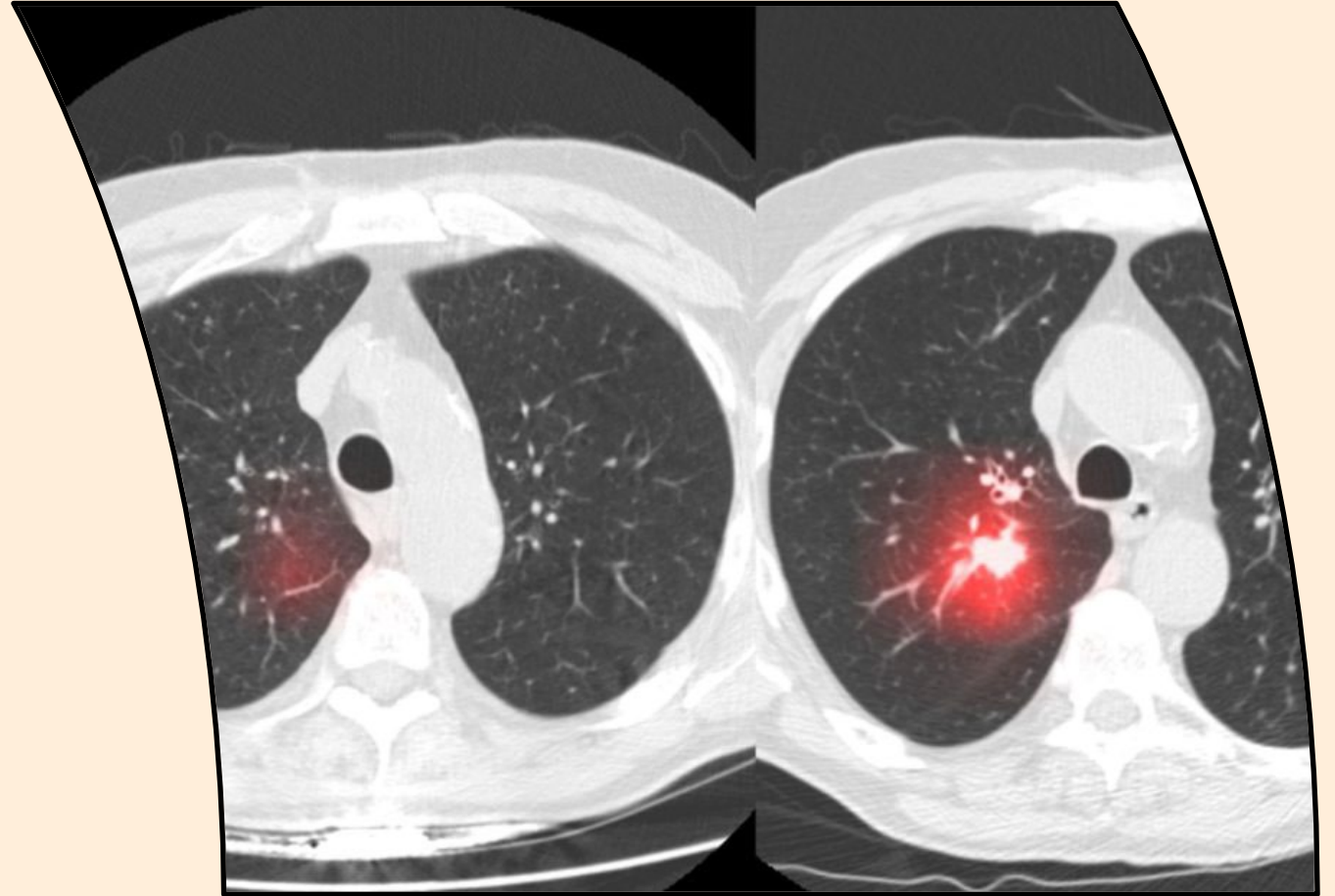
- For individuals aged 50–80 who smoke or used to smoke and have at least a 20 pack-year history of smoking
- Low-dose CT (LDCT) has become an effective method for early detection of lung cancer
- Currently the only screening method available



FUTURE DIRECTIONS

Sybil

- Sybil is an open access deep learning model to predict future lung cancer risk
- Capable of predicting an individual's future lung cancer risk from a single LDCT scan
- Developed by Regina Barzilay in collaboration Lecia Sequist



<https://ascopubs.org/doi/10.1200/JCO.22.01345>

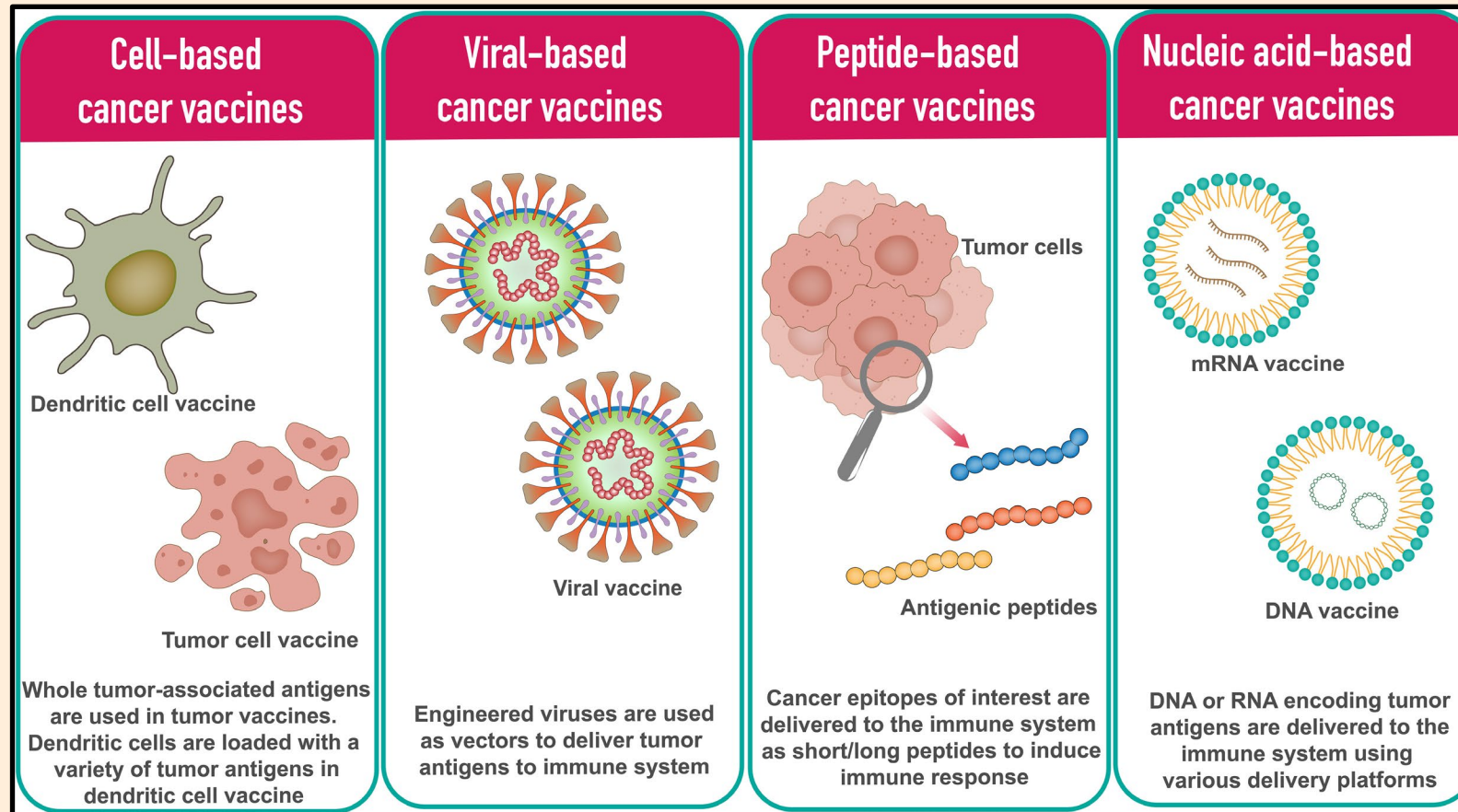
FUTURE DIRECTIONS

AI/LLM

- Multiplexing large “omics” datasets from liquid biopsies
- Algorithm to predict early-stage cancer and pre-cancer
- Tumor-informed

FUTURE DIRECTIONS

Vaccine Platforms

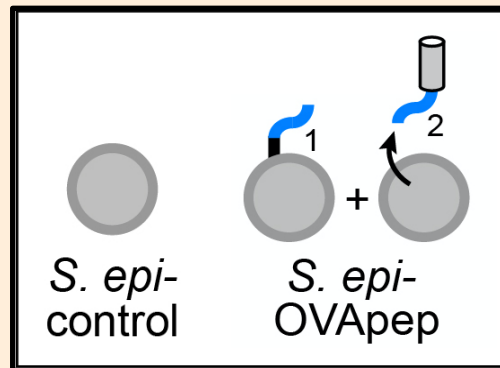
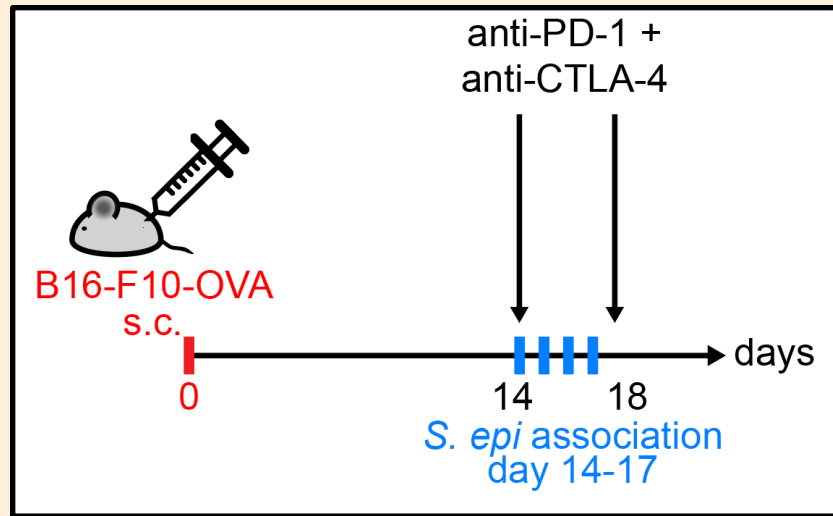


Vishweshwaraiah, Y.L.; Dokholyan, N.V.; mRNA Vaccines for Cancer Immunology, 2022. *Front. Immunol.* 13, 1-10.
<https://doi.org/10.3389/fimmu.2022.1029069>

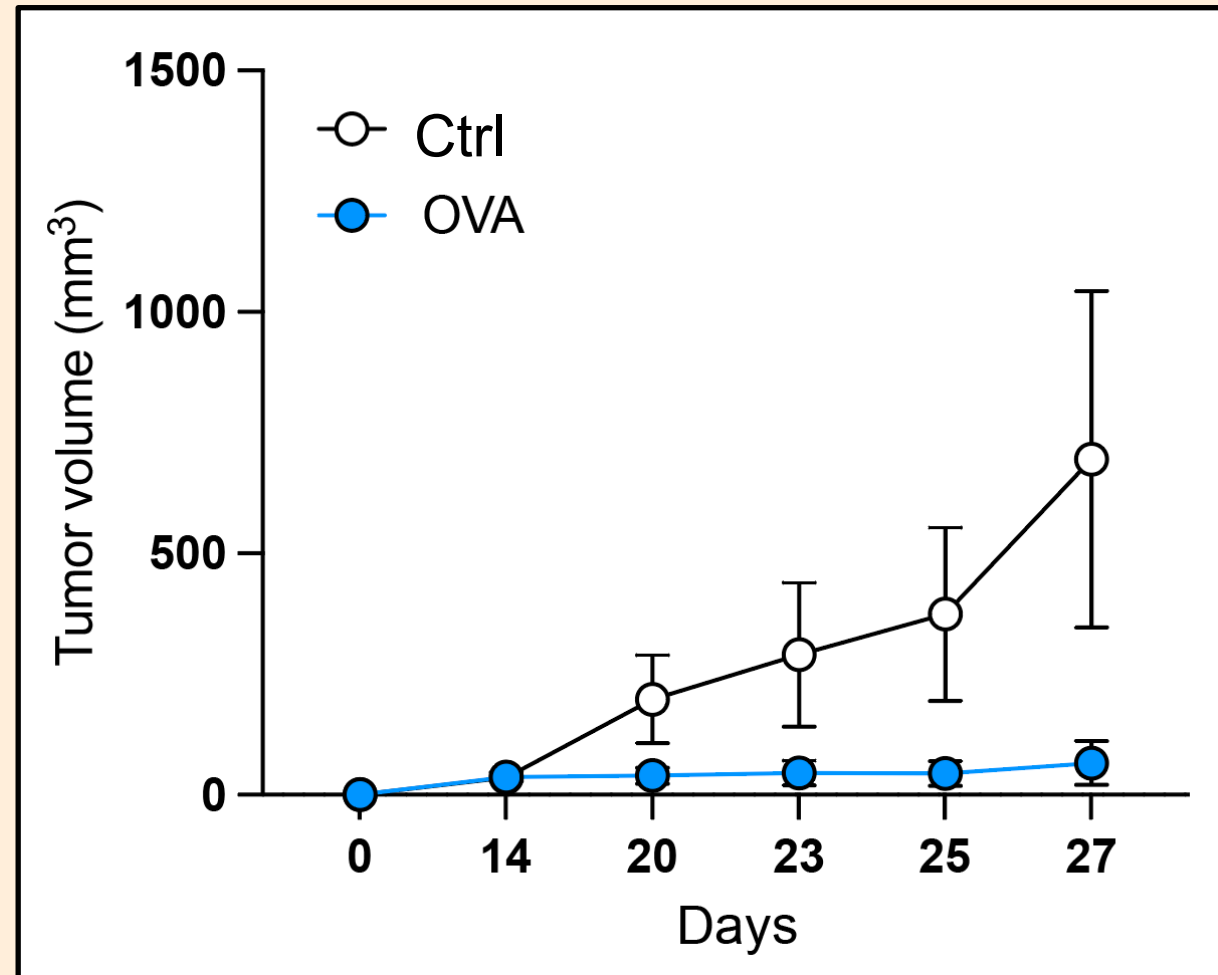
FUTURE DIRECTIONS



Synergy with checkpoint blockade: Treatment mode



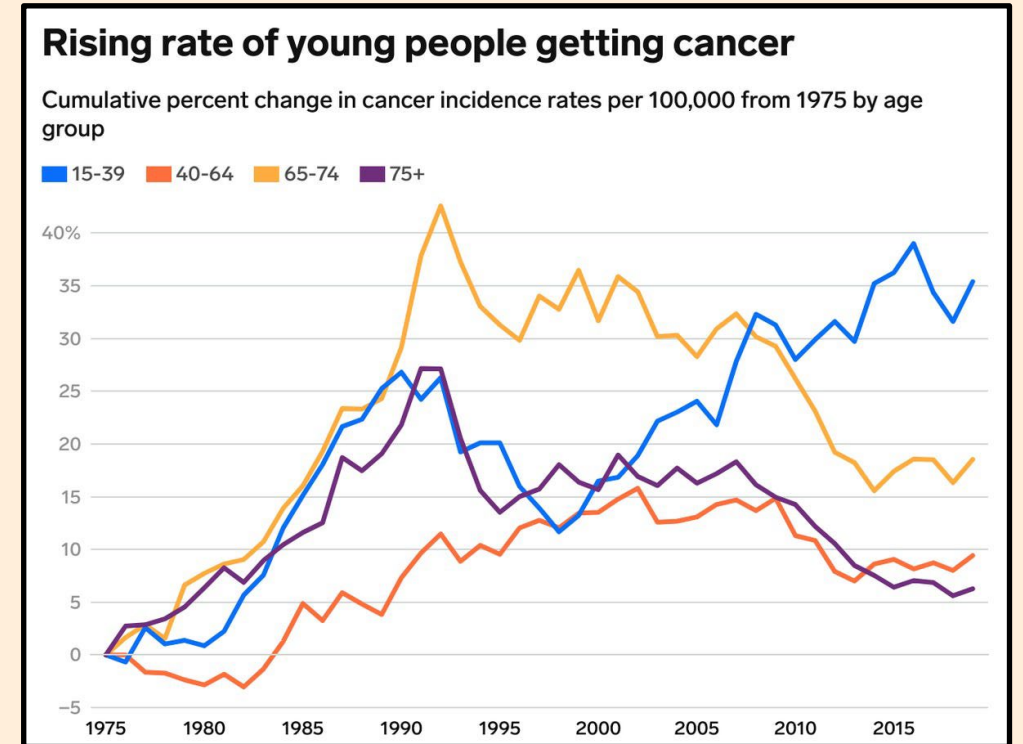
Chen et al., Science 380, 203–210 (2023)



FUTURE DIRECTIONS

Cancer in Younger Patients

- Cancer diagnoses are on the rise among younger patients (under 50).
- Colorectal, stomach, breast, and pancreatic cancers.
- Young adults are not regularly screened, so later-stage diagnoses are more common.
- Lifestyle, environmental factors, diet, other factors e.g. microplastics.



<https://www.businessinsider.com/rise-in-cancer-among-young-people-under-age-50-charts-2024-3>

STAND UP TO CANCER

Future Directions

A deliberate approach towards **CURING CANCER through early detection & interception.**

and research to reduce mortality from cancer by **25% in five years and 50% ten years.**

[illegible]

STAND UP TO CANCER

Cure Directions

A deliberate approach towards **CURING CANCER through early detection & interception.**

and research to reduce mortality from cancer by **25% in five years and 50% ten years.**

STAND UP TO CANCER
THANK YOU!

