

Life Science Caucus Meeting
October 19, 2020
7:30am

Co-chairs:
Senators Newton and Woodard
Representatives White and Reives

Meeting will begin shortly



Agenda

- Welcoming Remarks by Chairs
 - Senators Paul Newton and Mike Woodard
 - Representatives Donna White and Robert Reives
- Presentation – NC Biotech – Doug Edgeton and Bill Bullock
- Presentation – Lilly – Dan VonDielingen
- Presentation – GRAIL – Joan Malcolm
- Discussion
- Adjourn

North Carolina Biotechnology Center

Doug Edgeton became NCBiotech's president and CEO in September 2014. He brings extensive executive-level experience in health care from major academic medical centers, research park development and business administration, including an emphasis on community service.

Throughout his career, Doug has managed both human resources (talent) and facilities, helping them work in concert to create the right ecosystem for organizational growth. This approach led to more efficient organizations, faster technology transfer and better patient care. Edgeton continues this transformative approach at the Biotech Center, targeting state investment and staff expertise to help North Carolina's life science companies grow, create jobs, and bring life-changing technologies to market.

Edgeton received his B.S. degree from the University of Alabama in Tuscaloosa, and MBA and MPH degrees from UAB.



North Carolina Biotechnology Center

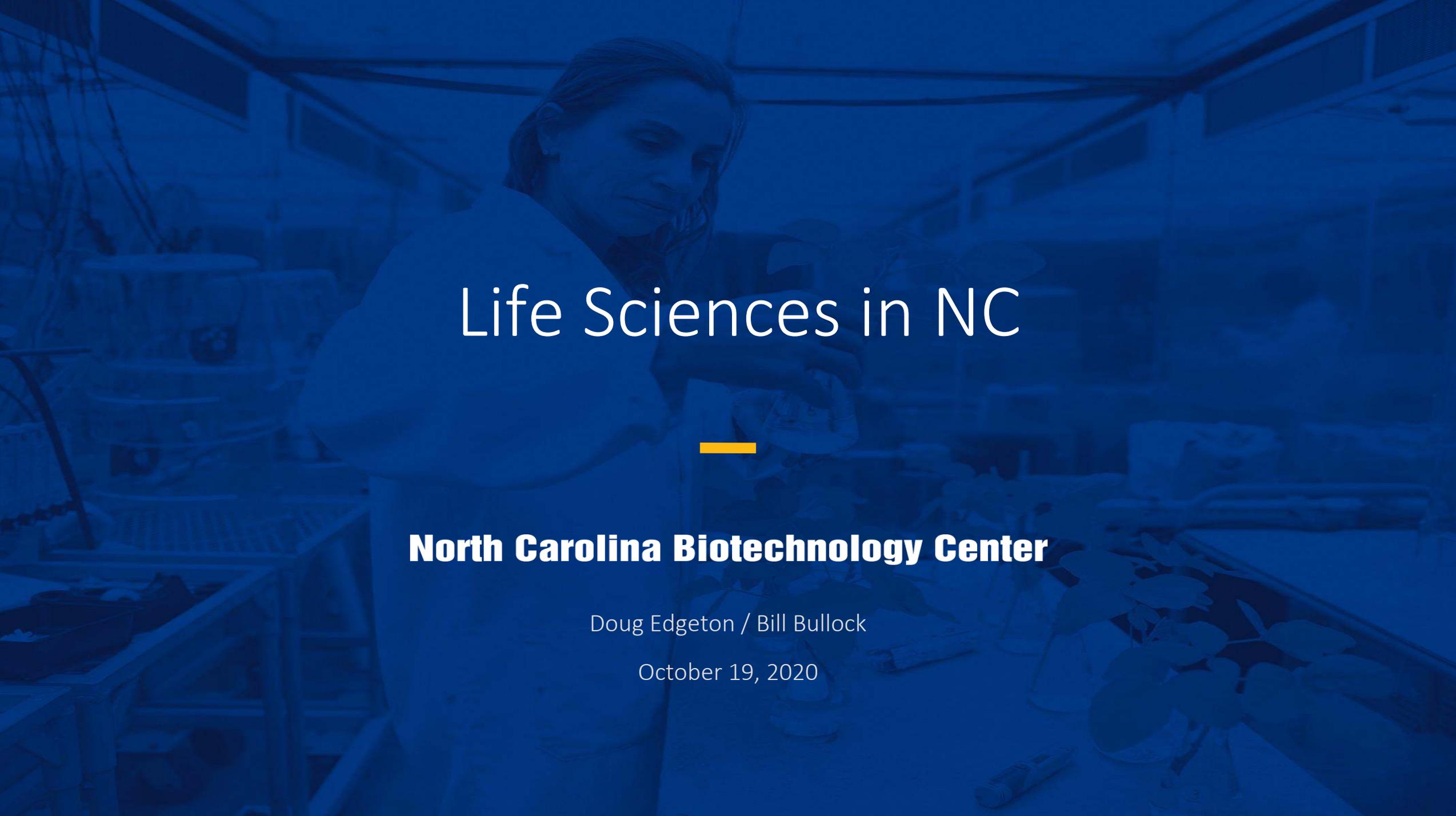
Bill Bullock is responsible for leading NC Biotechnology Center teams that promote marketing, recruitment, expansion and attraction of life science companies. In addition, Bill is part of the Center's senior leadership team driving strategic life science outcomes in innovation, investment, jobs, solutions and opportunities across North Carolina.

Since 2008, his group's efforts have supported the recruitment or expansion of more than 80 life science companies representing nearly 10,000 jobs and \$6 billion in investment.

Prior to joining the Center, Bullock served as international business development manager for biotechnology within the North Carolina Department of Commerce. He was also vice president of the biotechnology consulting firm BioAbility, where he directed numerous studies and client consulting projects in North America and abroad. He spent six years in research, development and marketing at Stratagene Cloning Systems in San Diego.

He received his undergraduate degree in cell biology and biochemistry from the University of California, San Diego and an MBA from the Kenan-Flagler Business School at the University of North Carolina at Chapel Hill.





Life Sciences in NC

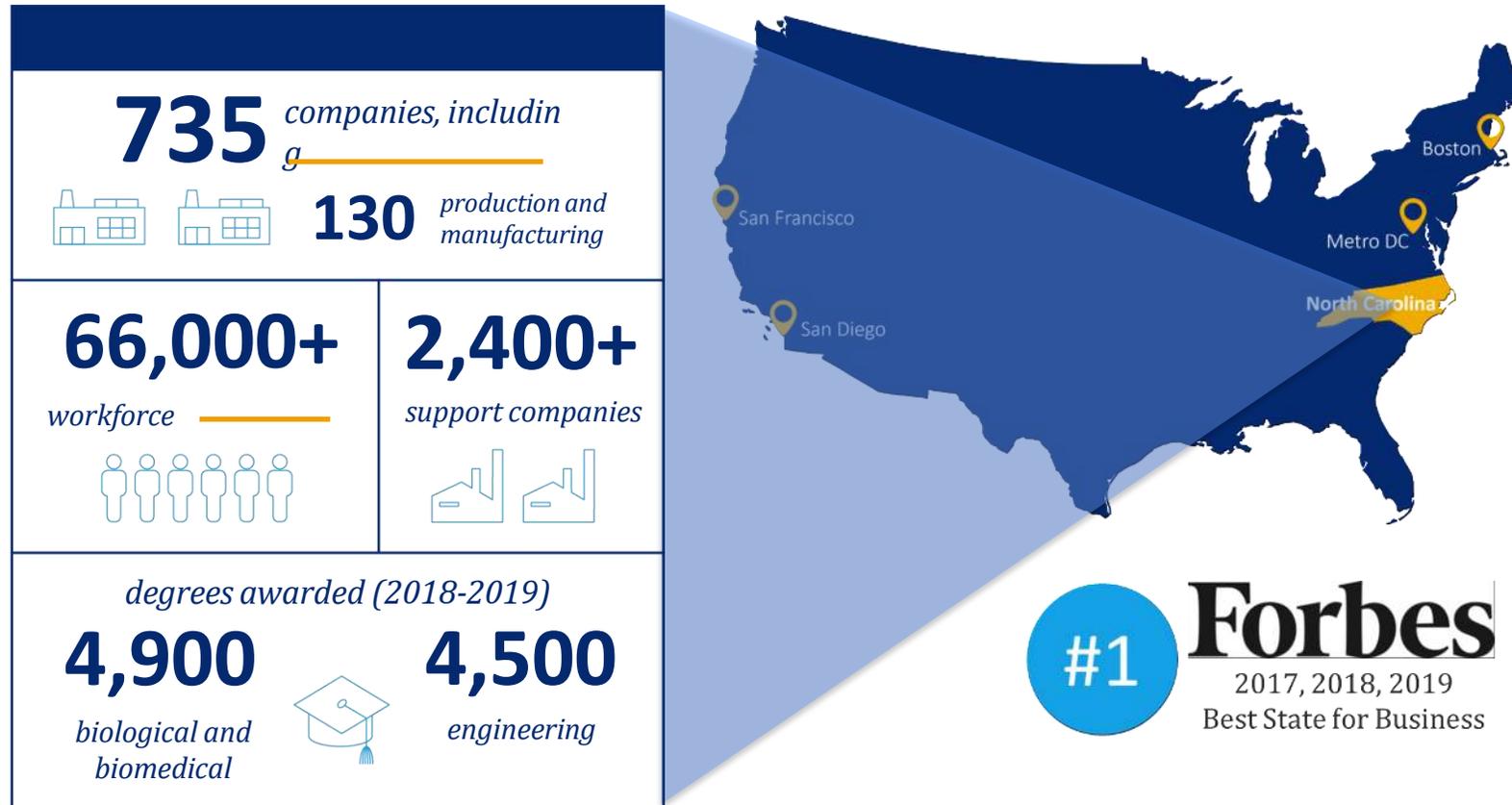


North Carolina Biotechnology Center

Doug Edgeton / Bill Bullock

October 19, 2020

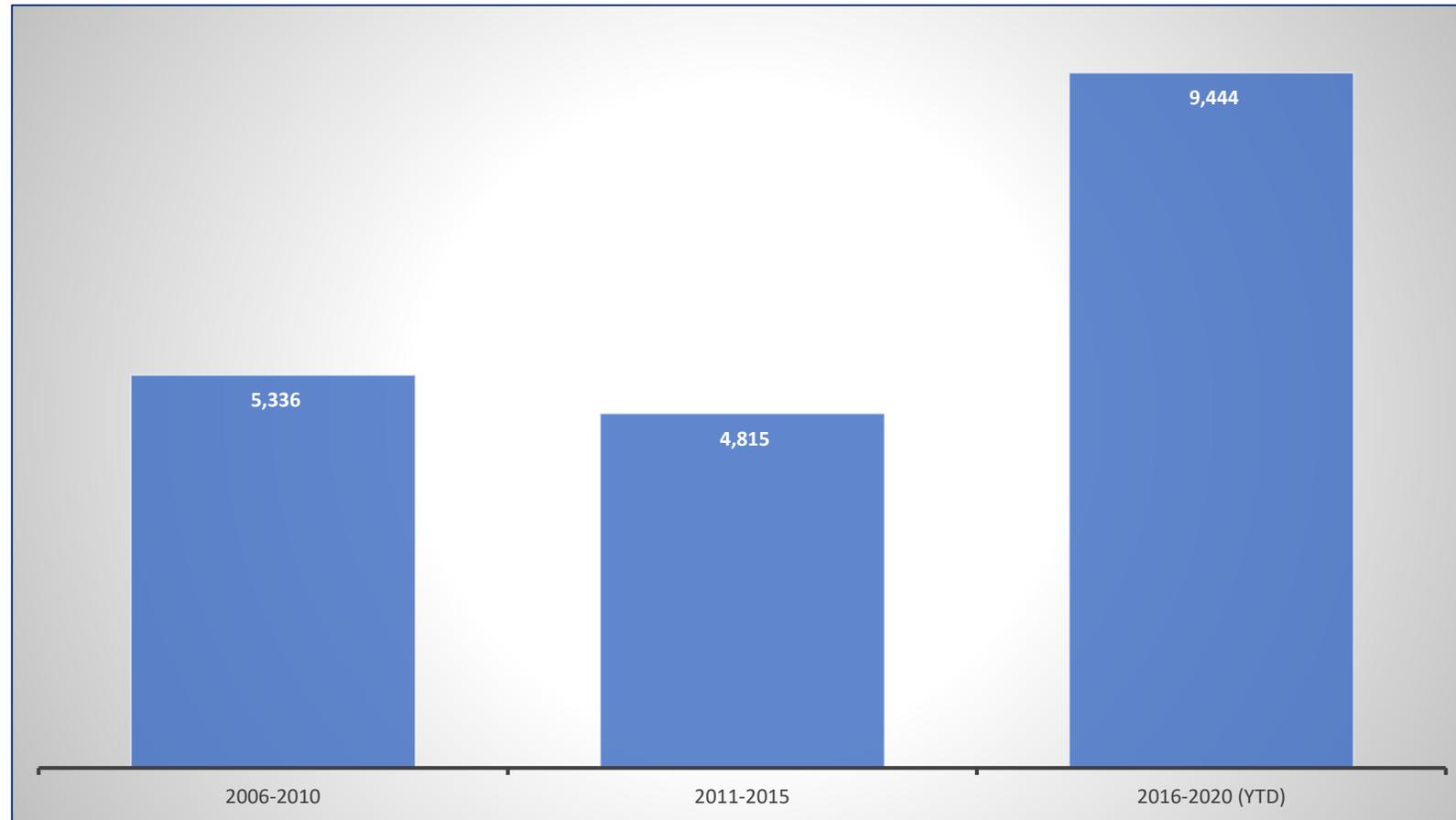
North Carolina's Life Science Ecosystem



North Carolina
Life Sciences
2025



Life Science Jobs Announced 2006 - 2020



Recent Life Sciences Announcements



August 2020
RTP (Durham County)
201 new jobs
\$83 M investment



January 2020
RTP (Durham County)
460 new jobs
\$470 M investment



June 2020
Clayton (Johnston County)
300 new jobs
\$351.6 M investment



November 2019
Durham (Durham County)
749 new jobs
\$73 M investment



June 2020
Durham (Durham County)
398 new jobs
\$100 M investment



August 2019
Sanford (Lee County)
300 new jobs
\$500 M investment



February 2020
Sanford (Lee County)
209 new jobs
\$109 M investment



July 2019
Durham (Durham County)
400+ new jobs
\$650 M investment

Site Selectors Guild – Project Outlook

Industries With the Most Project Activity



67% Biotech and Life Sciences



51% Advanced Manufacturing



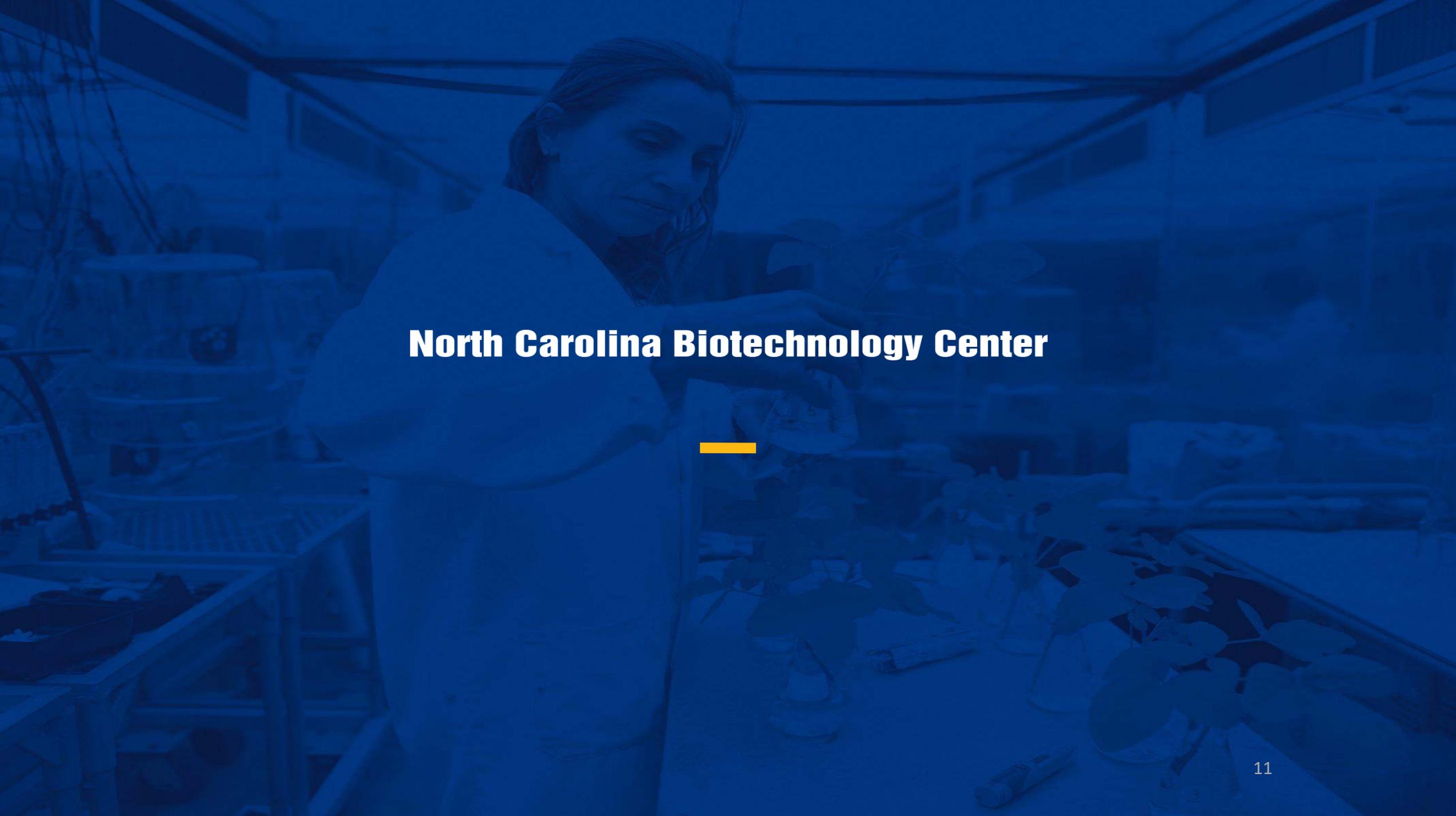
47% Food and Beverage Processing



44% Transportation and Logistics



31% Software and IT



North Carolina Biotechnology Center

Lilly RTP

Dan VonDielingen is the Site Head (General Manager) for the recently announced Lilly RTP manufacturing facility. Dan joined Lilly in 2000 and has held roles of increasing responsibility in Engineering, Quality and Operations across multiple sites and networks.

His most recent role was the Site Head for the Indianapolis Device Assembly and Packaging facility responsible for the commercial supply and advancement of Lilly pipeline molecules.





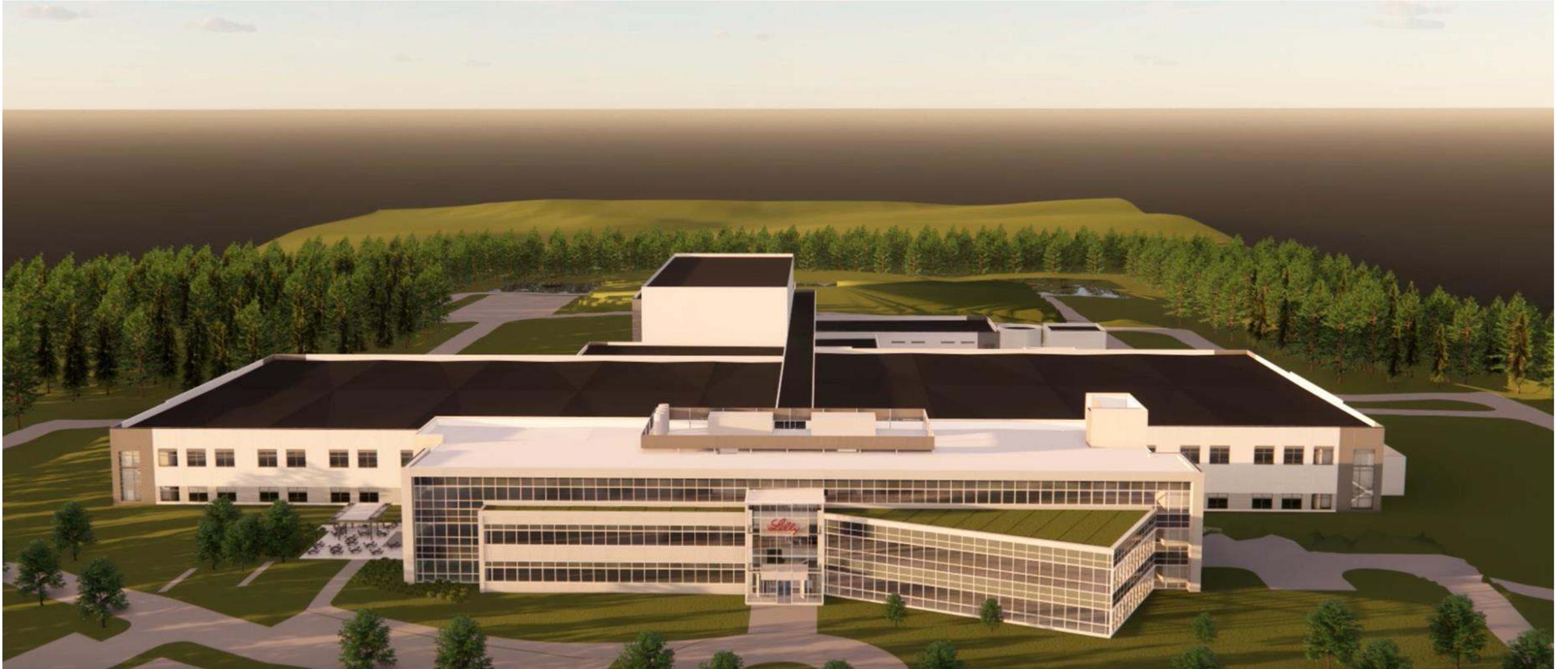
Lilly



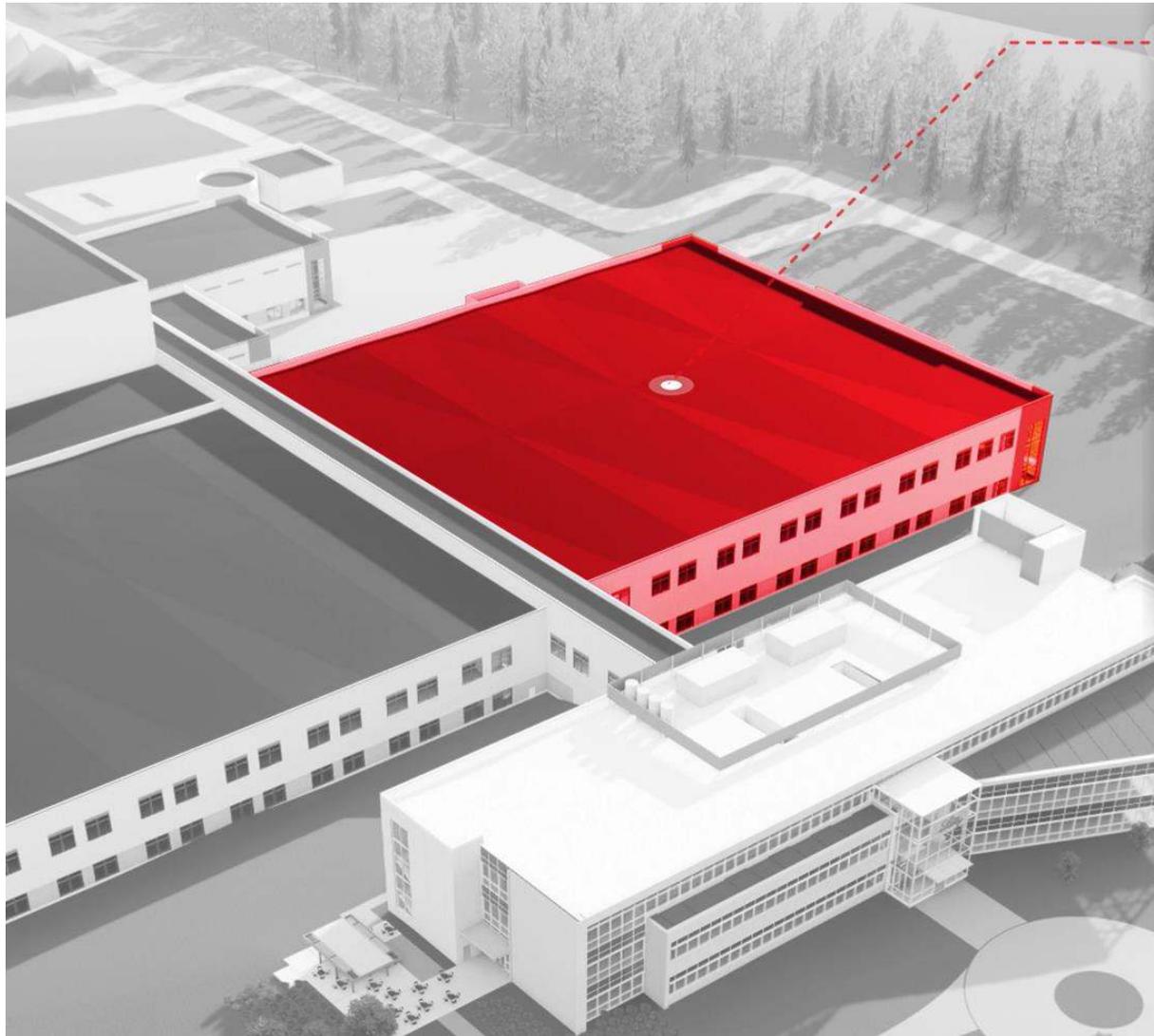
Lilly RTP

Manufacturing and Quality | Research Triangle Park, North Carolina

Lilly-RTP



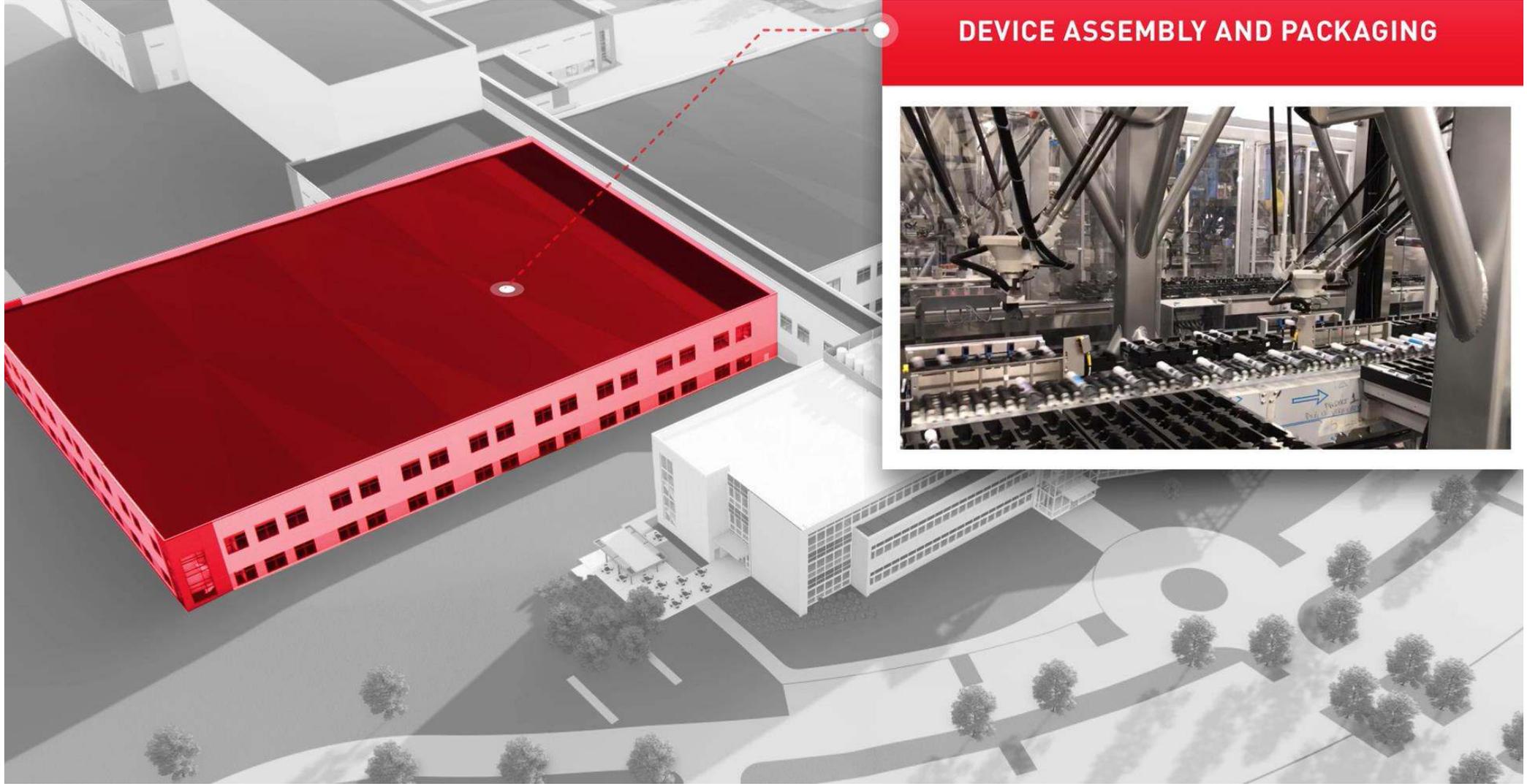
Lilly-RTP



SYRINGE FILLING



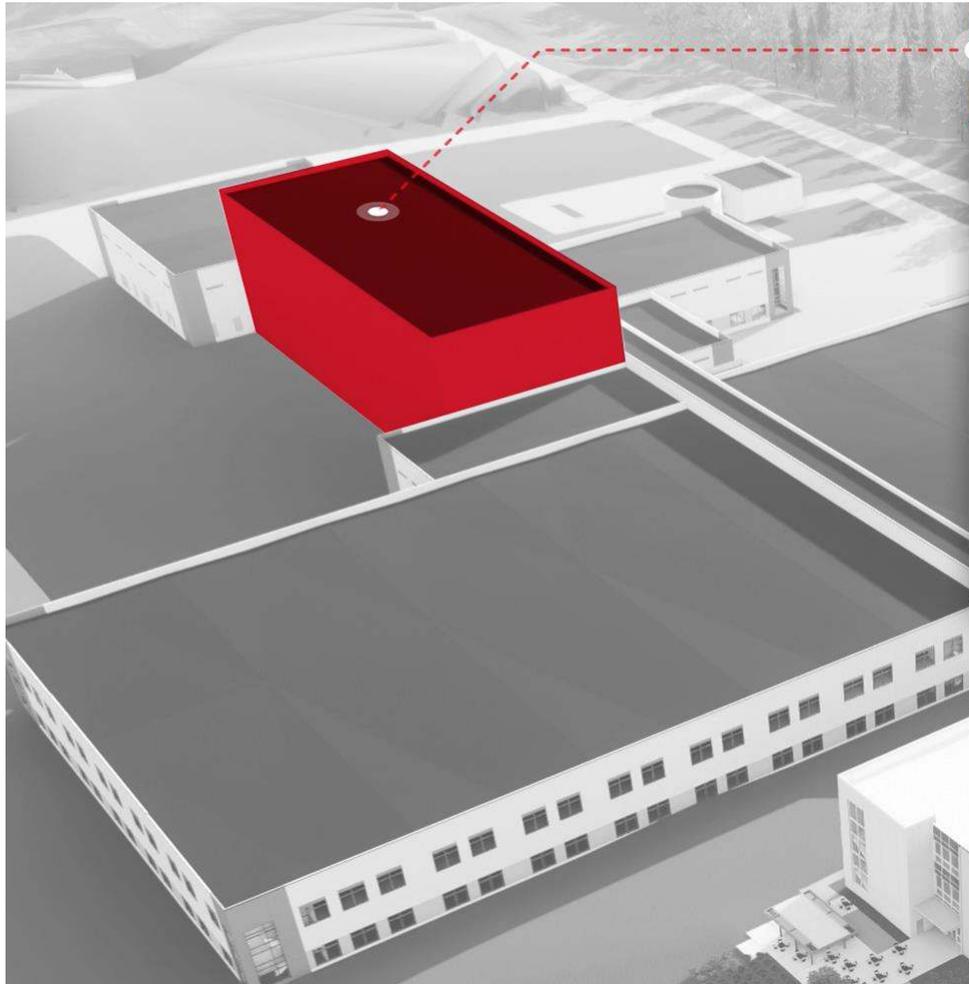
Lilly-RTP



DEVICE ASSEMBLY AND PACKAGING



Lilly-RTP



FULLY INTEGRATED DOCK TO DOCK MATERIAL MOVEMENT



Lilly-RTP

Current Site Progress



North Carolina and Lilly



Why North Carolina and RTP

- Workforce Capability and Diversity
- Proximity to educational institutions with strong STEM programs
- Pharmaceutical presence
- Logistics and Transportation
- Rankings for Quality of Life
- Speed: Infrastructure, Planning, Zoning
- Value: State Incentives, Public Policy

Lilly-RTP

- State-of-the-art site focused on Parenteral and Device manufacturing
- >\$500M and 500 employees
- Operational by 2023
- Diversifies US manufacturing operations and provides capacity for current and future Lilly biologic medicines
- Long Term in mind

Lilly

GRAIL

Joan Malcolm, PhD, is the Director of External Affairs at GRAIL, a healthcare company whose mission is to detect cancer early, when it can be cured.

Prior to GRAIL, Joan spent over a decade in translational and clinical genomic research at The Jackson Laboratory, where she led the genomic services business unit.





The Promise of Multi-Cancer Early Detection

And our future in North Carolina

October 19, 2020

Joan Malcolm, PhD
Director, External Affairs



☰☰☰ Disclaimer and Disclosure

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THE TECHNOLOGY AND ANY PRODUCT(S) DISCUSSED IN THIS PRESENTATION ARE INVESTIGATIONAL AND THEIR
SAFETY AND EFFECTIVENESS HAVE NOT YET BEEN ESTABLISHED. THE DATA PRESENTED ARE PRELIMINARY.

JOAN MALCOLM IS AN EMPLOYEE AND SHAREHOLDER OF GRAIL, INC.

Mission

Detect cancer early, when it
can be cured

GRAIL, Inc.

Formed in January 2016 to take on one of the world's biggest challenges



- Headquartered in Silicon Valley at the intersection of life sciences and technology industries
- A world-class team of leaders, scientists, clinicians, engineers, and other experts

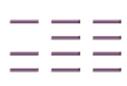


GRAIL Commercial Laboratory - Research Triangle Park

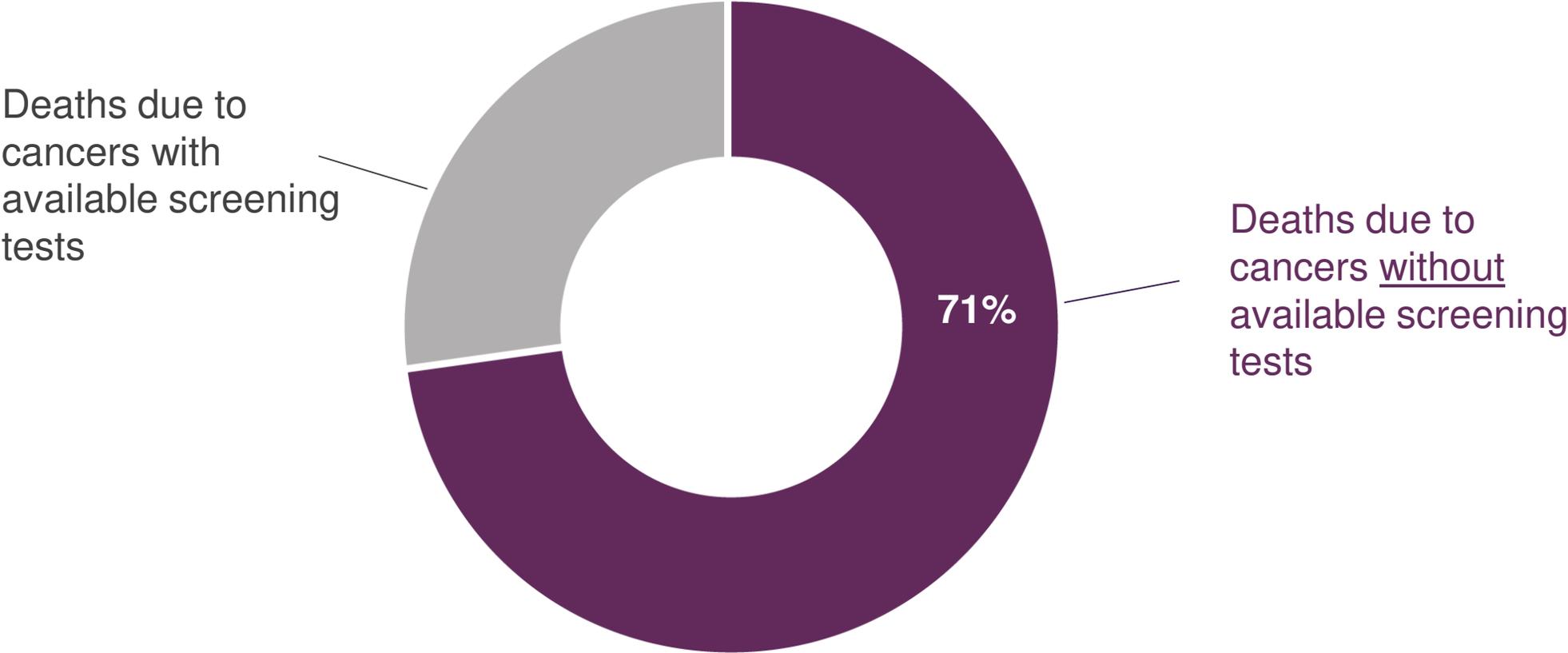


North Carolina / RTP excelled in decision key criteria

- High quality workforce
- Logistical infrastructure
- Support of state and local leaders
- Quality of life (e.g., education system, cost of living, etc)
- Other key factors



Cancers Without Available Screening Tests Will Account for 71% of Cancer Deaths in the United States in 2020^{1,2}



USPSTF, United States Preventive Services Task Force.
¹Among individuals 50-79 years old.
²Assumes screening is available for all prostate, breast, cervical, and colorectal cancer cases and 27% of lung cancer cases (based on estimated proportion of lung cancers that occur in screen-eligible individuals older than 40 years)
Data on file from Surveillance, Epidemiology, and End Results (SEER) 18 Regs Research Data, Nov 2017 Submission. Includes persons aged 50-79. Estimated deaths per year in 2020 from American Cancer Society Cancer Facts and Figures 2020. Available at: www.cancer.org/content/dam/cancer-org/research/cancer-facts-and-statistics/annual-cancer-facts-and-figures/2020/cancer-facts-and-figures-2020.pdf

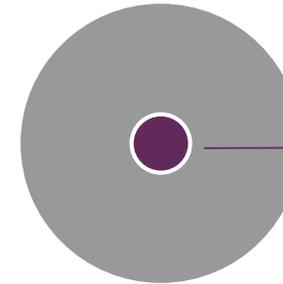


Early Diagnosis Can Dramatically Improve Cancer Survival

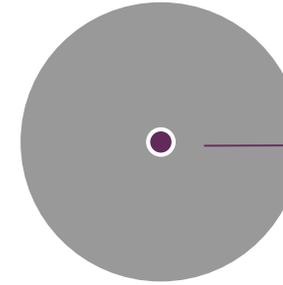
5-year cancer-specific survival
when diagnosed **early**

5-year cancer-specific survival
when diagnosed **late**

ALL CANCERS



LUNG CANCER



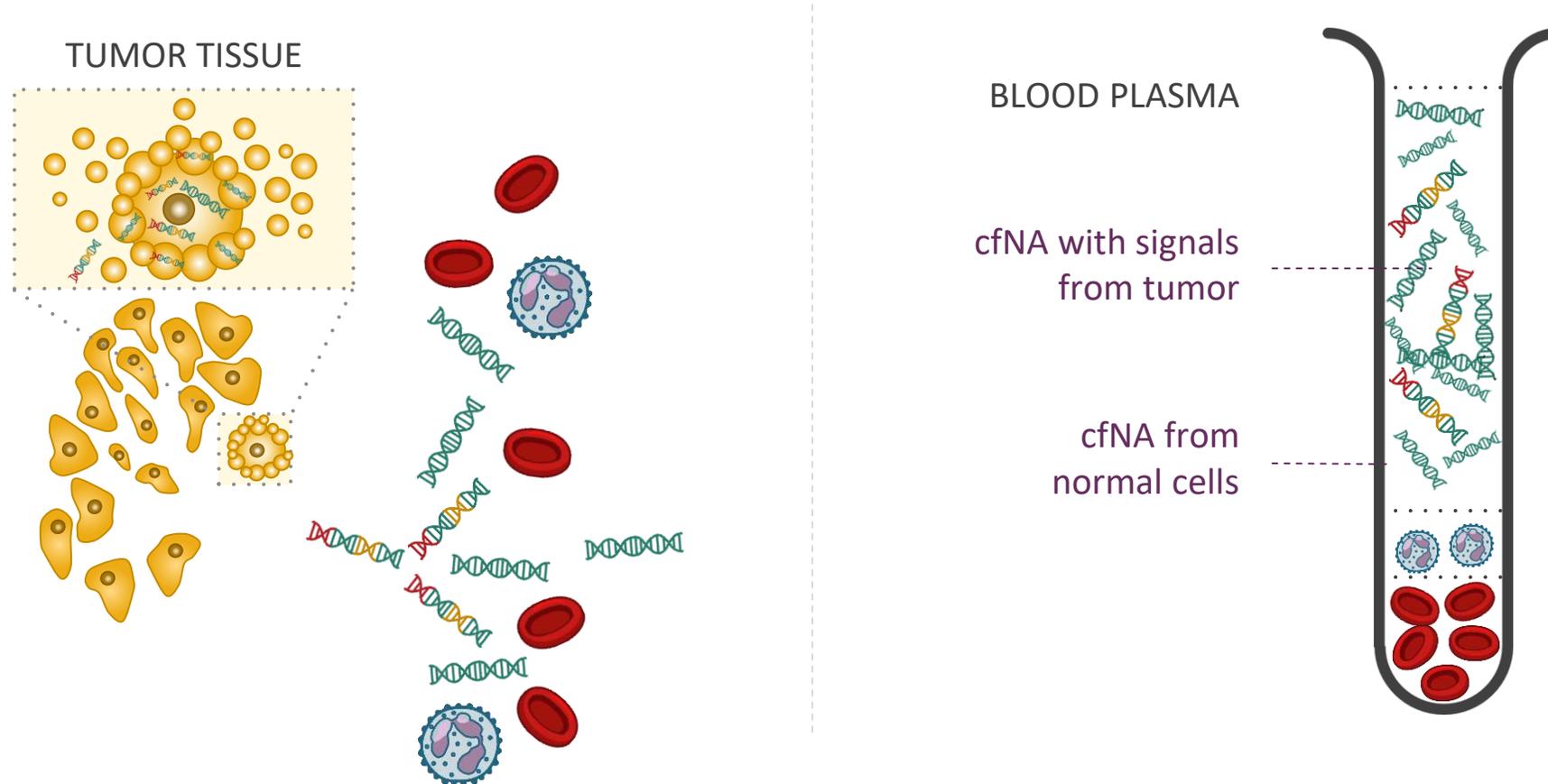
LOCALIZED

DISTANT METASTASES

Surveillance, Epidemiology, and End Results (SEER) Program (www.seer.cancer.gov) SEER*Stat Database: Incidence - SEER 18 Regs Research Data, Nov 2018 Sub. Includes persons aged 50-79 diagnosed 2006-2015 "Early/Localized" includes invasive localized tumors that have not spread beyond organ of origin, "Late/Metastasized" includes invasive cancers that have metastasized beyond the organ of origin to other parts of the body. Noone AM, Howlader N, Krapcho M, et al. (eds). SEER Cancer Statistics Review, 1975-2015, National Cancer Institute, Bethesda, MD, http://seer.cancer.gov/csr/1975_2015/, based on November 2017 SEER data submission, posted to the SEER website April 2018.

Cancer is a Disease of the Genome

Tumors shed cell-free nucleic acids (cfDNA) into the blood, carrying signals specific to cancer, and these can be detected with sequencing approaches



Adapted from Crowley E, Di Nicolantonio F, Loupakis F, Bardelli A. Liquid biopsy: monitoring cancer-genetics in the blood. Nature Reviews Clinical Oncology. 2013; 10(8):472-84.

GRAIL's Multi-Cancer Early Detection Test Is Designed To:

DETECT
all cancers



COMPLEMENT
not replace
recommended
single cancer
screening tests



OPTIMIZE
overall cancer
detection



MINIMIZE
harms

Mission

Detect cancer early, when it
can be cured



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Questions and Wrap Up



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Meeting adjourned

