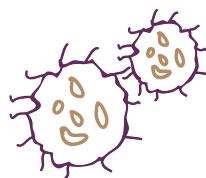


# A Revolution in Early Cancer Detection

GRAIL's mission is to detect cancer early, when it can be cured.



Cancer remains the **2nd leading cause** of death<sup>1</sup>



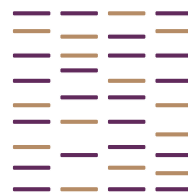
**71% of cancers** today don't have routine screening<sup>2</sup>



In 2021, it is estimated that **more than 600,000 Americans** will be diagnosed with cancer each day<sup>3</sup>



**1 in 2 men** and **1 in 3 women** are diagnosed with some form of cancer in America in their lifetime<sup>4</sup>



Recommended screening only exists for **5 cancer types** and many cancers are detected too late<sup>5</sup>

“As a powerful cancer screening tool, ctDNA could be used for early cancer detection. This could mean detecting cancer prior to a cancer diagnosis in an asymptomatic population, or detecting early recurrence, or the degree or burden of disease in patients that have already been diagnosed with cancer.”<sup>6</sup>

– Friends of Cancer Research White Paper, Exploring the Use of Circulating Tumor DNA as a Monitoring Tool for Drug Development

<sup>1</sup> <https://www.cdc.gov/chronicdisease/resources/publications/factsheets/cancer.htm>

<sup>2</sup> Data on file from SEER 18 Regs Research Data, Nov 2017 Sub. Includes persons aged 50-79. Estimated deaths per year in 2020 from ACS Cancer Facts and Figures Report 2020. Recommended screening tests include breast, cervical, colorectal, and high-risk lung cancer

<sup>3</sup> <https://cancerstatisticscenter.cancer.org/#/>

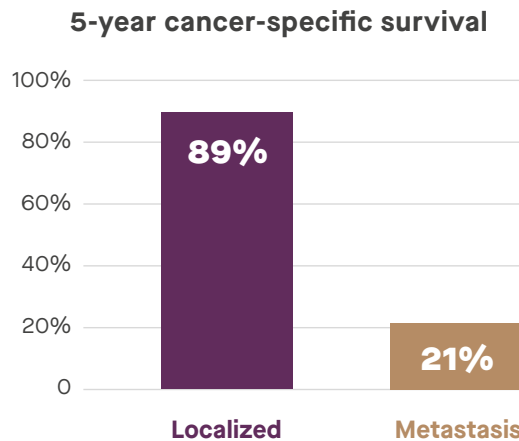
<sup>4</sup> <https://www.cancer.org/cancer/cancer-basics/lifetime-probability-of-developing-or-dying-from-cancer.html>

<sup>5</sup> <https://www.cancer.org/health-care-professionals/american-cancer-society-prevention-early-detection-guidelines.html>

<sup>6</sup> American Cancer Society Cancer Action Network, “New Legislation Aims to Increase Early Cancer Detection in Medicare,” press release, December 3, 2020.

## THE PROMISE OF EARLIER DETECTION

The 5-year cancer-specific survival when diagnosed late (after cancer has metastasized) is 21%, but when diagnosed early (cancer is still localized) is 89%.<sup>7</sup>



## THE SCIENCE

GRAIL is generating scientific and clinical evidence through clinical studies enrolling more than 145,000 participants in what we believe is the largest clinical programs in genomic medicine to date.

## THE TECHNOLOGY

Through tremendous advancements in the fields of genomics, next-generation sequencing, machine learning, and artificial intelligence, GRAIL uses technology to find and sequence tiny bits of DNA in the blood. The technology can determine whether or not a cancer signal is present and if so, predict the cancer signal origin with high accuracy.

In order to achieve benefits of early detection while minimizing harms at a population scale, multi-cancer early detection tests should have:



**Low false positives:** achieved through high specificity



**Localizing ability:** identifies anatomic location to direct appropriate diagnostic work-up



**Limited overdiagnosis:** preferential detection of clinically significant cancers

## THE RESULT

GRAIL has created Galleri, a simple blood test that can detect more than 50 types of cancers.

Galleri will help:



detect cancer at early stages, sometimes before symptoms even appear



complement existing cancer screening paradigms



detect cancers at a false positive rate of less than 1%



predict the cancer signal of origin to guide next steps

GRAIL's multi-cancer early detection technology has the potential to detect deadly cancers early, when they are most treatable. Equipped with this powerful information from a simple blood draw, doctors may have the opportunity to step in and administer interventions before the cancer has a chance to spread.

**Galleri, the first of its kind multi-cancer early detection test, will be launched in 2021.**

<sup>7</sup> Surveillance, Epidemiology, and End Results (SEER) Program ([www.seer.cancer.gov](http://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/](http://seer.cancer.gov/csr/1975_2015/), based on November 2017 SEER data submission, posted to the SEER website April 2018.