

Accelerating the Development of Methods for Early Detection of Cancer

A Prize-based Approach

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MOTIVATION AND OBJECTIVE

SITUATION

Around the world, almost 500 people die each hour from preventable cancer deaths. We know that Catching Cancer Early equals Saving Lives.

COMPLICATION

The current market is structured to incentivize cancer treatment, but not solutions for early detection and prevention.

SOLUTION

The prize competition will incentivize solutions to rapidly, accurately, and affordably screen for early cancers where intervention reduces human suffering.

BACKGROUND

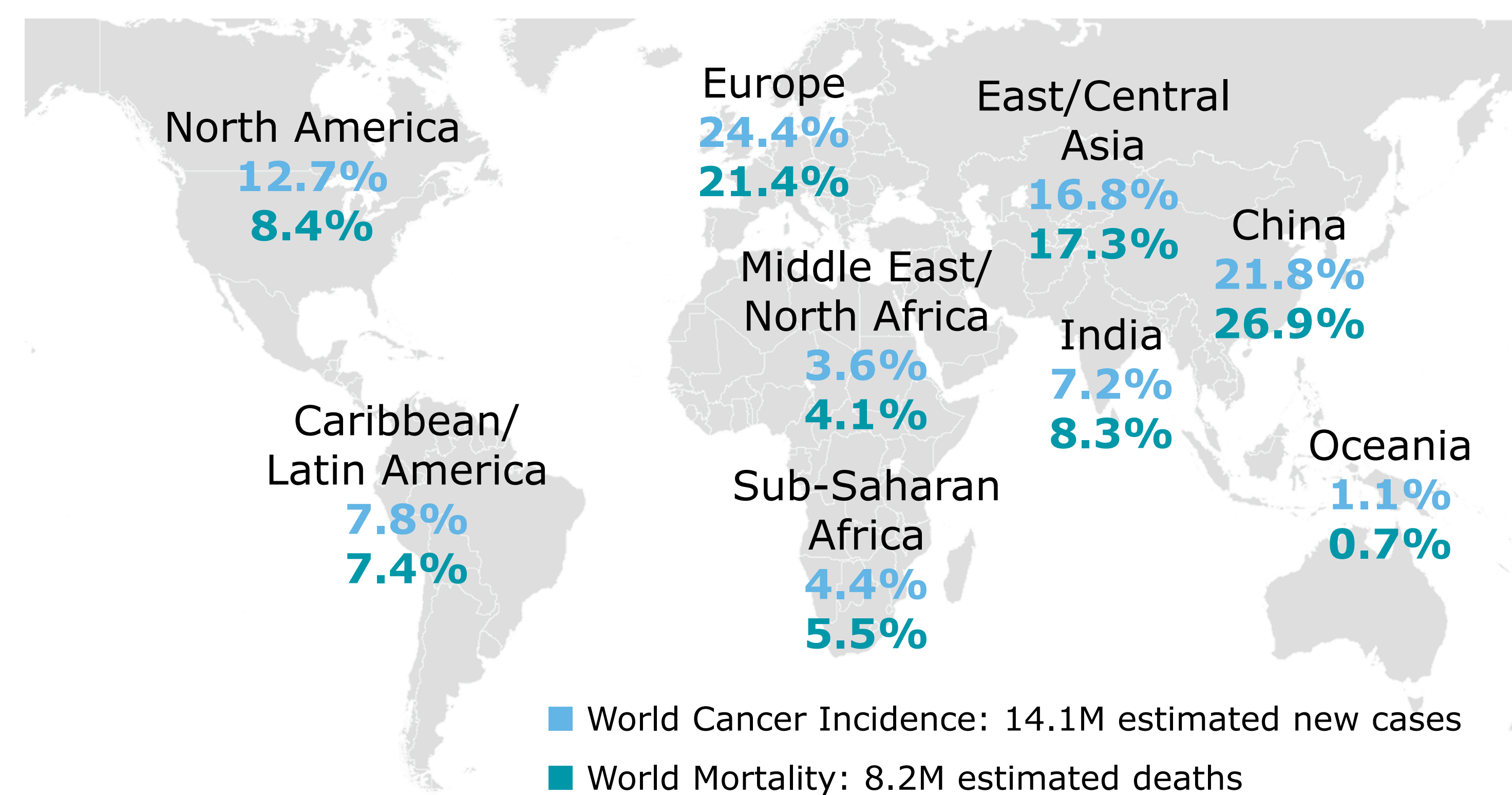
STATISTICAL OVERVIEW OF CANCER TYPES

Cancer Types	5 Year Survival Rate Stage at Diagnosis							
	Localized		Regional		Distant		Unknown	
Ovarian	92.1%	15%	73.1%	19%	28.8%	60%	24.2%	6%
Lung	55.2%	16%	28%	22%	4.3%	57%	7.4%	5%
Pancreatic	29.3%	9%	11.1%	29%	2.6%	52%	4.9%	10%
Colorectal	90.1%	39%	71.2%	35%	13.5%	21%	35.5%	5%
Breast	98.8%	61%	85.2%	31%	26.3%	6%	52.5%	2%
Melanoma	98.4%	84%	62.4%	9%	17.9%	4%	81.2%	3%

Statistics estimated for 2016 by NCI

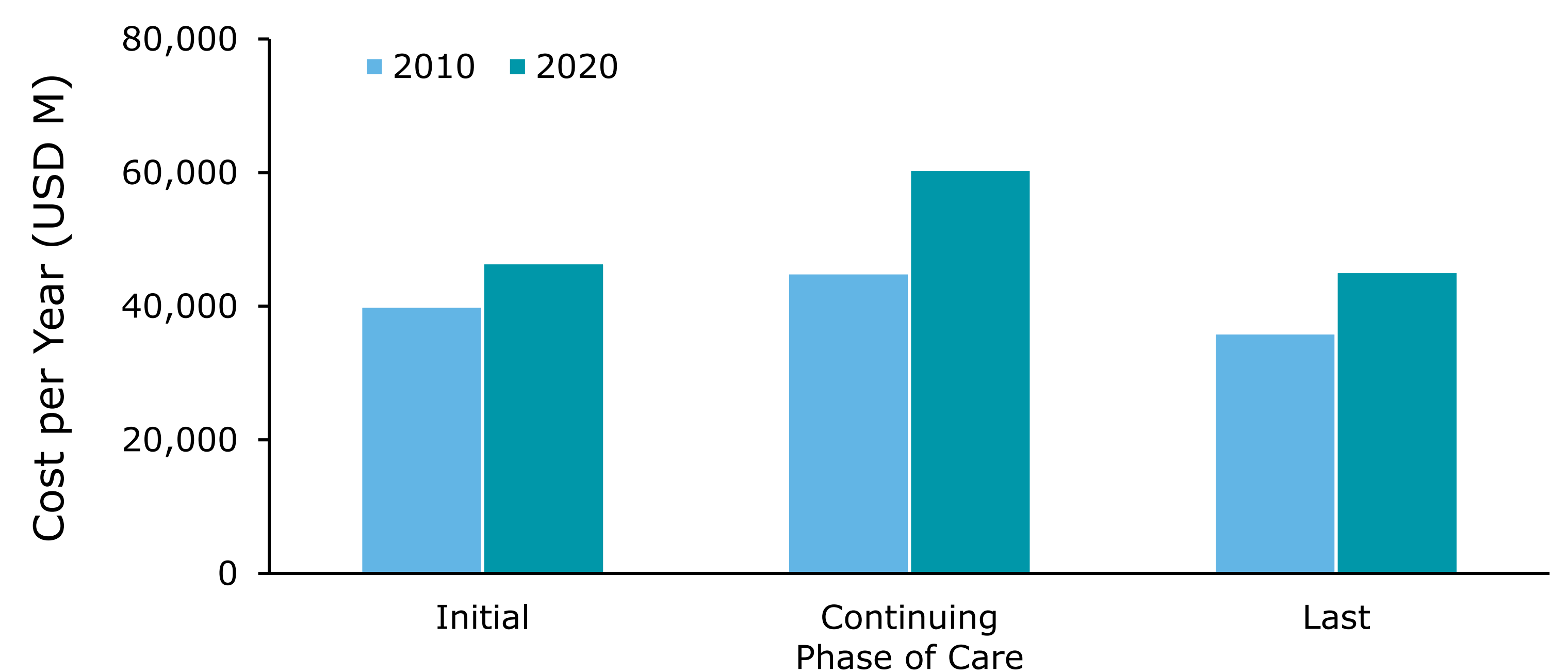
IMPACT OF CANCER

Lost years of life and productivity caused by cancer is the largest drain on the global economy, compared to other diseases including HIV/AIDS and other infectious diseases.



CANCER ECONOMICS

The implementation of prevention, early detection, and treatment strategies could potentially save 2.4M-3.7M lives every year (mainly in low and middle income countries) for an economic benefit of \$400B.



Cost of Cancer Care by Phase of Care, All Sites, All Ages, Male and Female, in 2010 Dollars.

METHODS

XPRIZE Competition

The winning team will develop a means to rapidly, accurately, and affordably screen for early cancer where intervention can reduce human suffering.

Exponential Technologies

Liquid biopsies, nanomedicine, exosomes, smartphone technology, and artificial intelligence.

Market Challenges

Siloed ecosystem, regulatory complexity, misaligned incentives, barriers to entry for new entrants and new ideas.

RAPIDLY

Reducing or eliminating the time between a test being conducted and the delivery of its results is key to addressing disparities in cancer screening.

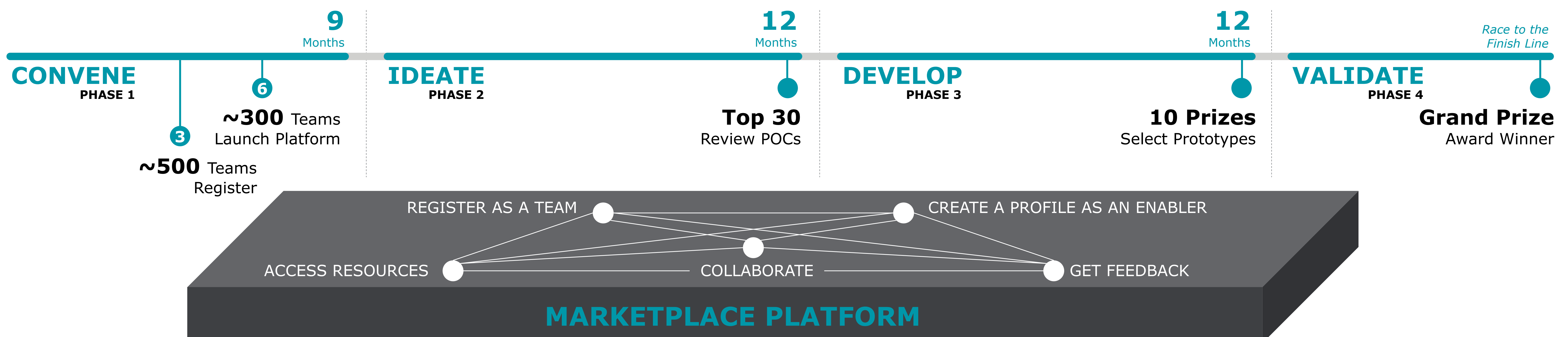
ACCURATELY

A solution must be sensitive to detect cancer early enough for effective intervention, yet specific to avoid over-diagnosis.

AFFORDABLY

Significantly reducing the cost of cancer screening is key to making it more available.

HOW THE PRIZE DESIGN WORKS



PROGRESS TO DATE

Being deemed 'ready for launch', the Conquering Cancer XPRIZE team demonstrated the validity of the concept, global need for early cancer detection, and broad support of the XPRIZE community to execute immediately.

With continued support for the Cancer Moonshot initiative, the team is in the Prize Preparation phase, which includes prize design finalization, operational model preparation, fundraising, marketing, and key stakeholder recruitment.

FUTURE PLANS AND IMPACT

The Cancer XPRIZE is on track to launch in early 2018. It is designed to run for a duration of 3-5 years, and will include milestone prizes as well as a grand prize.

Through collaborative efforts from a variety of stakeholders, the XPRIZE will reshape the field of cancer prevention and early detection, reduce human suffering, and ultimately save lives around the world.