Myriad Genetics
myChoice HRD® Update

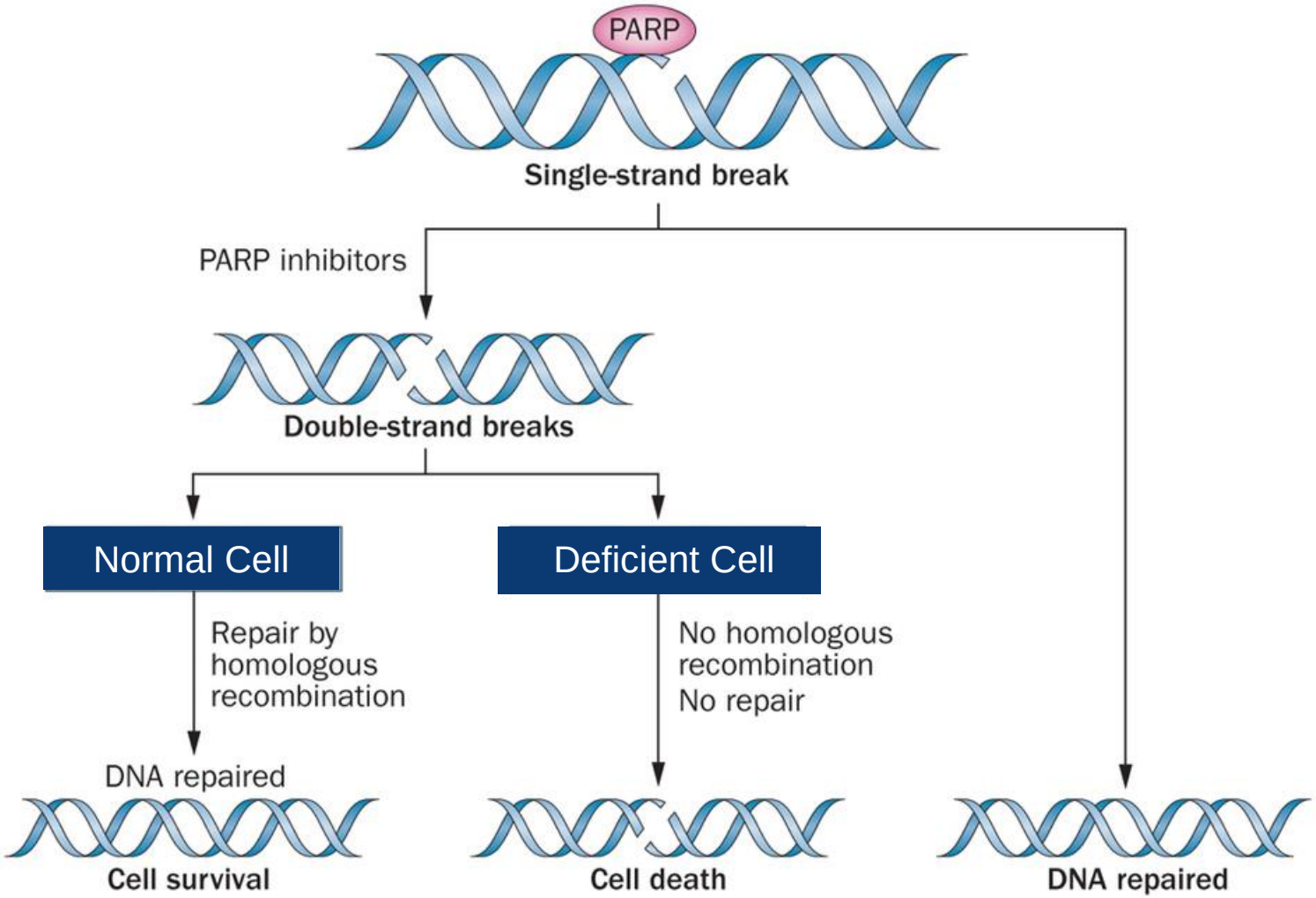
06/30/2016

Forward Looking Statements

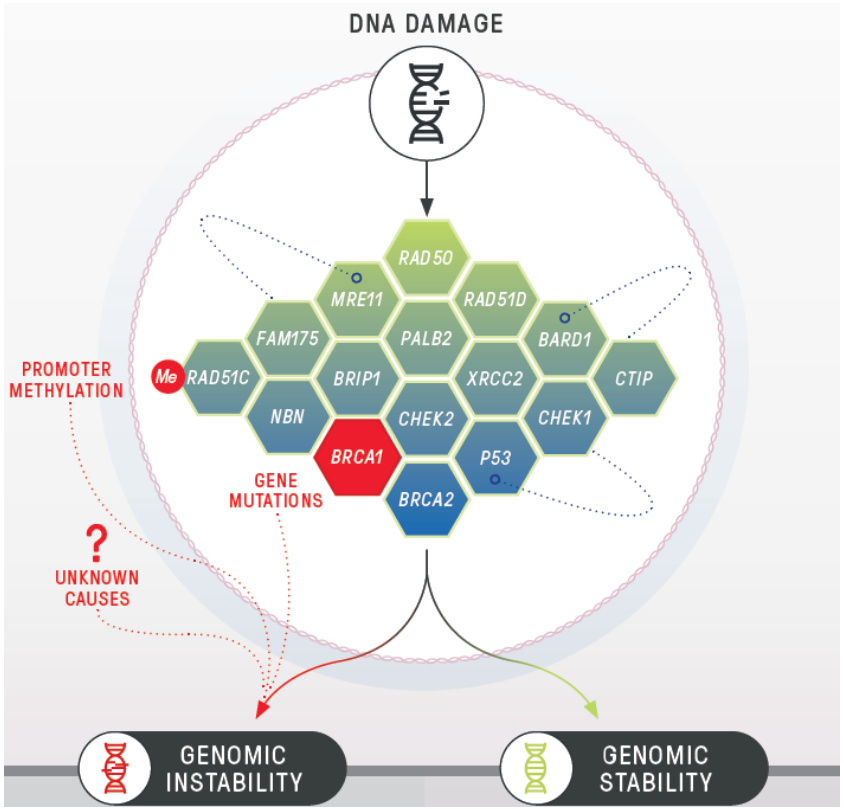
Some of the information presented here today may contain projections or other forward-looking statements regarding future events or the future financial performance of the Company. These statements are based on management's current expectations and the actual events or results may differ materially and adversely from these expectations. We refer you to the documents the Company files from time to time with the Securities and Exchange Commission, specifically, the Company's annual reports on Form 10-K, its quarterly reports on Form 10-Q, and its current reports on Form 8-K. These documents identify important risk factors that could cause the actual results to differ materially from those contained in the Company's projections or forward-looking statements.

A Pioneering Discovery: myChoice HRD

PARP Mechanism of Action

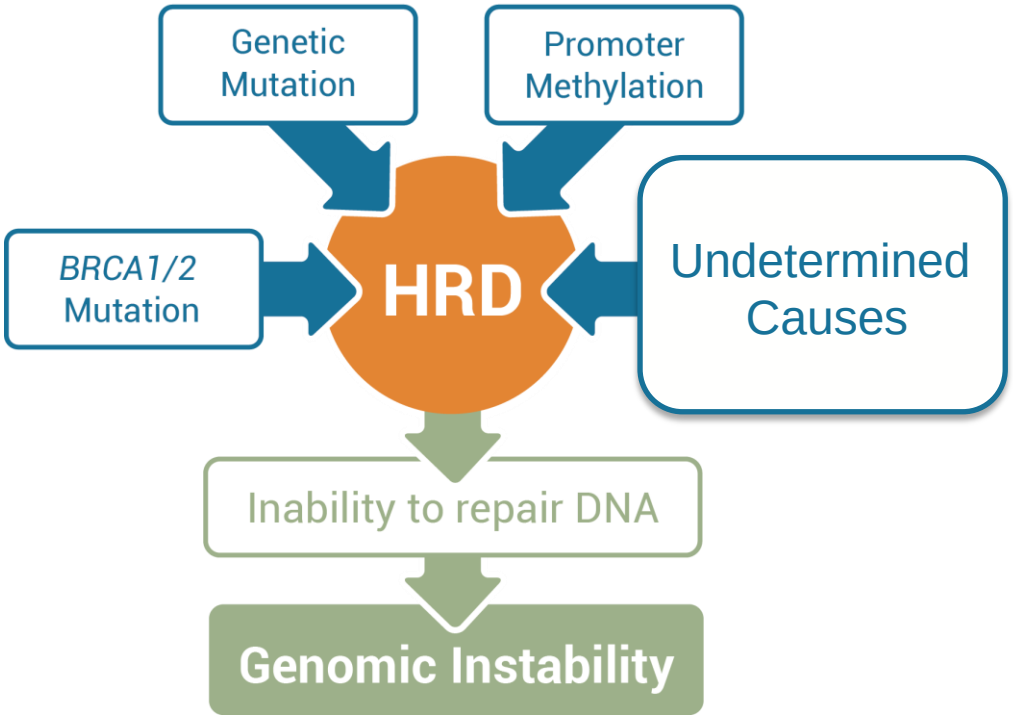


Homologous Recombination (HR) Pathway Status Predicts Drug Response



- When the HR pathway is working properly, DNA can be repaired effectively and is error free, maintaining genomic stability
- When the HR pathway is disrupted by gene mutations, promoter methylation or unknown causes, the HR pathway stops working leading to genomic instability or homologous recombination deficiency (HRD)
- Patients who have a defective pathway are much more likely to respond to drugs that impact DNA stability such as platinum drugs and PARPs

Most Causes of Homologous Recombination Deficiency (HRD) Are Unknown



- When the HR pathway is disrupted by **gene mutations**, **promoter methylation** or **unidentified causes**, the HR pathway stops working leading Homologous Recombination Deficiency or HRD

- Tumors with HRD are unable to repair themselves effectively after sustaining damage, leading to genomic instability

Pioneering Discovery: Measure the Effects vs. the Causes

The EFFECT…..

The Cause?

Lane closure?

Traffic light failure?

Overturned truck?

Fender bender?

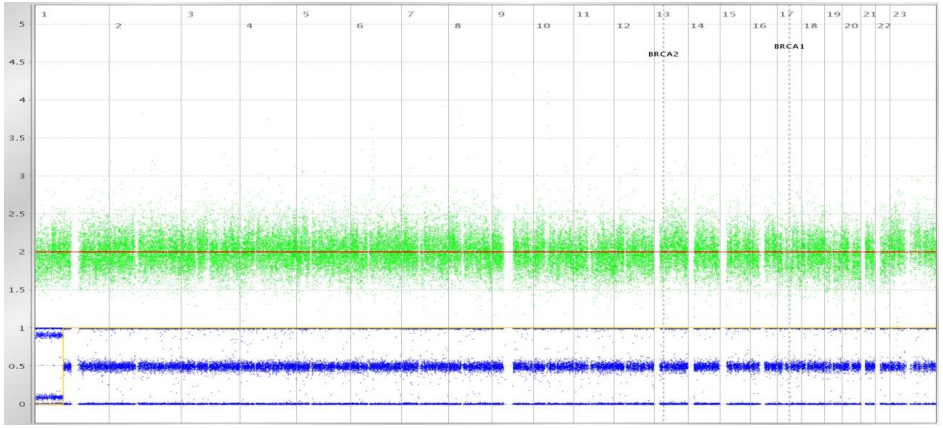
Presidential motorcade?

Who cares….

myriad WHEN DECISIONS MATTER

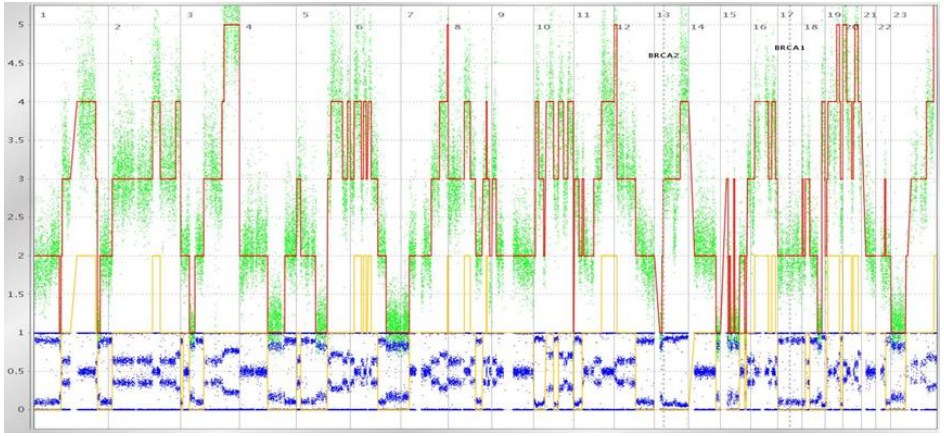
Measuring the DNA “Scar” – With Proprietary Informatics

Genome profiles are pictures of instability in tumor DNA



myChoice HRD Negative
(myChoice HRD Score = 3)

Cutoff = 42



myChoice HRD Positive
(myChoice HRD Score = 81)

genomic instability caused by HRD

myChoice HRD Identifies the Most Patients with Ovarian Cancer Potentially Eligible for a Drug

15% of patients are positive for BRACAnalysis CDx[1]

22% of patients are positive for Tumor BRACAnalysis CDx[2]

≈25% of patients are positive for a broad tumor HR panel[3]

≈50% of patients are positive for myChoice HRD[4]

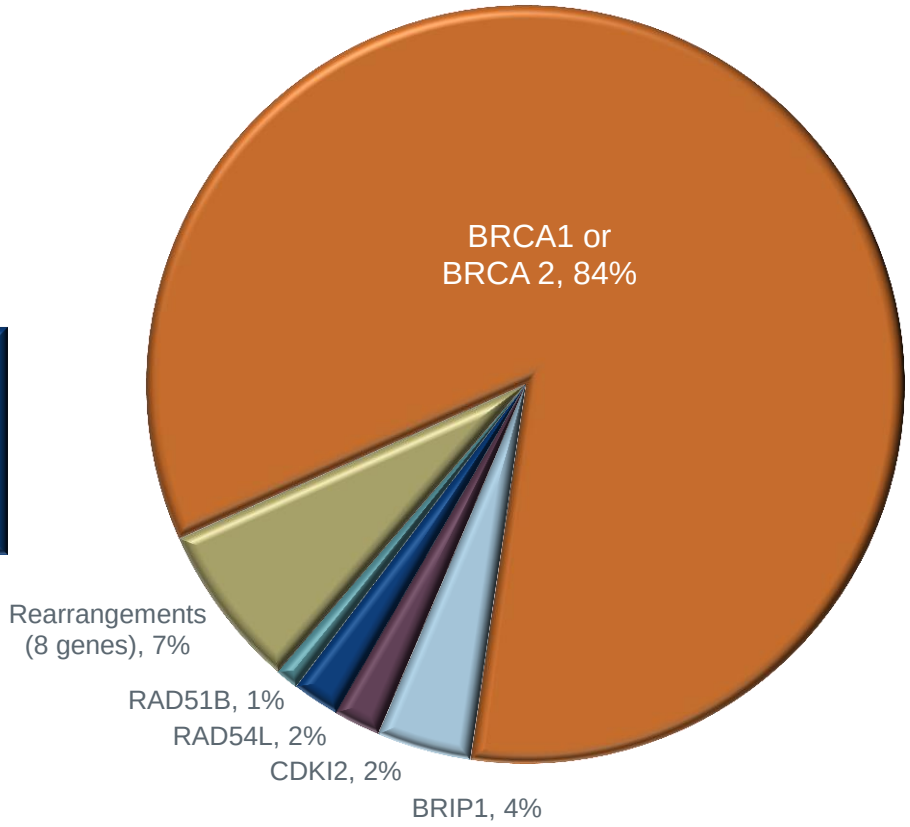
Detects twice as many patients as any other test

1&2 - Yates et al. Annals of Oncology (2014) 3&4 - Norquist et al. SGO 2016

Comprehensive Tumor Profiling Identifies Few Additional HRD Patients

AstraZeneca Study 19: 135 patients with tumor mutations as profiled with 315 gene Foundation Medicine Panel

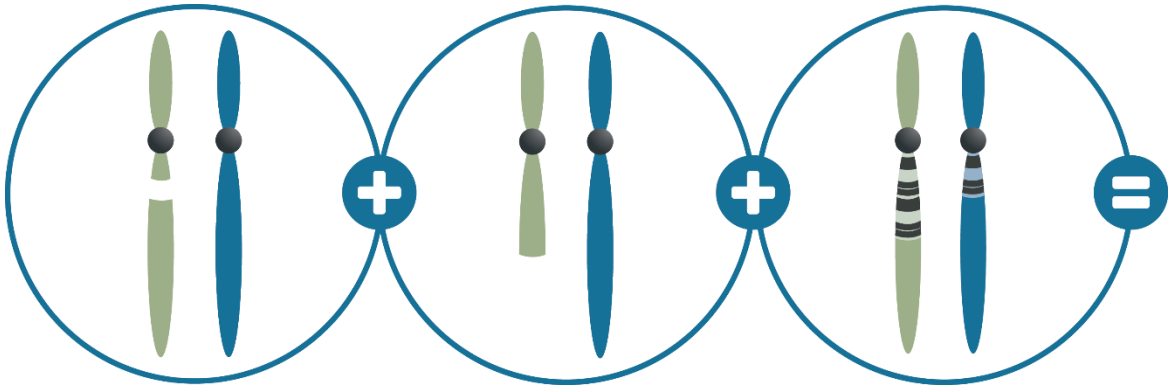
- Only 4 genes mutated more than once
- Only 12 genes had any mutations



Portfolio of Tests for Assessing DNA Repair Pathway

	BRACAnalysis CDx™	Tumor BRACAnalysis CDx™	Tumor Panel	MYRIAD myChoice® HRD
Sample	Blood	Tumor	Tumor	Tumor
Biomarkers	*BRCA*1&2	Tumor *BRCA*1&2	80+ clinically actionable oncology genes identified by pharma partners	Genome-wide assessment of DNA scar associated with DNA repair defects
Intellectual Property	Database, process, bioinformatics	Database, process, bioinformatics	Database, process, bioinformatics	MYGN has IP on three proprietary technologies (LOH, TAI, LST)
Currently Marketed	FDA approved	CE Marked	In research use with major pharma partners	Early access launch for platinum

myChoice HRD Score Results From the Combined Analysis of Three Different Biomarkers



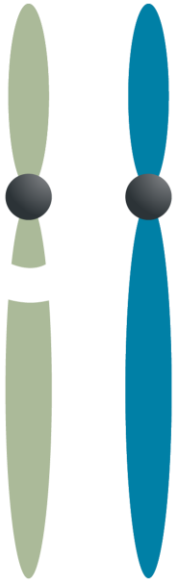
Loss of Heterozygosity (LOH)

Telomeric Allelic Imbalance (TAI)

Large-Scale State Transitions (LST)

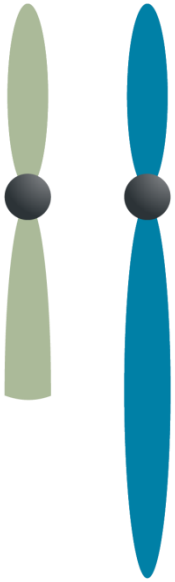
myChoice HRD Score

Three Biomarkers Result in a More Discriminating Measurement of HRD



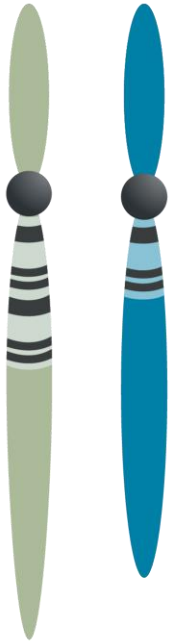
Loss of heterozygosity (LOH)

Presence of a single allele



Telomeric allelic imbalance (TAI)

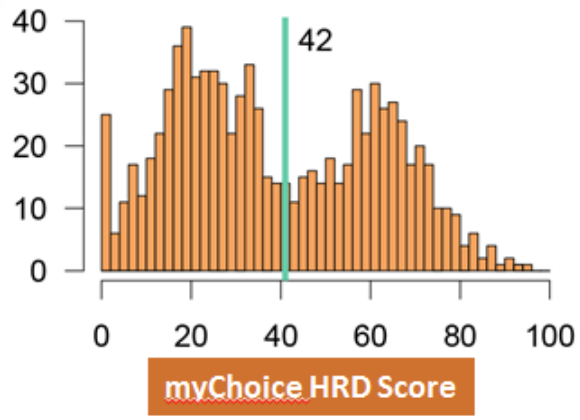
A discrepancy in the 1:1 allele ratio at the end of the chromosome (telomere)



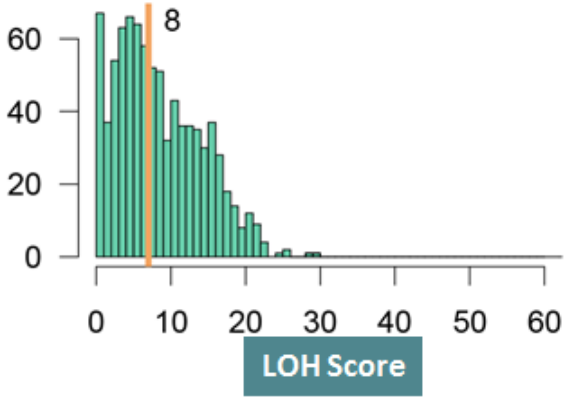
Large-scale state transitions (LST)

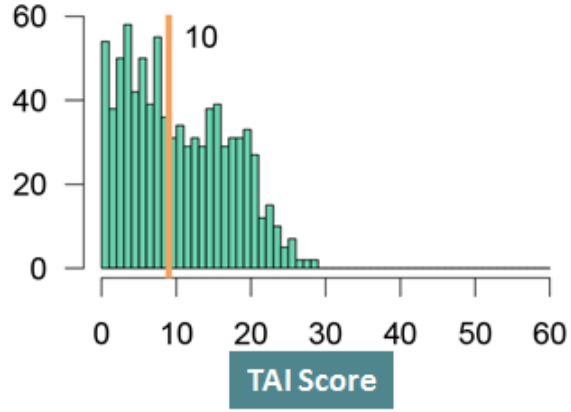
Transition points between regions of abnormal and normal DNA or between two different regions of abnormality

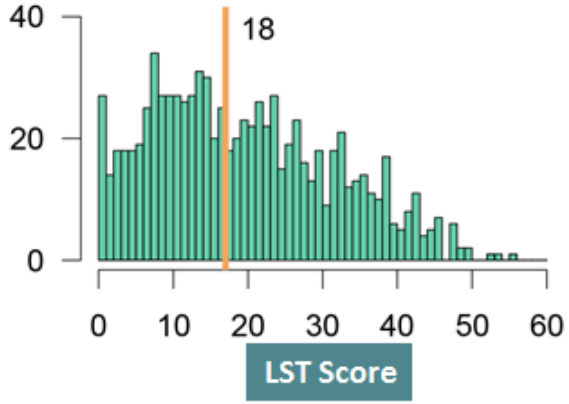
Single Measures of HRD are Insufficient



In a cohort of 859 ovarian tumors, only a combination of all three biomarkers (HRD score) yielded a clear cutoff.



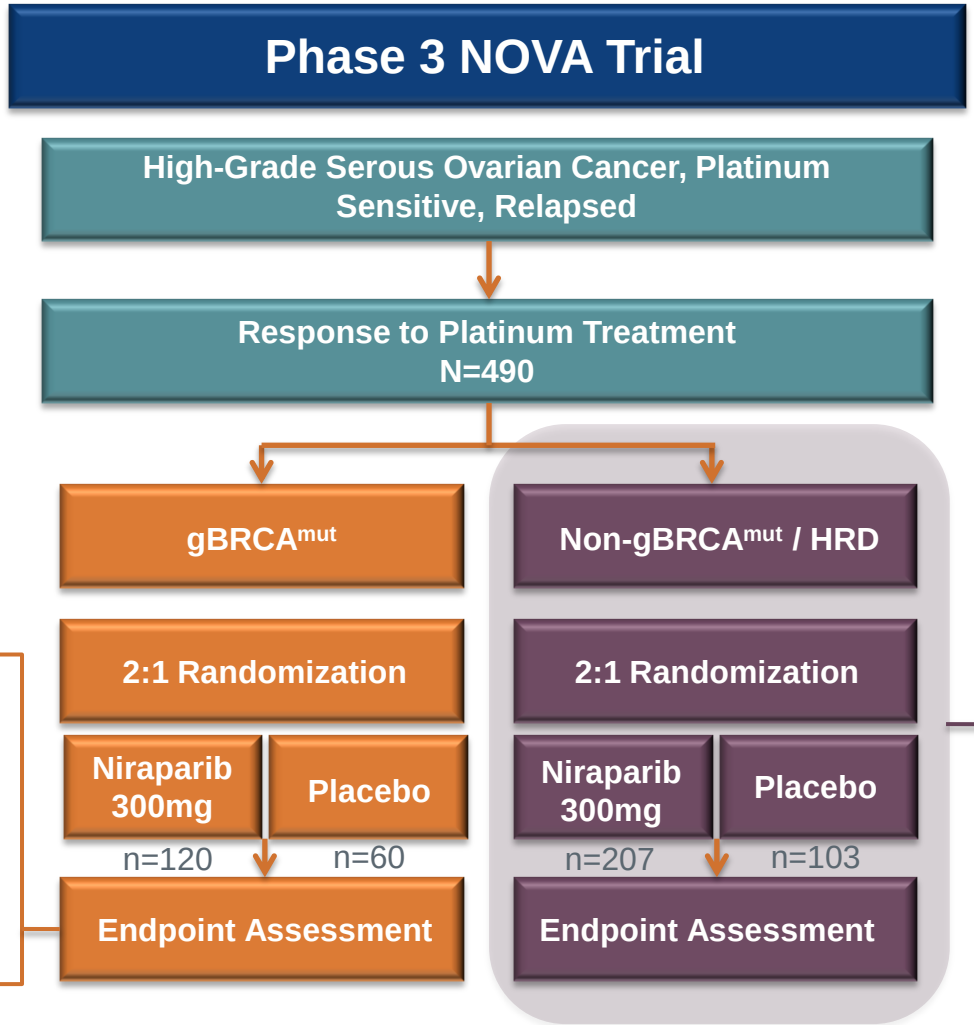




Hennessy BT, et al. *J Clin Oncol*. 2010; 28:3570.
TCGA Research Network. *Nature*. 2011; 474:6609.
Bannerjee et al. *Ann Oncol*. 2013;24(3):679.

NOVA Study and Data

Review of the NOVA Study



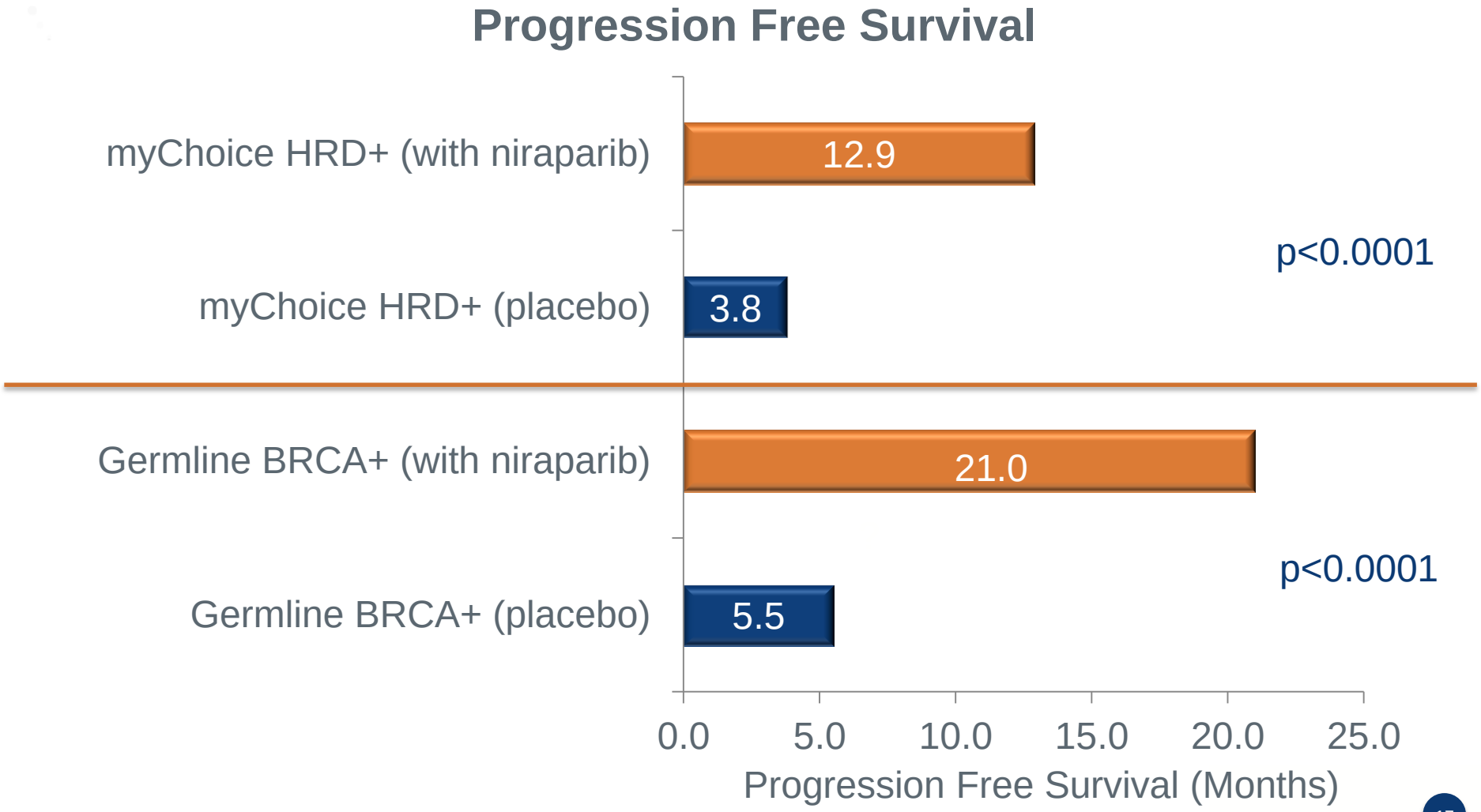
Primary Endpoint:

- PFS; >90% power to detect 4.8 month improvement (HR 0.50 in both cohorts)
- Assumption: 4.8 month PFS for control arms

myChoice HRD:

- First assess PFS in HRD+ subset
  - n≈165
  - >90% power to detect a HR=0.50
- If HRD+ subset has p<0.05, assess PFS for the entire cohort
  - N=310
  - >90% power to detect a HR=0.50

Niraparib Highly Efficacious in Both myChoice HRD+ Patients and Germline BRCA+ Patients

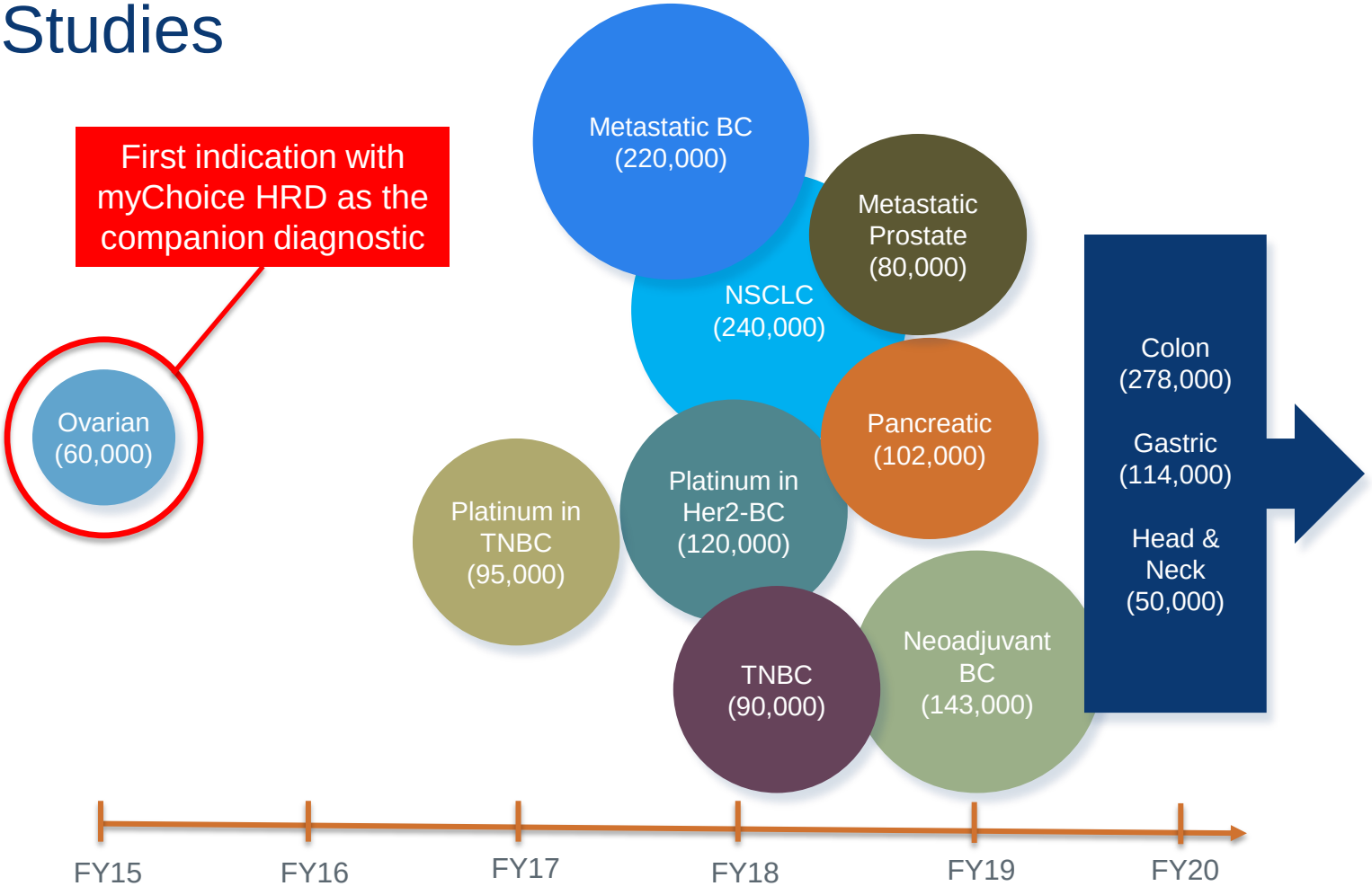


Summary of the NOVA Data

1) Niraparib is highly effective in patients with germline BRCA mutations and those with myChoice HRD positive test results
2) myChoice HRD identifies ≈2x as many patients who would benefit from Niraparib compared to the FDA approved BRACAnalysis CDx test.
3) The myChoice HRD+ patients demonstrated an incremental 9.1 months of progression free survival benefit, which is higher than seen in previous PARP studies

Business Impact

Extensive Collaborations With >22 Clinical Studies



Global Market > 1.4M patients or $6.0b*

*Includes U.S., Canada and EU6

myChoice HRD Addressable Market in Ovarian Cancer

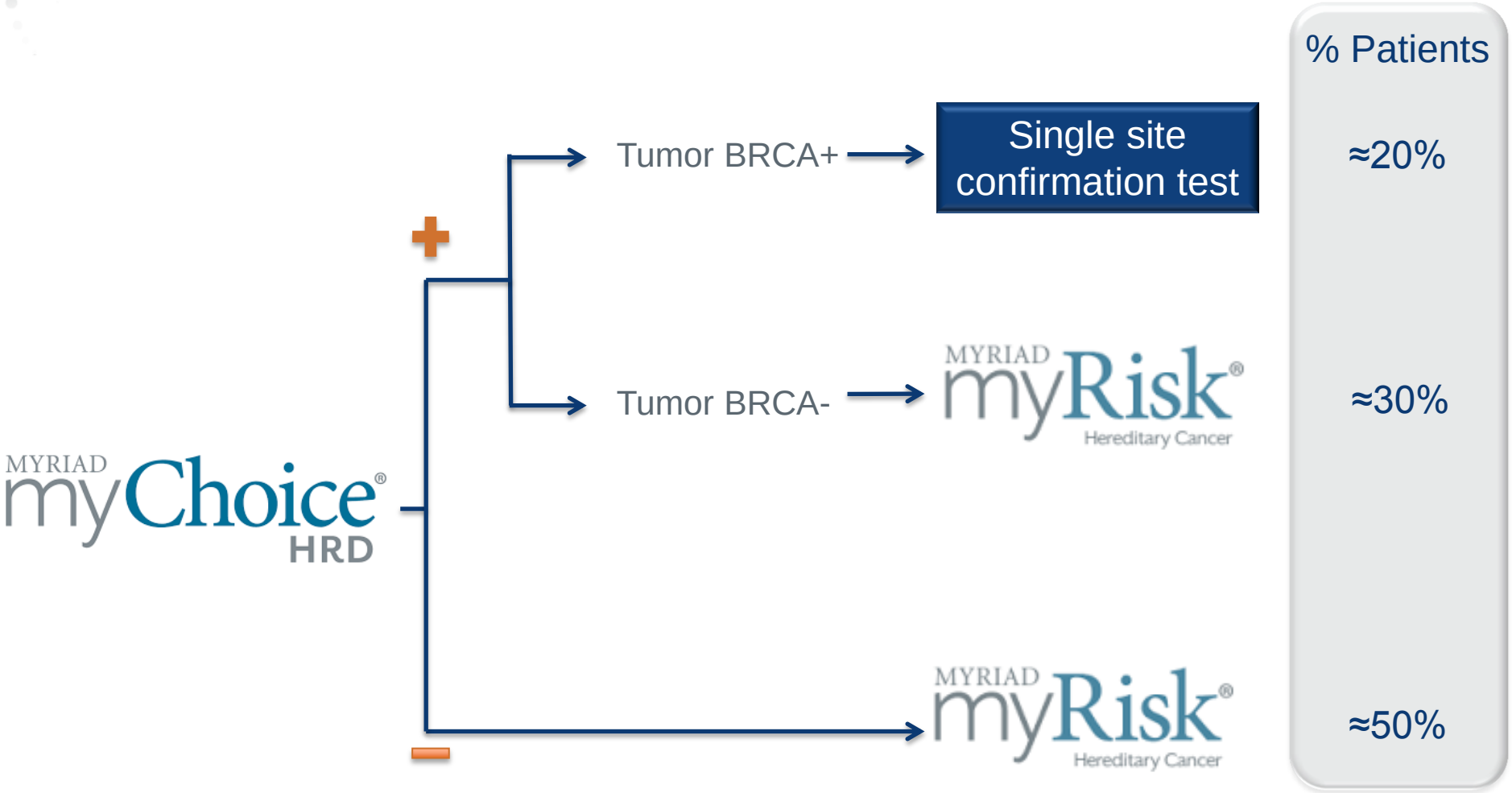
U.S.
22,000
patients

EU5 &
Canada
38,000
patients

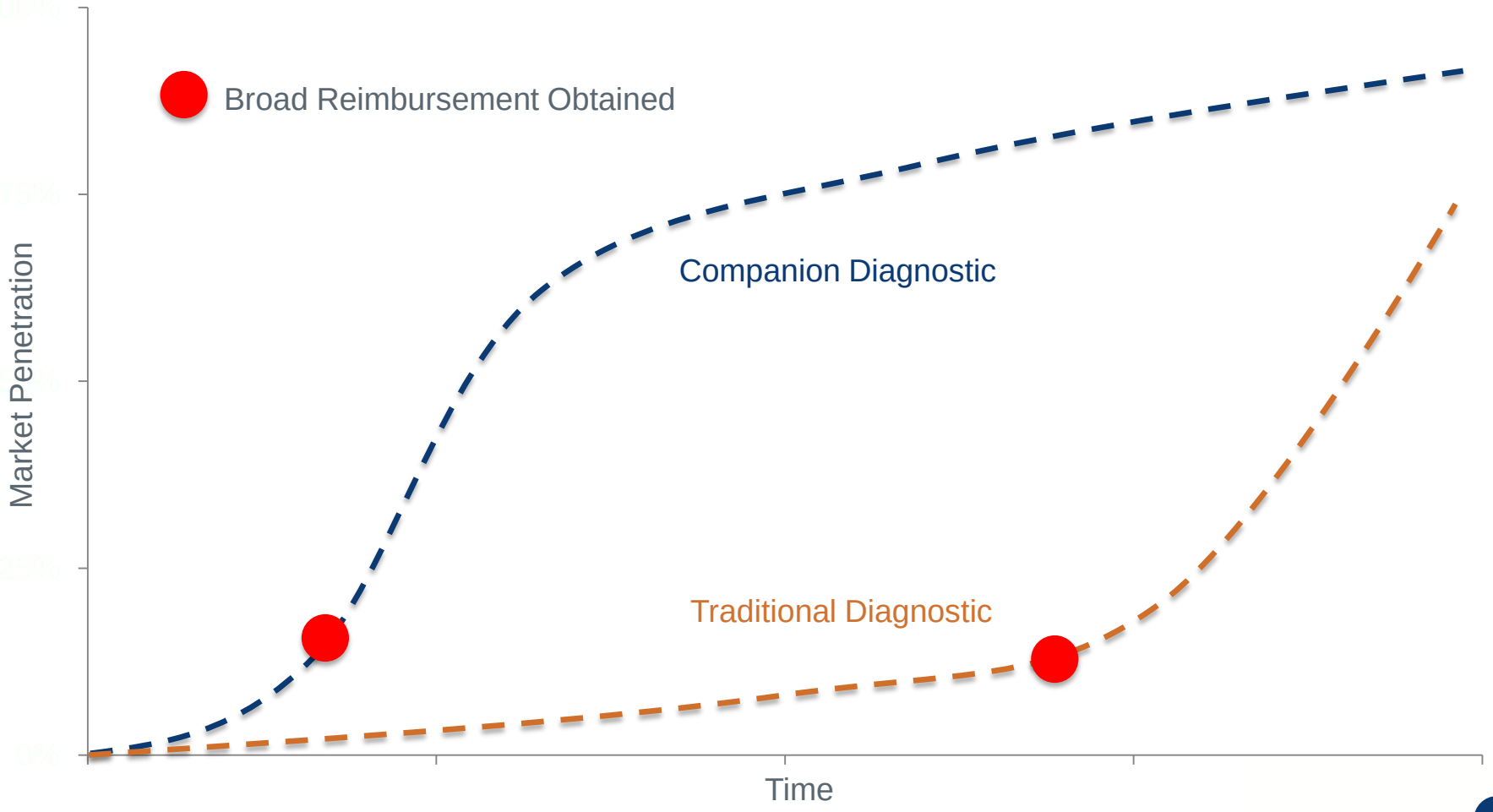
>$200M Global Market

- Differentiated diagnostic that is strategically important to pharma
- Protected by strong intellectual property with both patents and trade secrets
- Unlike BRACAnalysis CDx, this is an additive opportunity

myChoice HRD is Additive To Hereditary Cancer Testing



Revenue Curve for Companion Diagnostics is Much Steeper Than for Traditional Diagnostics



Other Strategic Considerations

- First prospective data and major validation of myChoice HRD – reduces risk for pharma partners and likely drives additional collaborations
- Growing core competency in FDA approved, high-value companion diagnostics
- Intellectual property around myChoice HRD is significant and provides global differentiation