

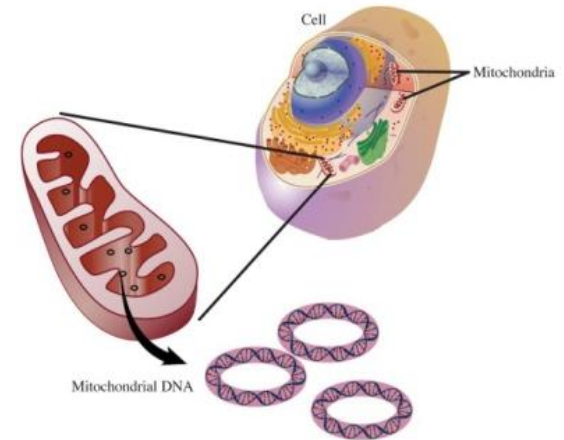


It's time to take
diagnostic testing
beyond doubt.

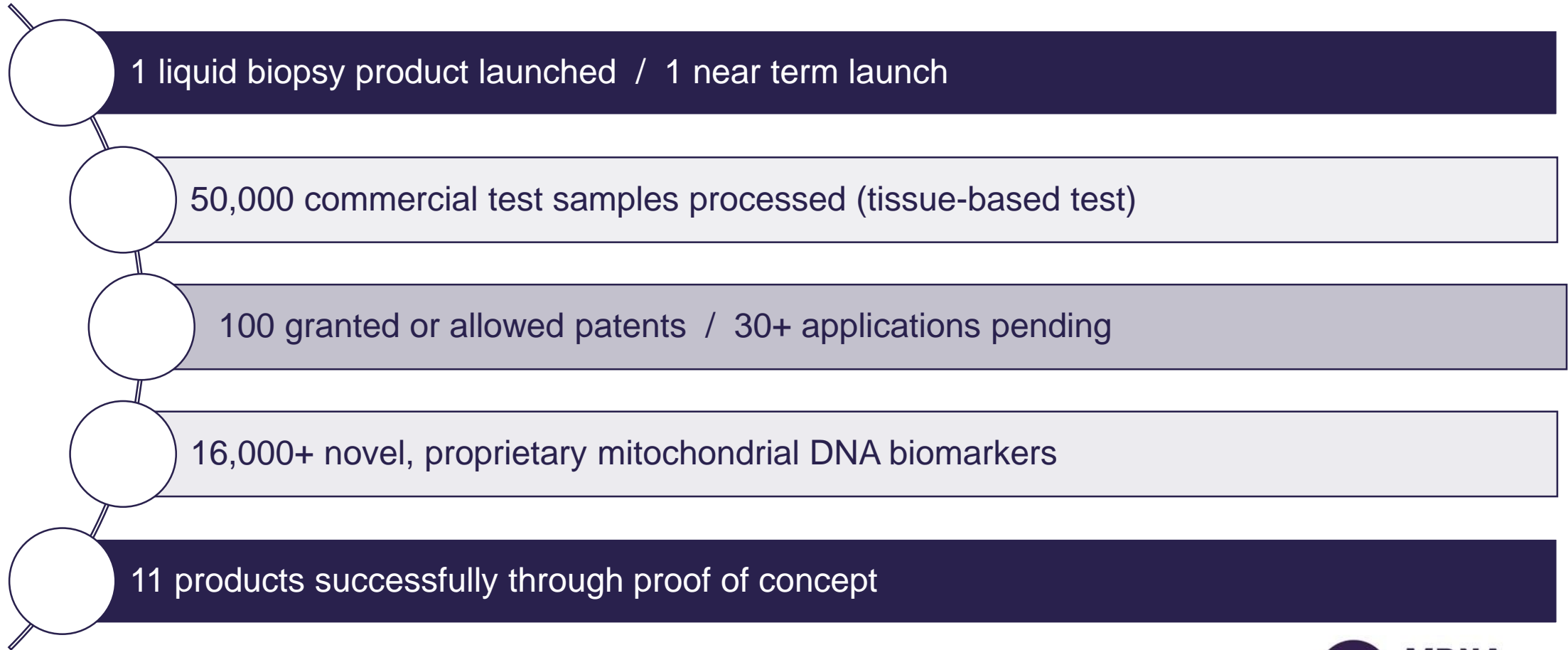


About Us

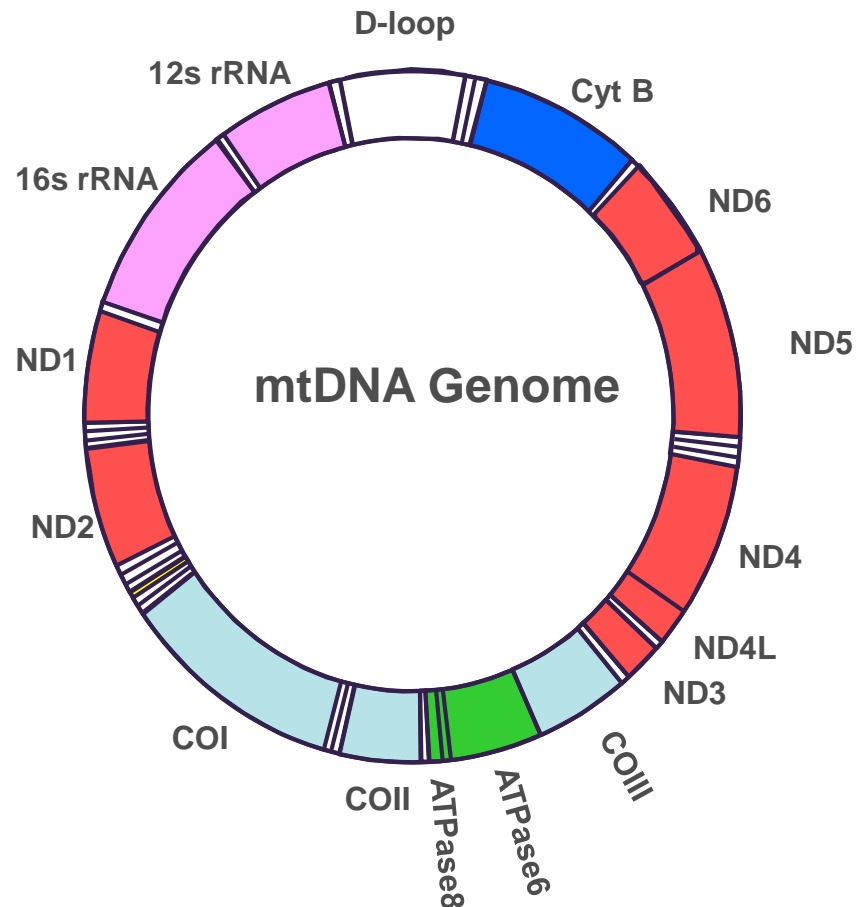
- Market disruptive **molecular and companion diagnostic platform** company.
- Exploiting the **biological advantages** of mitochondrial genomics.
- Utilizing non-invasive, **blood-based, liquid biopsy** format to diagnose cancer.
- **Deep product pipeline** focused on cancer diagnostics and oncology.
- Unmatched **rapid, agile development** of diagnostic proprietary tests.
- **Lowest cost testing** structure translates to high profit margins.
- Head office in West Palm Beach, Florida, USA.
- R&D laboratory in Newcastle-upon-Tyne, UK.
- IVD kit manufacturing in Marseille, France.



Key Facts

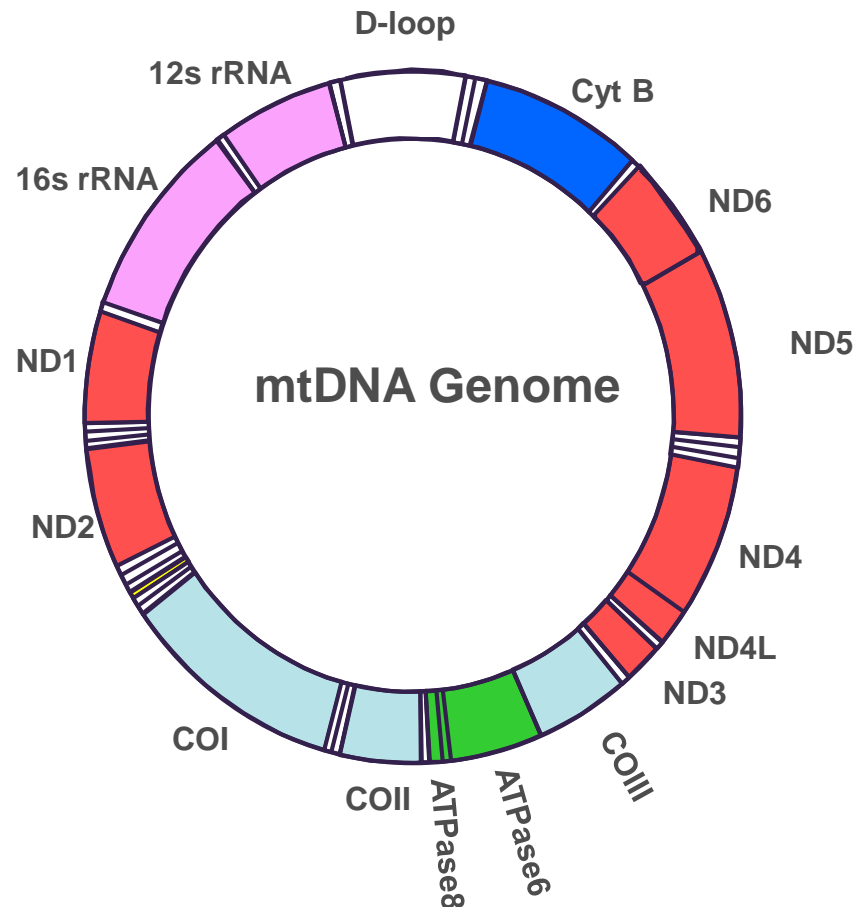


Human Mitochondrial DNA



- 16,568 base pairs of circular, double-stranded DNA.
- High copy number (1000 to 10,000 per cell).
- DNA mutations occur at high frequency (10-17 fold greater than nuclear DNA).
- Mutations can occur in a subset of mitochondrial genomes (known as heteroplasmy) which allows for early mutation detection.
- Limited ability to repair DNA.
- Controls apoptosis (cell death).

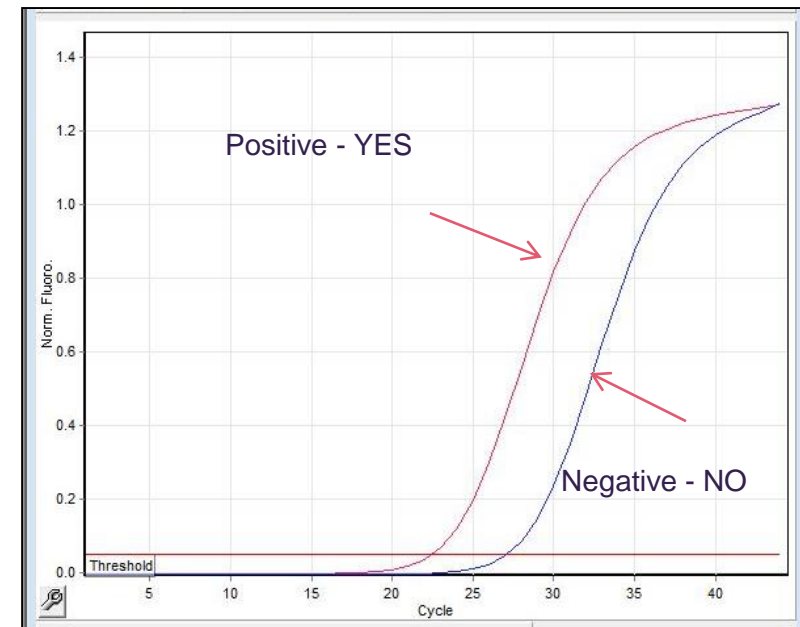
Mitochondrial DNA Deletions



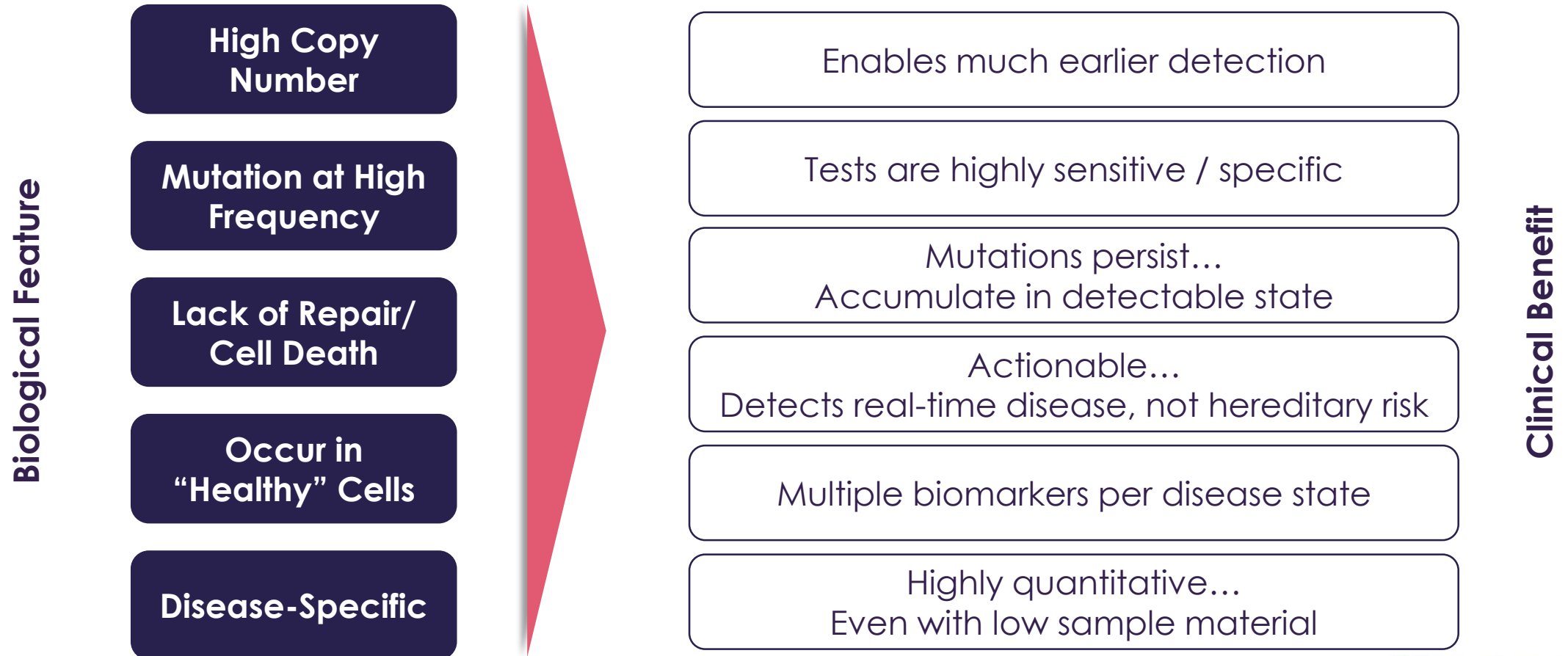
- Deletions are genome copies, which are missing large parts of the genome.
- Large-scale deletions in mtDNA indicate cellular changes that are associated with the development of disease.
- Deletions often result in loss of complete genes, impact energy production, and result in production of oxidants (i.e. reactive oxygen species).
- Cell death pathways become blocked or shut off.

Using Deletions for Disease Detection

- Specific deletions are involved with specific diseases.
- A particular deletion, or a combination of deletions, are definitive for a specific disease, (creating an opportunity to develop molecular tests for multiple purposes across all diseases since detection is possible in various sample types – tissue, biofluids, blood).
- ***Importantly, deletions accumulate in a way that enables quantitative measurement using standard laboratory equipment platforms (e.g. qPCR).***



Mitochondrial DNA: The Perfect Biosensor



Clinical Benefits Drive Commercial Advantages

Clinical Benefit

Early Detection

High Sensitivity /
Specificity

Persistent
Detection

Actionable, Real
Time

Multiple
Biomarkers

Quantitative and
Reliable



Best-in-class, non-invasive blood-based tests

Can be optimized for screening, diagnosis,
prognosis, and/or treatment decisions

Biomarker discovery and proof of concept
development is efficient and cost effective

Low sample quantity is not a limiting factor

Layers of IP protection

Robust, yet simple clinical implementation

“Plug & Play” roll out based on extensive
cross-platform validation

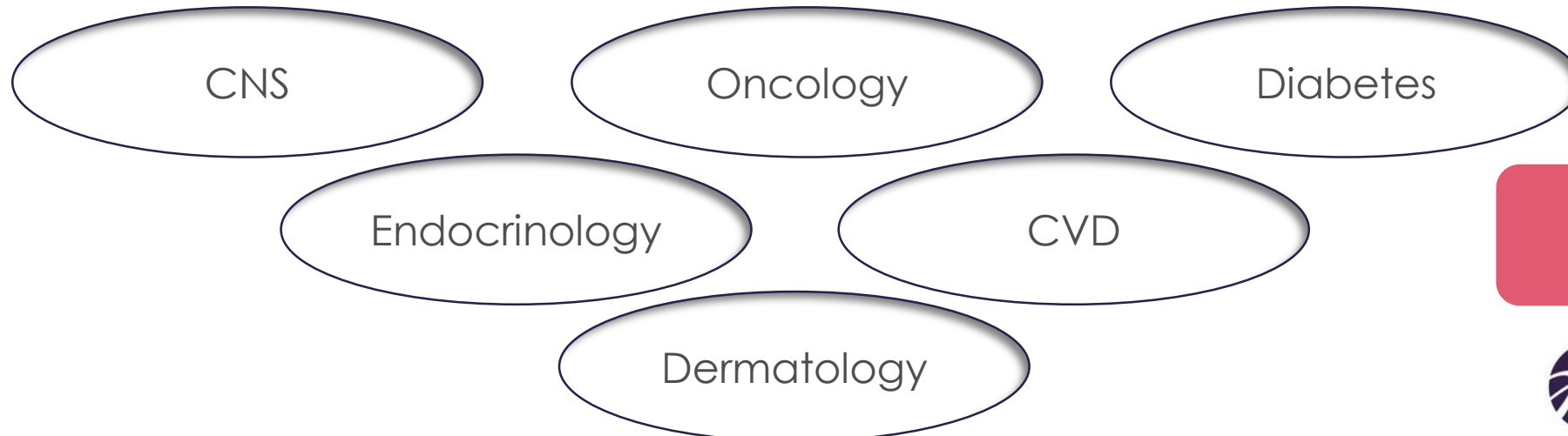
Development & Commercial
Advantages

End-to-End Market Application

Development Platform

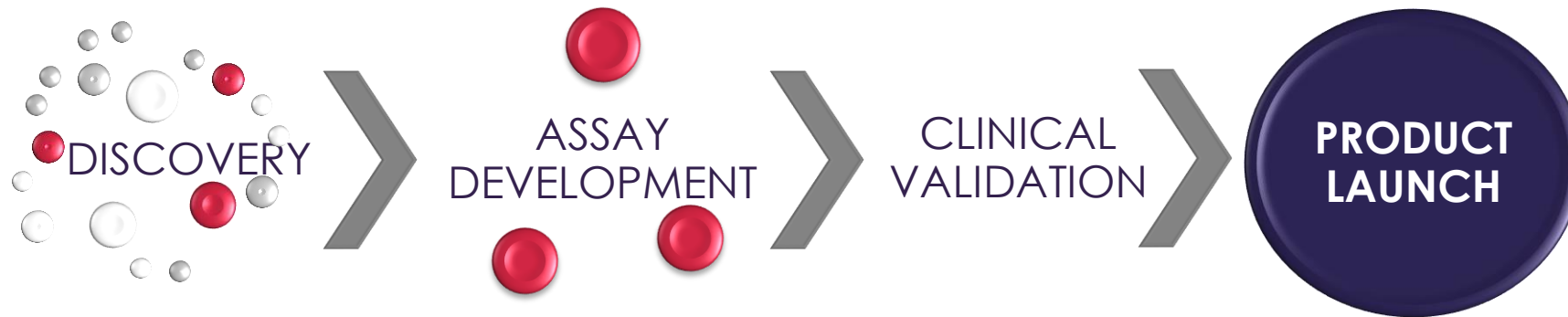


Product and Market Application



Unlimited
Application

Discovery to Product Launch



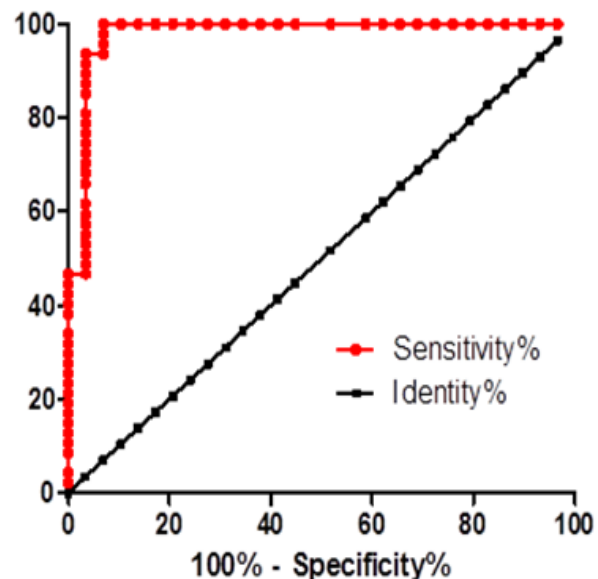
- Identify unique independent biomarkers (next-generation sequencing)

- Develop QPCR assay(s)
- Test against control blood samples (blinded)

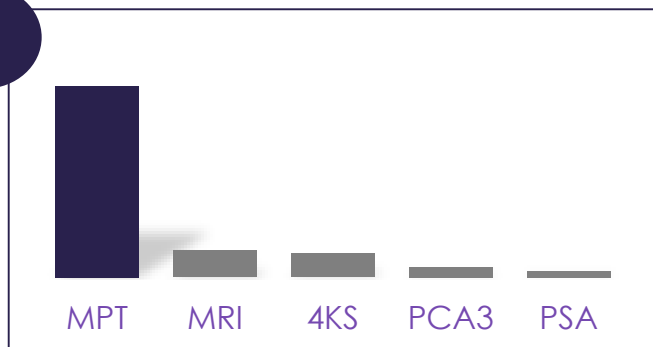
- Establish clinical performance statistics

- Regulatory submission and market launch

Find Prostate Cancer in Blood



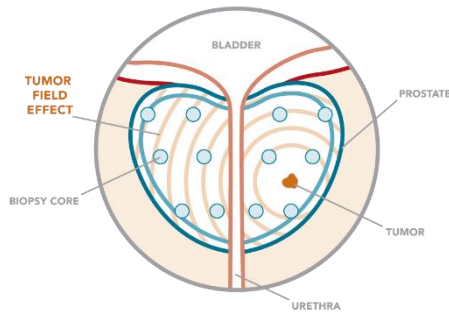
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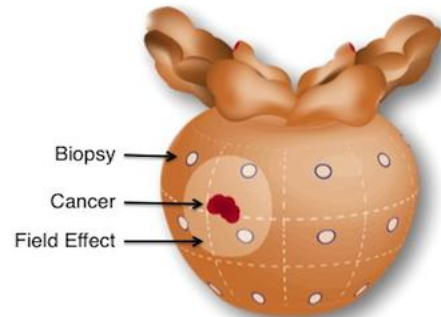
- Mitomic™ Prostate Test (MPT™) is the **first non-PSA linked liquid biopsy test** for prostate cancer. Launched in USA with LabCorp.
- **Top performer and disruptive** to current standards (i.e. PSA and MRI).
- For screening at risk patients.
- Developed in collaboration with the University of Cambridge in the UK.
- Distribution agreements signed in USA, Australia, New Zealand, South Korea, Germany, UK, Central Europe, the Nordics, and Israel.
- Agreements pending in Canada, Middle East, Africa, and Latin America.

Uncover False Negative Biopsies

MDNA Field Effect
~ **Entire Prostate** ~



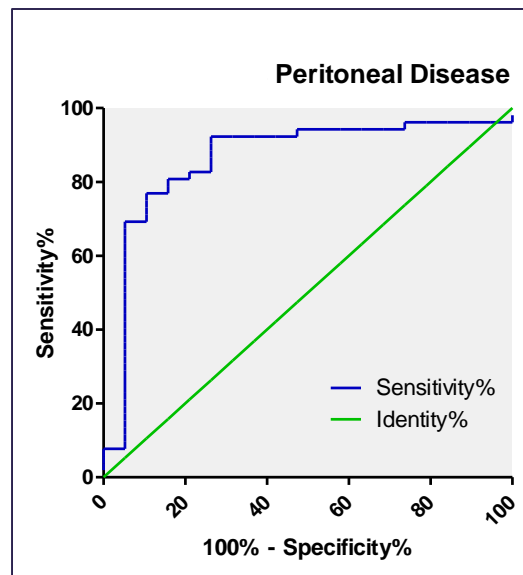
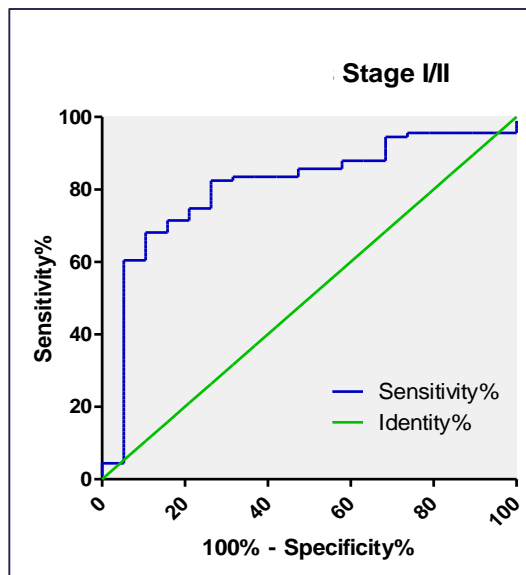
Confirm MDx Field Effect
~ Halo Only ~



- Mitomic™ Prostate Core Test (MPCT™) identifies the 3.4kb mitochondrial DNA deletion associated with malignant cells in benign tissue.
- MPCT provides: (i) a confirmation of negative biopsy results without need for additional patient sample or office visit (**92% Negative Predictive Value**) and (ii) an accurate identification of men at high risk of undiagnosed prostate cancer missed during prior biopsy procedure (**Sensitivity 85%**).
- **Top performer.** Field extends through the **entire prostate**, versus the small 'halo' of the competing test.
- An in-clinic observational study of 1467 men demonstrates MPCT **reduced biopsies up to 8 fold and advanced diagnosis by an average of 2.5 months.**
- Results reported on a per core basis.

First-in-Class Endometriosis Test


- The Mitomic™ Endometriosis Test (MET™) will be the **first blood-based test** for endometriosis.



- Disruptive** to current standards (i.e. surgery).
- For screening prior to laparoscopy.
- Under development in collaboration with the University of Oxford in the UK and Harvard University and UPMC in the USA.
- We are ahead of all potential competitors in endometriosis development.
- Launching in 2019 in the USA.
- CE IVD kit to follow.

Many Future Revenue Opportunities

- Identified **multiple, independent disease-specific biomarkers** in each listed category:
 - Underserved with significant testing need;
 - Established at-risk population;
 - Reliant on invasive diagnostic procedures; with
 - Opportunity to reduce costs
- Successful proof-of-concept studies highlight **exceptional test performance** in many different disease states.
- Reveals the depth of our **proprietary & patented** technology and future product launches.



Disease State	Biomarker Performance (AUC %)
Ovarian Cancer	99
Uterine Cancer	87
Cervical Cancer	97
Breast Cancer	89
Testicular Cancer	99
Lung Cancer	89
Bladder Cancer	89
Colorectal Cancer	84
Melanoma	96

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