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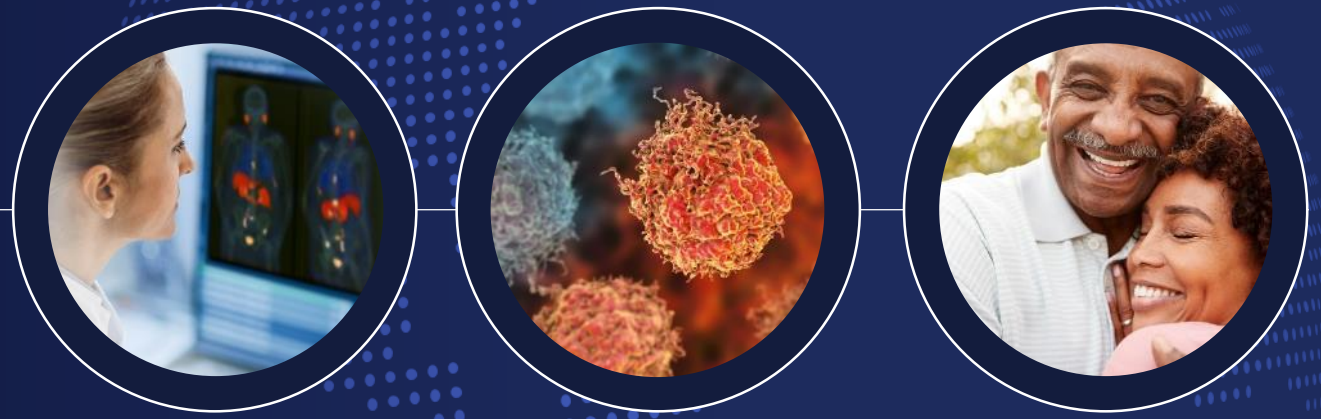

Baird 2021 Global Healthcare Conference Presentation

FIND > FIGHT > FOLLOW™

September 15, 2021

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Safe Harbor Statements

Cautionary Statement Regarding Forward-Looking Statements

This document contains forward-looking statements within the meaning of the Private Securities Litigation Reform Act of 1995, as amended, that are subject to risks and uncertainties and are made pursuant to the safe harbor provisions of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Forward-looking statements may be identified by their use of terms such as “anticipate,” “believe,” “confident,” “could,” “estimate,” “expect,” “intend,” “may,” “plan,” “predict,” “project,” “target,” “will” and other similar terms. Such forward-looking statements are based upon current plans, estimates and expectations that are subject to risks and uncertainties that could cause actual results to materially differ from those described in the forward-looking statements. The inclusion of forward-looking statements should not be regarded as a representation that such plans, estimates and expectations will be achieved. Readers are cautioned not to place undue reliance on the forward-looking statements contained herein, which speak only as of the date hereof. The Company undertakes no obligation to publicly update any forward-looking statement, whether as a result of new information, future developments or otherwise, except as may be required by law. Risks and uncertainties that could cause our actual results to materially differ from those described in the forward-looking statements include : (i) the impact of the global COVID-19 pandemic on our business, financial conditions and prospects, and on the timing and enrollment of our clinical trials; (ii) continued market expansion and penetration for our commercial products, particularly DEFINITY, in the face of segment competition and potential generic competition, including as a result of patent and regulatory exclusivity expirations; (iii) our ability to successfully launch PYLARIFY as a commercial product, including (A) our ability to obtain U.S. Food and Drug Administration (“FDA”) approval for additional PET manufacturing facilities (“PMFs”) that could manufacture PYLARIFY, (B) the ability of those PMFs to supply PYLARIFY to customers, and (C) our ability to sell PYLARIFY to customers; (iv) the global Molybdenum-99 supply; (v) our products manufactured at Jubilant HollisterStier and our recently-approved modified formulation of DEFINITY (“DEFINITY RT”) to be commercially manufactured at Samsung Biologics; (vi) the continued integration of the Progenics products and product candidate portfolio into our business following the Progenics Acquisition; (vii) our ability to use in-house manufacturing capacity; (viii) the Company’s ability to successfully launch aPROMISE as a commercial product; (ix) the efforts and timing for commercialization of products or new clinical applications for our products that we or our strategic partners may develop, including flurpiridaz F 18; (x) our ability to develop highly contextualized assessments of disease burden using artificial intelligence (“AI”); and (xi) the risk and uncertainties discussed in our filings with the Securities and Exchange Commission (including those described in the Risk Factors section in our Annual Reports on Form 10-K and our Quarterly Reports on Form 10-Q).

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Non-GAAP Financial Measures

The Company uses non-GAAP financial measures, such as adjusted net income and its line components; adjusted net income per share - fully diluted; and free cash flow. The Company’s management believes that the presentation of these measures provides useful information to investors. These measures may assist investors in evaluating the Company’s operations, period over period. However, these measures may exclude items that may be highly variable, difficult to predict and of a size that could have a substantial impact on the Company’s reported results of operations for a particular period. Management uses these and other non-GAAP measures internally for evaluation of the performance of the business, including the allocation of resources and the evaluation of results relative to employee performance compensation targets. Investors should consider these non-GAAP measures only as a supplement to, not as a substitute for or as superior to, measures of financial performance prepared in accordance with GAAP.

YESTERDAY

65 years of imaging innovation

Most used radiopharmaceutical imaging agent in the U.S.[1]

Nearly 50 years of Technetium Tc-99m generator manufacturing expertise

#1 ultrasound enhancing agent used in the U.S. for 20 years[2]

(1) Sestamibi was the most used radiopharmaceutical in the U.S. based on procedure volume, DRG 2019 Imaging Market Guide.
(2) DRG Echo Monthly Monitor.

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Precision Diagnostics

Our leading diagnostic products assist healthcare professionals (HCPs) in Finding and Following diseases in non-oncologic conditions

Radiopharmaceutical Oncology

Diagnostics and therapeutics that aid HCPs in Finding, Fighting and Following cancer

Strategic Partnerships and Other

Strategic partnerships with a focus on enabling precision medicine with biomarkers, digital solutions and radiotherapeutic platforms

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Diversified Portfolio Positions the Company for Sustained Revenue Growth

THREE PORTFOLIO CATEGORIES

1 PRECISION DIAGNOSTICS

- DEFINITY® (Perflutren Lipid Microsphere) VIAL FOR INJECTABLE SUSPENSION
- DEFINITY® RT (Perflutren Lipid Microsphere) INJECTABLE SUSPENSION
- TechneLite® Technetium Tc 99m Generator
- Xenon Xe 133 Gas
- NEUROLITE® Kit for the Preparation of Technetium Tc 99m Bicisate for Injection
- Cardiolite® Kit for the Preparation of Technetium Tc99m Sestamibi for Injection
- Thallium Thallous Chloride Tl 201 Injection
- Gallium Gallium Citrate Ga 67 Injection

2 RADIOPHARMACEUTICAL ONCOLOGY

- PYLARIFY® Piflufolastat F 18 Injection
- AZEDRA® iobenguane I 131 injection for intravenous use
- QUADRAMET® (SAMARIUM SM 153 LEXIDRONAM INJECTION)
- 1095*
- LMI 1195*

3 STRATEGIC PARTNERSHIPS & OTHER

Pharma Services: Biomarkers

- NTI-1309* NORIA
- NM-01* NANOMAB
- BAYER**
- POINT BIOPHARMA**
- reflexion**
- REGENERON**

Microbubble Partnerships*

- CARTHERA Advanced Brain Therapy Through Innovation
- CEREVAST™
- INSIGHTEC®
- AHN

- aBSI AUTOMATED BONE SCAN INDEX
- aPROMISE
- RELISTOR® methylnaltrexone bromide
- BAUSCH Health
- piflufolastat F 18* **
- CURIUM™ EU ONLY
- flurpiridaz*
- GE Healthcare
- 1404*
- ROTOP

* Product candidates.
** Revenue will be reported under the Radiopharmaceutical Oncology category.
*** Revenue will be reported under the Precision Diagnostic category.

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Highlighted Products

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PRECISION DIAGNOSTICS

Microbubbles
DEFINITY brand

Lantheus Holdings

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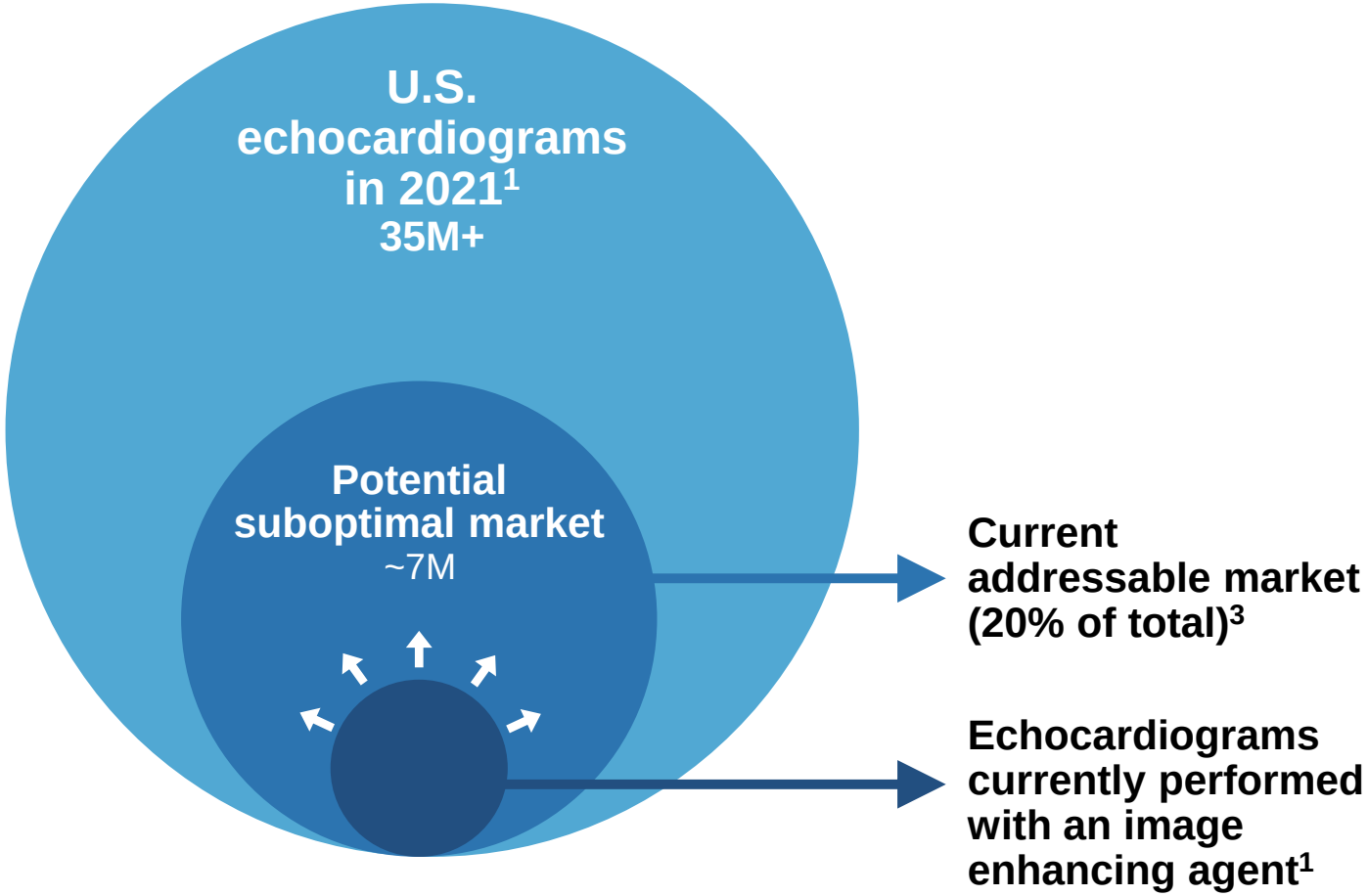
Significant U.S. Echocardiography Market Opportunity Remains for DEFINITY

U.S. Market for Echocardiograms Continues to Grow ~2% Annually[1]

DEFINITY®
VIAL FOR (Perflutren Lipid Microsphere)
INJECTABLE SUSPENSION

80%+ market share among agents used in suboptimal echocardiograms[2]



Circles not drawn to scale.

(1) Based on historical trends and the most current AMR data for Q1 2021, we estimate there will be 35M+ echocardiograms in the U.S. for CY 2021.
(2) Lantheus estimate.
(3) 20% of echocardiograms result in sub-optimal images. Source: Lindner JR. J. Am. Coll. Cardiol. 2017:1-9.

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DEFINITY: A Trusted Choice for 20 Years

#1 Ultrasound Enhancing Agent

DEFINITY®
VIAL FOR (Perflutren Lipid Microsphere)
INJECTABLE SUSPENSION

- Significant market opportunity remains
- Q2 2021 DEFINITY demand exceeded pre-COVID-19 levels
- As of Q2 2021, >50% of promotional efforts were in-person, up from ~10% at the start of 2021
- Virtual engagement of customers also continues
- Estimated timing of in-house DEFINITY manufactured product commercially available - early 2022
  - Provides supply chain redundancy
  - Margin expansion opportunity

DEFINITY RT
(Perflutren Lipid Microsphere)
INJECTABLE SUSPENSION

NOW APPROVED

- Room temperature formulation
- Provides customer flexibility
- Well suited for inclusion in product kits utilizing microbubbles for therapeutic applications
- Orange Book listed patents through 2035

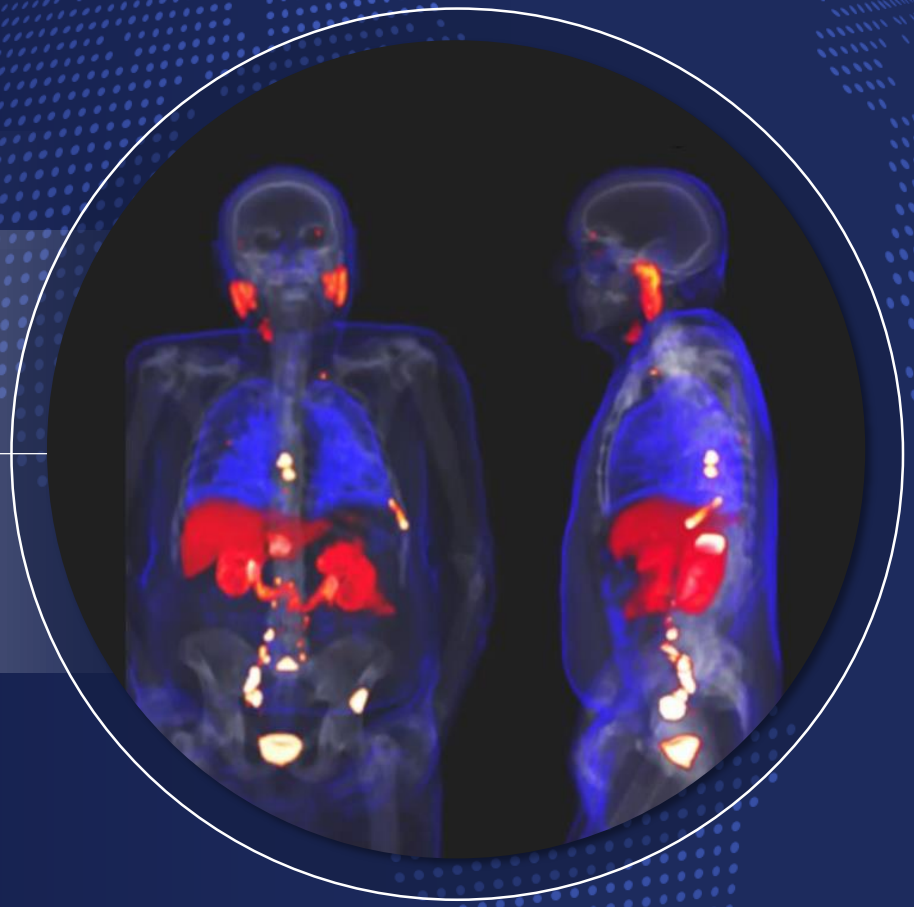
Currently under development for inclusion in kits utilizing microbubbles for therapeutic applications

PARTNERSHIPS WITH

CarThera Advanced Brain Therapy Through Innovation · INSIGHTEC® · CEREVAST™ · AHN

RADIOPHARMACEUTICAL ONCOLOGY

PYLARIFY®
Piflufolastat F 18 Injection



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PYLARIFY®

Piflufolastat F 18 Injection

NOW APPROVED

PYLARIFY® (piflufolastat F 18) Injection is a radioactive diagnostic agent indicated for positron emission tomography (PET) of prostate-specific membrane antigen (PSMA) positive lesions in men with prostate cancer:

- with suspected metastasis who are candidates for initial definitive therapy.
- with suspected recurrence based on elevated serum prostate-specific antigen (PSA) level.

PYLARIFY® [package insert]. North Billerica, MA: Progenics Pharmaceuticals, Inc., a Lantheus company.

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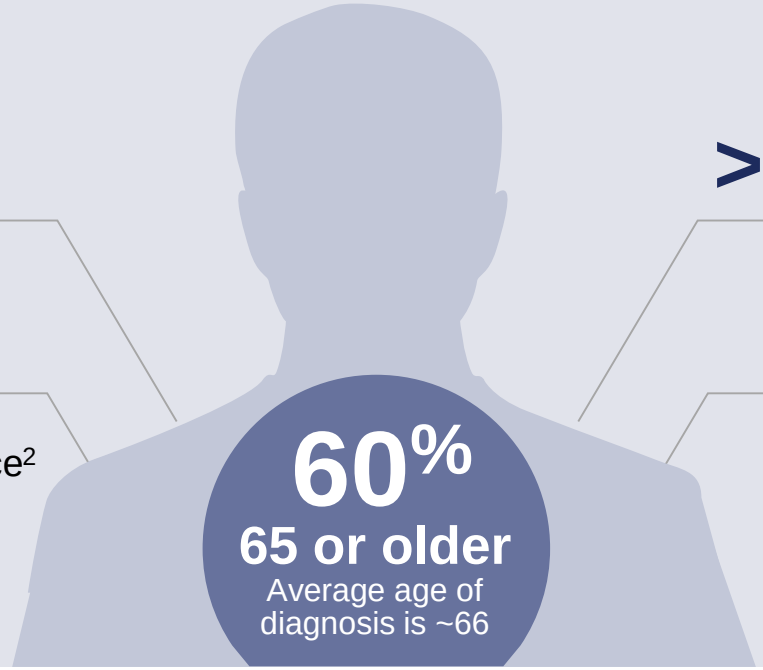
Prostate Cancer is the Second Most Common Cancer in American Men[1]

2021 **Prostate Cancer Estimates**

~248,530 new cases[1]

~34,130 deaths[1]



1:8 Diagnosed with prostate cancer during his lifetime[1]

Up to 50% Will experience a recurrence[2]

60%
65 or older
Average age of diagnosis is ~66

>3.1M Are living with prostate cancer today[1]

1:41 Will die of prostate cancer[1]

(1) American Cancer Society. *Cancer Facts & Figures 2021.* Atlanta: American Cancer Society; 2021.
(2) Ceci & Fanti. PSMA-PET/CT imaging in prostate cancer: why and when. Clinical and Translational Imaging volume 7, pages 377–379 (2019).

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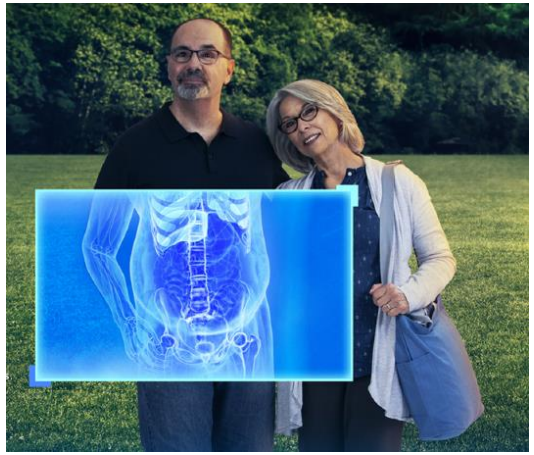
Prostate Cancer PET Imaging: Large Addressable Market

Eligible Patients

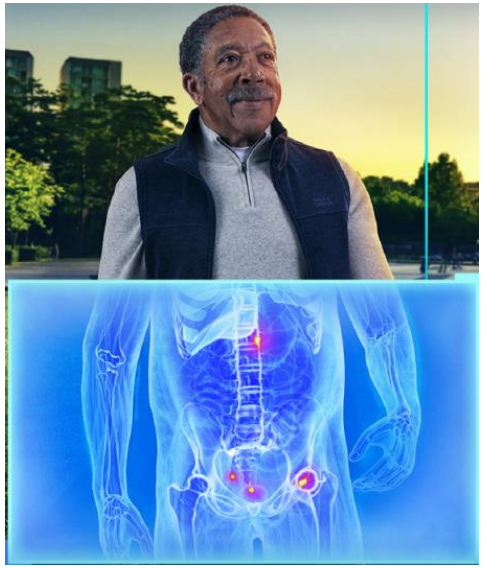
~170K

Comprised of 130,000+ patients with suspected recurrence and 40,000+ patients with suspected metastasis[1]



Annual Potential

$600M+[2]



Not actual patients.

(1) Scher HI, Solo K, Valant J, Todd MB, Mehra M. 2015. Prevalence of Prostate Cancer Clinical States and Mortality in the United States: Estimates Using a Dynamic Progression Model. PloS one 10: e0139440.
(2) Addressable market based on: current management estimates, internal data and observed market price.

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Advantages of PYLARIFY

PET IMAGING[1,2]

PET/CT Scans:

- Have high detection rates of metastatic disease even in patients with low PSA
- Are not limited by the size of lymph nodes in detection of nodal disease
- Can visualize bone metastases when CT or bone scan cannot

PSMA TARGETING[3]

- PYLARIFY works by binding to PSMA, a protein that is overexpressed on the surface of more than 90% of primary and metastatic prostate cancer cells which enables the reader of the PET/CT scan to detect and locate the disease

F 18 RADIOISOTOPE[4]

- Attributes help deliver high quality, clear, detailed and reproducible images
- Cyclotron production offers high batch capacity
- 110-minute half-life allows for broad geographic distribution and clinical flexibility in administration

FUTURE TECHNOLOGY[5,6]

- aPROMISE – a proprietary, patent-protected artificial intelligence medical device software developed to assist with the reading and quantification of PYLARIFY scans
- Potential benefits of reader efficiency and reproducibility of PSMA PET/CT image assessments
- Regulatory Clearances:
  U.S. - 510(k)
  E.U. - CE mark

(1) Alipour R, Azad A, Hofman MS. Guiding management of therapy in prostate cancer: time to switch from conventional imaging to PSMA PET? Ther Adv Med Oncol. 2019;11:1-14. doi:10.1177/1758835919876828.; (2) Rousseau E, Wilson D, Lacroix-Poisson F, et al. A prospective study on 18F-DCFPyL PSMA PET/CT imaging in biochemical recurrence of prostate cancer. J Nucl Med. 2019;60(11):1587-1593. doi: 10.2967/jnumed.119.226381; (3) Ceci & Fanti. PSMA-PET/CT imaging in prostate cancer: why and when. Clinical and Translational Imaging volume 7, pages 377–379 (2019); (4) Werner RA, Derlin T, Lapa C, et al. 18F-labeled, PSMA-targeted radiotracers: leveraging the advantages of radiofluorination for prostate cancer molecular imaging. Theranostics. 2020;10(1):1-16; (5) Deep Learning-Enabled Comprehensive Detection and Quantification of 18FDCFPyL (PyL-PSMA) PET/CT. Brynolfsson J, Johnsson K, Sahlstedt H, Richter J, et al, OP-548, 1006: Cutting Edge Science Track – TROP Session: AI -Radiomics and Modelling, EANM 2020; (6) miPSMA Index: Comprehensive and Automated Quantification of 18F-DCFPyL (PyL-PSMA) PET/CT for Prostate Cancer Staging. Johnsson K, Sahlstedt H, Brynolfsson J, et al. J Nucl Med. 2020;61(1):1435.

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Investing in our Commercial Infrastructure

Hiring and Training a **DEDICATED FIELD SALES TEAM**

Supported by contracting specialists and home office resources

MARKET ACCESS TEAM

Laying the groundwork for future reimbursement coverage, working with both governmental and commercial payers

Working to obtain appropriate coding, pass-through status and progress with commercial payers to ensure appropriate coverage or payment

COORDINATION

Working with our PMF partners, commercial teams and commercial and government payers to make PYLARIFY broadly available to the prostate cancer community and ensure patients and facilities can be adequately reimbursed and covered

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aPROMISE: Improves Consistency and Productivity of PSMA Imaging

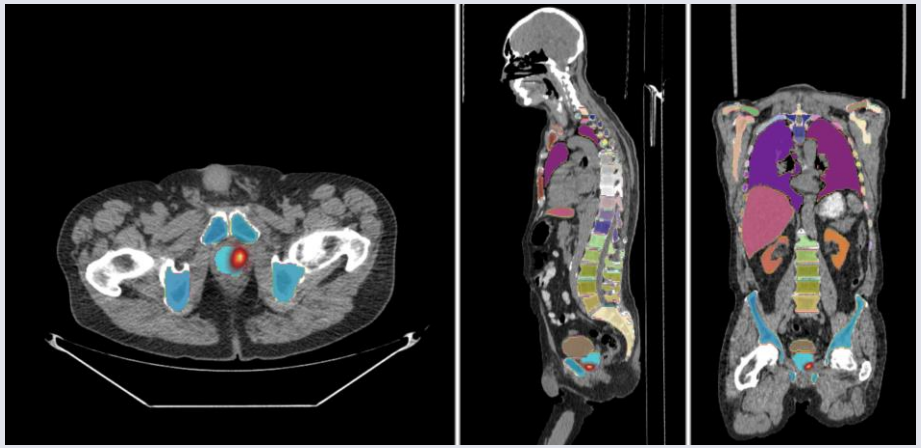
FEATURES

- aPROMISE[1] is the only FDA-cleared artificial intelligence-based (AI) medical device software that allows HCPs and researchers to perform quantitative assessment of PSMA PET/CT images in prostate cancer
- aPROMISE automates body segmentation and marking, quantifying and reporting suspicious lesions in their anatomical context

BENEFITS

- **Improves Consistency:** Provides enhanced consistency in quantitative analysis and standardized reports and has demonstrated increased efficiency and reproducibility of clinicians' PSMA PET/CT image assessments[2, 3]
- **Productivity**: Significant reduction (30-40%) in read time[2]

(1) Regulatory Clearances: U.S. - 510(k); E.U. - CE mark
(2) Nickols, N, et al., JNM 2021.
(3) Johnsson K, et al., EJNMMI 2021.



aPROMISE

- Deep learning segmentation of anatomical context in low dose CT of PET/CT
- Individual colors represent the respective segmented organs

aPROMISE enables physicians to automate the laborious tasks and reproducibly quantify PSMA uptake in PET/CT images.

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RADIOPHARMACEUTICAL ONCOLOGY

AZEDRA®

iobenguane I 131 injection for intravenous use

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AZEDRA: Treating Patients with Pheochromocytoma and Paraganglioma (PPGL)

Rare cancers with high unmet need

652 – 2,608 patients diagnosed each year in US[1,2]

15% of cases are advanced at diagnosis[1]

Disease recurs in 16.4% of patients treated surgically[3]

Tumor progression is the most frequent cause of death

The 5-year overall survival of patients with advanced PPGL varies, but can be as low as 12%[4]

(1) Martucci VL, Pacak K. Curr Probl Cancer. 2014;38(1):7-41.
(2) US Census Bureau. US and World Population Clock. https://www.census.gov/popclock/. Accessed October 1, 2017.
(3) Kantorovich V, Eisenhofer G, Pacak K. Ann N Y Acad Sci. 2009;1148:462-468.
(4) Long-Term Survival and Safety from a Multi-Center, Open-Label Pivotal Phase 2 Study of AZEDRA IN Patients with Unresectable, Locally Advanced or Metastatic Pheochromocytoma or Paraganglioma ASCO Abstract 2019, Noto et al.

AZEDRA® iobenguane I 131 injection for intravenous use

First and Only FDA Approved Treatment for Patients with PPGL

COMMERCIAL AND MEDICAL AFFAIRS

- New marketing initiatives introduced to increase awareness of PPGL and treatment options among referring physicians
- Implementing a new Medical Affairs plan to facilitate peer-to-peer education

MANUFACTURING

- Increased the manufacturing staff at our Somerset facility to ensure ongoing adequate product supply
- Constructing an additional manufacturing suite* to provide redundancy for AZEDRA manufacturing, as well as increased overall future capacity of our iodine-based products.

Additional centers of excellence are offering treatment to patients across the U.S.

* Subject to FDA approval

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STRATEGIC PARTNERSHIPS & OTHER

Pharma Services & Other Partnerships

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Pharma Services: Enabling Precision Medicine with Biomarkers and Digital Solutions that Augment Diagnostic Productivity

Prostate

piflufolastat F 18

aBSI AUTOMATED BONE SCAN INDEX aPROMISE

- Precision biomarkers offered to pharmaceutical companies developing therapies in prostate cancer
  - Clinical supply agreements with Regeneron, Bayer and POINT BioPharma for use of piflufolastat F 18 in prostate cancer drug development programs
  - Development and commercialization collaboration with RefleXion Medical, Inc. to evaluate the use of piflufolastat F 18 with biology-guided radiotherapy in prostate cancer

Immuno-Oncology

NM-01 – PDL1

- Acquired rights to NM-01 from NanoMab, a PD-L1 imaging biomarker product candidate
  - For potential use by pharmaceutical companies and academic centers conducting clinical trials of immuno-oncology therapies, including combination therapies

Pan-Oncology

NTI-1309 – FAP

- Acquired rights to NTI-1309, an innovative imaging biomarker that targets fibroblast activation protein (FAP), from Ratio Therapeutics (formerly Noria Therapeutics)
  - FAP is an emerging target with broad potential applicability in oncology
  - We are integrating NTI-1309 into our portfolio of imaging biomarkers as part of our Pharma Services offering. Upon further clinical development, we will assess options to bring NTI-1309 to market as a diagnostic or potentially a therapeutic agent.

CURRENT PARTNERS

BAYER · POINT BIOPHARMA · REGENERON · reflexion · Ratio Therapeutics · NANOMAB

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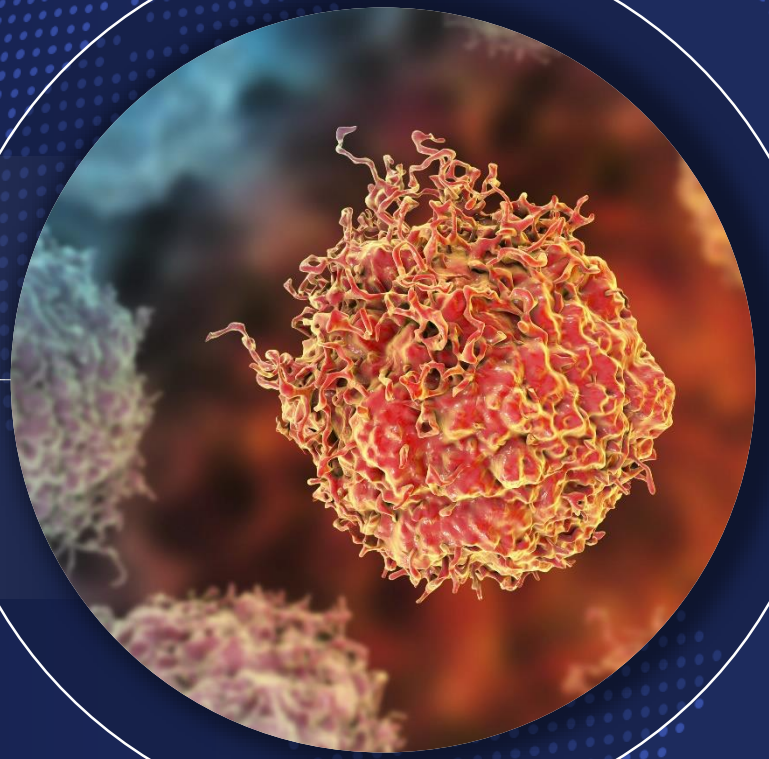
Pipeline



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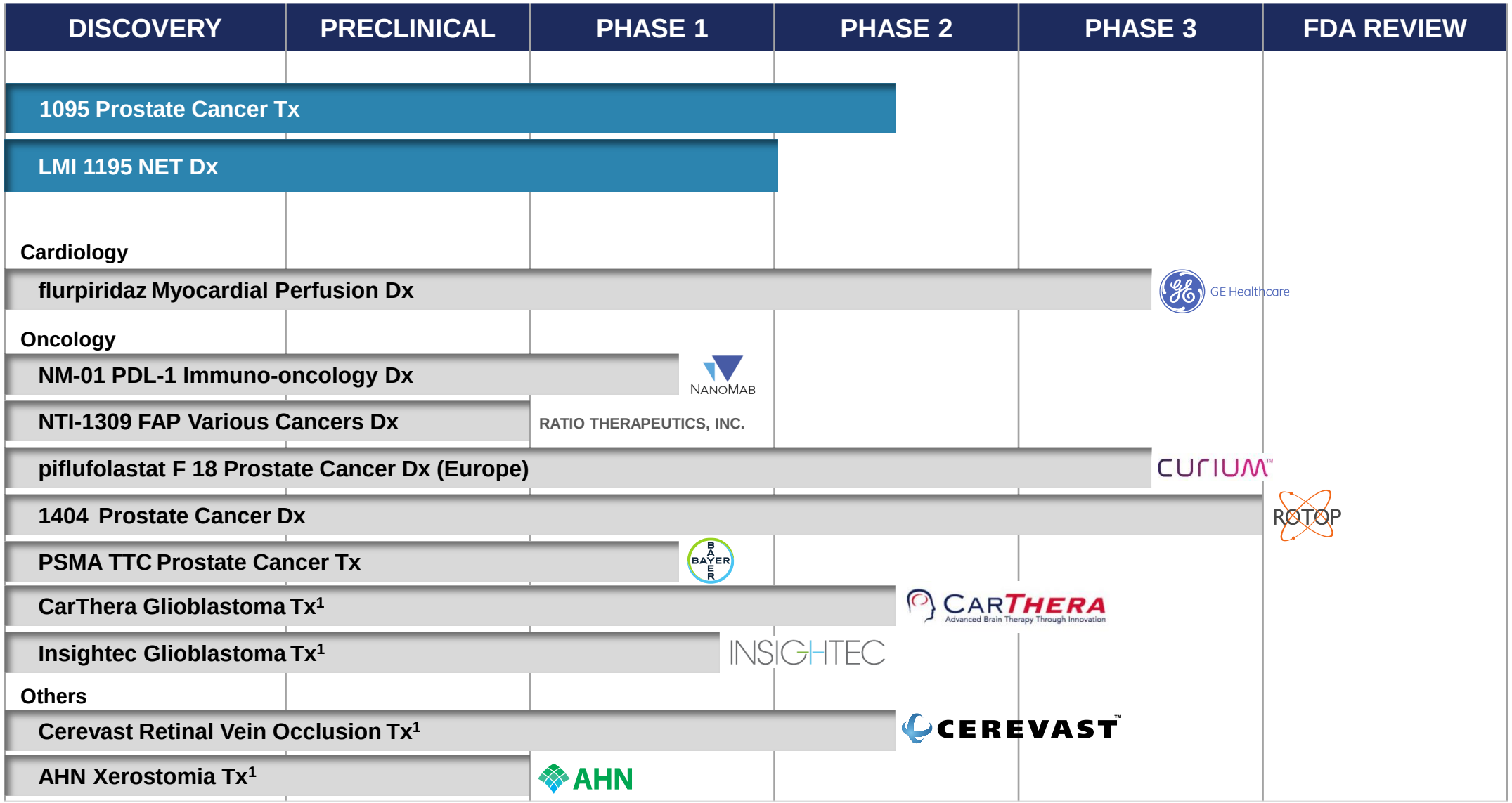
Robust Pipeline with Promising Value Drivers



(1) Using Lantheus microbubble.

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Appendix

Piflufolastat F 18: Progressing Use as a Biomarker in Prostate Cancer Therapeutic Trials

Ongoing Clinical Trials

POINT BIOPHARMA	Phase 3 Pivotal Trial	• Lutetium-labeled PSMA agent in patients with mCRPC
REGENERON	Phase 1 Trial	• PSMAxCD28 bispecific antibody in combination with cemiplimab (PD-1 inhibitor) in patients with mCRPC
	Phase 1/2 Trial	• PSMAxCD3 bispecific antibody in combination with cemiplimab in patients with mCRPC
BAYER	Phase 1 Trial	• Thorium-labeled PSMA antibody in patients with mCRPC
Lantheus FIND > FIGHT > FOLLOW™	Phase 2 Trial	• Iodine-labeled PSMA agent (1095) in patients with mCRPC

Piflufolastat F 18 used to assess PSMA expression levels in clinical trials for prostate cancer therapeutics

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Strategic Partnerships Across Our Portfolio

Oncology

piflufolastat F 18

REGENERON

BAYER

POINT BIOPHARMA

CURIUM™

reflexion

1404

ROTOP

PSMA TTC

BAYER

aBSI

GE Healthcare

Biomarker

RATIO THERAPEUTICS, INC.

NANOMAB

Microbubble

CEREVAST™

INSIGHTEC®

CARTHERA
Advanced Brain Therapy Through Innovation

AHN

RELISTOR

BAUSCH+ Health

flurpiridaz F18

GE Healthcare

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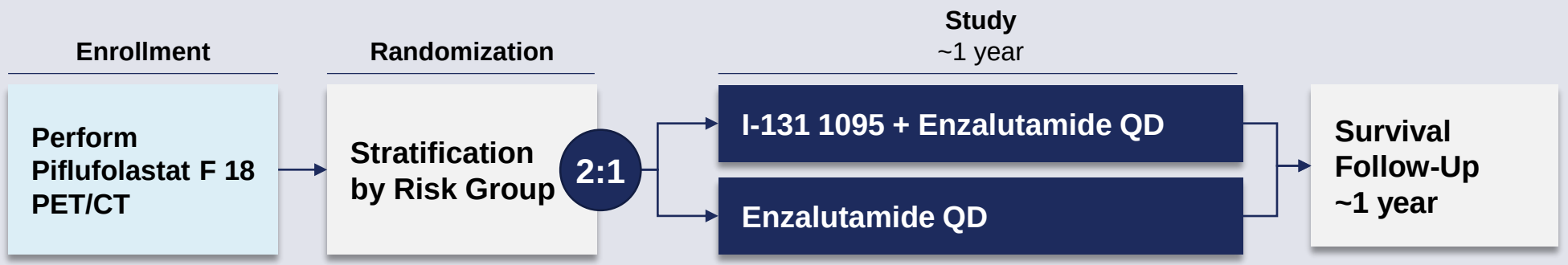
1095 Phase 2 Trial Progressing

PSMA-targeted small molecule therapeutic for metastatic castration-resistant prostate cancer (mCRPC)

PSMA-targeted iodine-131 labeled small molecule that is designed to deliver beta radiation directly to prostate cancer cells with minimal impact on the surrounding healthy tissues

ARROW
Phase 2 Study

25 clinical sites in the U.S. and Canada support enrollment for our multicenter, randomized, controlled study



Data from proof-of-concept trial will be used to determine next steps in the development plan for 1095

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U.S. Approved Products

aBSI
AUTOMATED BONE SCAN INDEX

aPROMISE

AZEDRA®
iobenguane I 131 injection for intravenous use

Cardiolite®
Kit for the Preparation of
Technetium Tc99m Sestamibi for Injection

DEFINITY®
VIAL FOR (Perflutren Lipid Microsphere)
INJECTABLE SUSPENSION

DEFINITY RT
(Perflutren Lipid Microsphere)
INJECTABLE SUSPENSION

Gallium
Gallium Citrate
Ga 67 Injection

NEUROLITE®
Kit for the Preparation of Technetium
Tc 99m Bicisate for Injection

PYLARIFY®
Piflufolastat F 18 Injection

QUADRAMET®
(SAMARIUM SM 153 LEXIDRONAM INJECTION)

RELISTOR®
methylnaltrexone bromide

TechneLite®
Technetium Tc 99m
Generator

Thallium
Thallous Chloride
Tl 201 Injection

Xenon
Xe 133 Gas

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PYLARIFY: Strong Diagnostic Performance Across the Prostate Cancer Disease Continuum

CONDOR Study

Diagnostic Performance of ^{18}F-DCFPyL-PET/CT in Men with Biochemically Recurrent Prostate Cancer: Results from the CONDOR Phase 3, Multicenter Study

OSPREY Study

A Phase 2/3 Prospective Multicenter Study of Diagnostic Accuracy of Prostate-Specific Membrane Antigen PET/CT with ^{18}F-DCFPyL in Prostate Cancer Patients (OSPREY)

PYLARIFY Pivotal Studies

CONDOR

OSPREY

~600 subjects

PYLARIFY NDA

Two pivotal trials supported the approval of the NDA which was granted Priority Review

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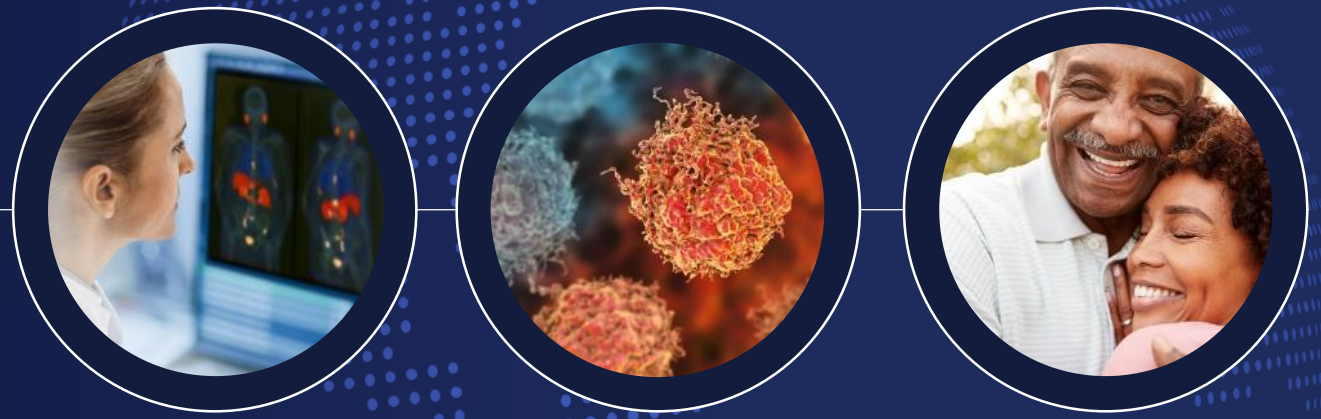

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