Oncoinvent

Innovative locally acting alpha-emitter technology

Lead Product Candidate: Radspherin®
for Peritoneal Carcinomatosis (PC)

Backed by Hadean Ventures & several high-value Family Offices in Norway, Europe

Oncoinvent: Differentiated, clinical stage radiopharma in multi billion market opportunity

1. **Clinical stage opportunity in a rising market segment**
   Oncoinvent is currently amongst most clinically advanced radiopharma company after several big pharma M&As
2. **Unique radiopharmaceutical expertise at all levels of the company**
   Founders, board members and management of Oncoinvent have a proven track record of developing a radiopharmaceutical asset and bringing it to market (Xofigo®).
3. **Multi billion market opportunity in high unmet medical need indication**
   The target area of Peritoneal Carcinomatosis can originate from several cancer types, and there exists a large patient population with a high unmet need.
4. **Pipeline in a product**
   Significant potential for this locally acting, receptor-independent, alpha-emitter therapy, applicable in many different cancer types.
5. **Alpha-emitter with potential for Standard of Care status**
   Radspherin® has the possibility to become standard of care for Peritoneal Carcinomatosis stemming from an array of different cancer types.

Radiopharmaceutical Expertise at all Levels

Management

Anders Månsson
CEO

FERRING PHARMACEUTICALS
LEO

Gro Hjellum
COO

BAYER
GE
ALGETA

Anne-Kirsti Aksnes
CCO

ALGETA
targovax

Kari Myren
CMO

NOVARTIS
Roche

Tore Kvam
CFO

KPMG
Gjensidige

Gillies O'Bryan-Tear
Chair

Ingrid Teigland Akay
Board Member

Hilde Steineger
Board Member

Kari Grønås
Board Member

Orlando Oliveira
Board Member

Anne Cecilie Alvik
Employee Rep.

Board

Roy Larsen
Scientific Founder & Advisor

Øyvind Bruland
Scientific Founder & Advisor

Scientific Founders

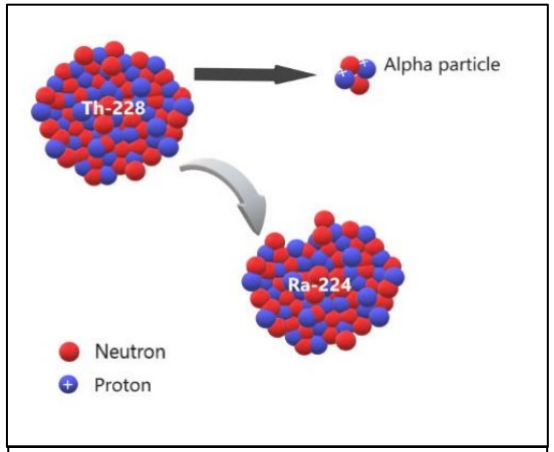
ALGETA
ARTBIO

Full BIOs available at:

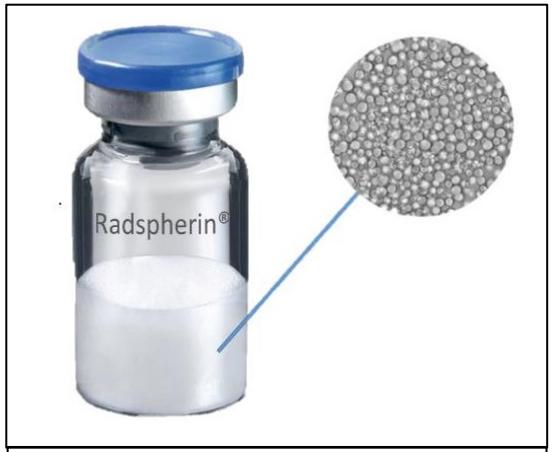
www.oncoinvent.com

In-house Production at GMP Facility

Oncoinvent has in-house GMP Production Capability



^{224}Ra produced from ^{228}Th, which has multiple sources



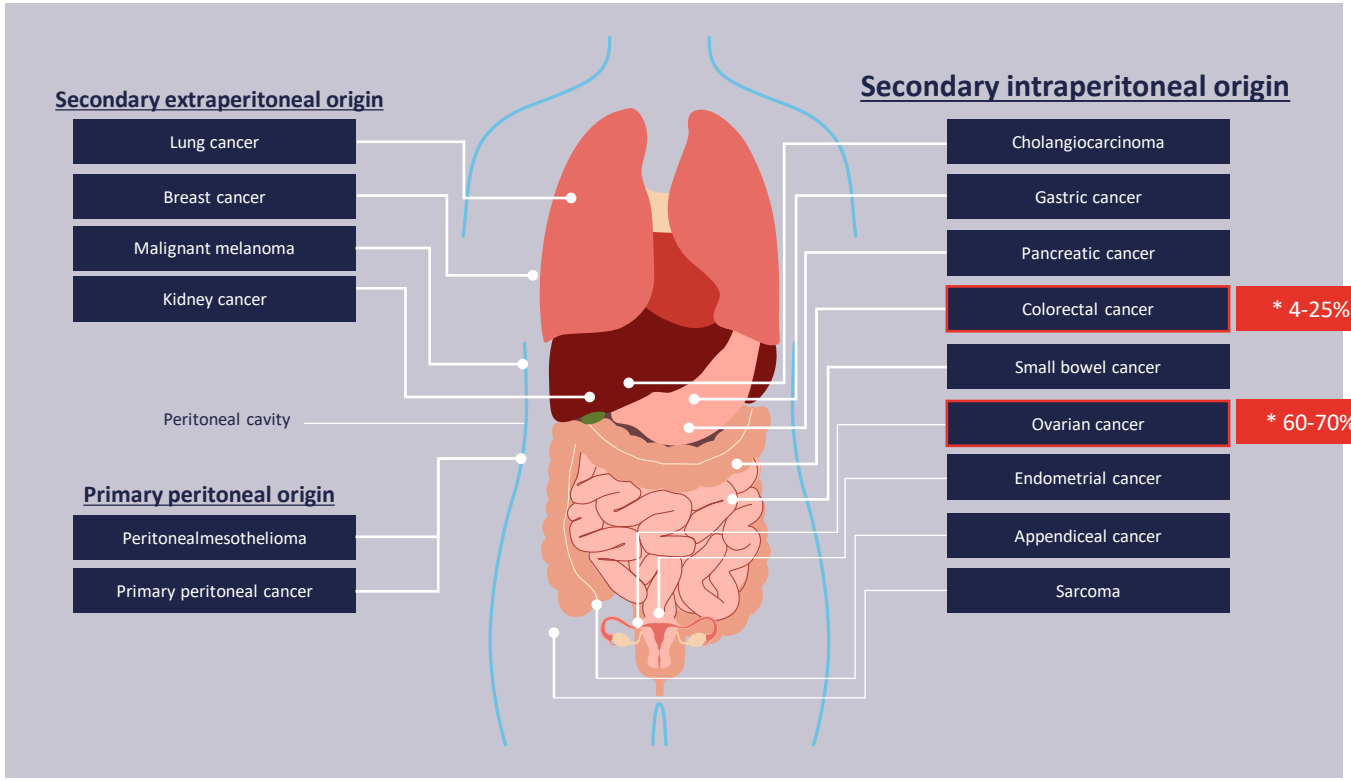
Microparticles and finished goods produced in-house

Current GMP facility can support the Clinical Phase 2b program. Outsourcing and scale-up required for Phase 3.

Target Area - Peritoneal Carcinomatosis (PC)

- Many underlying cancers types
- Peritoneal Metastases common at diagnosis*
- Cytoreductive Surgery is Standard of Care
- Considerable Patient Population
- No approved specific treatment
- High Unmet Medical Need

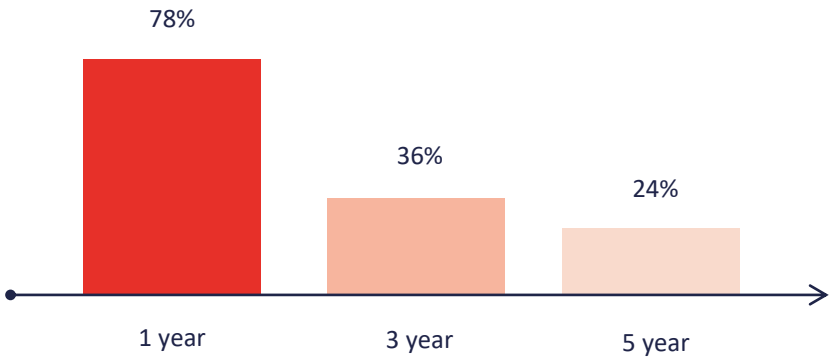
- **Significant Market Potential**



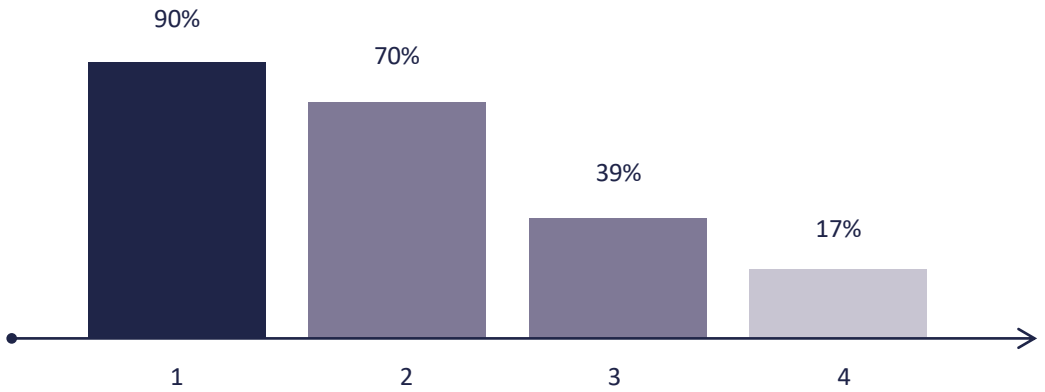
Cortés-Guiral et al. Nat Rev Dis Primers. 2021 Dec 16;7(1):91
Kranenburg et al. Front Oncol. 2021 Mar 16;11:650098

High Unmet Medical Need

Long-term survival rates of patients with PC of colorectal origin[1]



Five-year survival rates in ovarian cancer[2] by disease stage



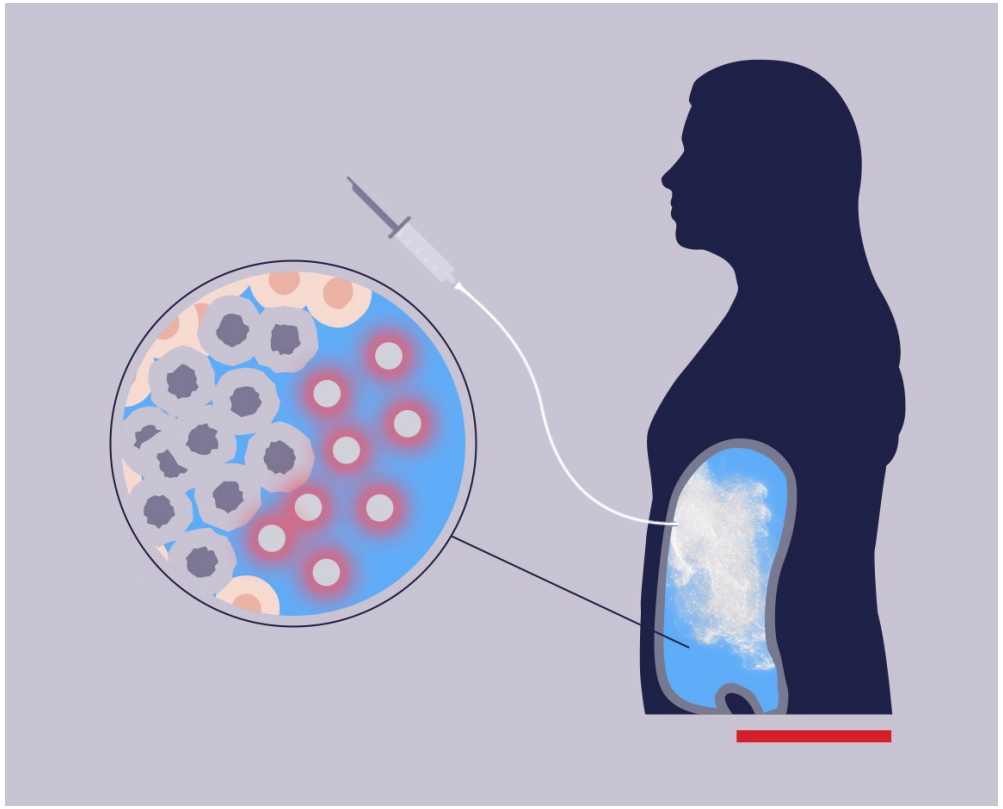
"Historically, the survival rate for **gastric carcinoma** patients with peritoneal carcinomatosis has been poor, ranging **from 2.2 to 8.8 months and no survival at 5 years."** [3]

1 source: https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4655111/
2 source: http://www.cancer.org/cancer/ovariancancer/detailedguide/ovarian-cancer-survival-rates
3 source: Cytoreductive Surgery and Hyperthermic Intraperitoneal Chemotherapy for Gastric Cancer - PMC (nih.gov)

Clinical Administration of Radspherin®

- Radspherin® is shipped as dispersion of microparticles in a vial
- Single Dose Administration of 7 Mbq through standard catheter 1-3 days after surgery to eradicate micro metastases
- No incremental invasiveness or hospitalization
- Can be administered bed-side
- No special precautions

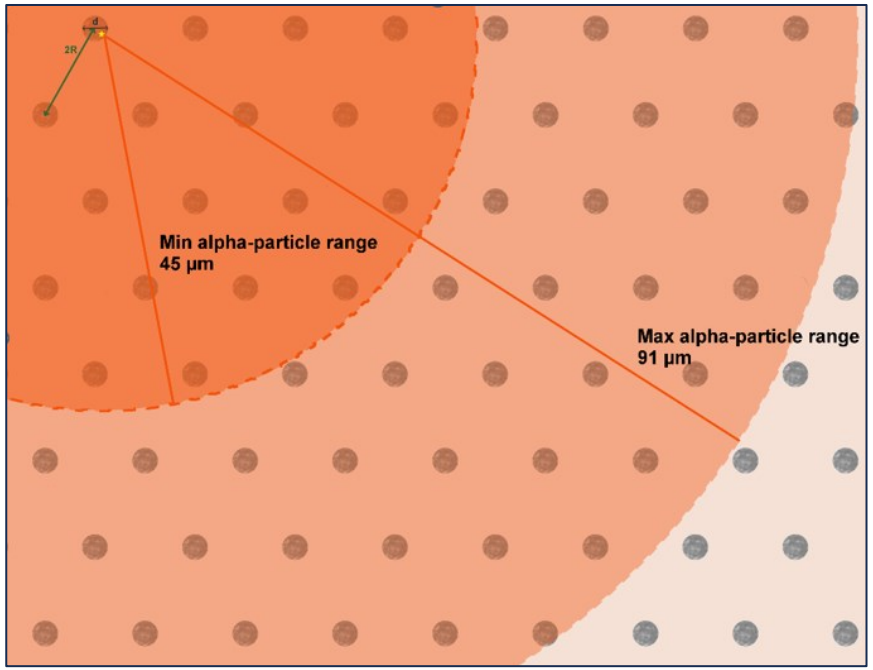
- **Easy-to-use, non-invasive, alpha-emitting radiotherapy with local administration**



^{224}Ra alpha-emitter ideal for large body cavity surfaces

- **High Radiation Energy** – Effectively treating a large body cavity with minimal exposure to other organs
- **Shallow Radiation Depth** – Limited collateral tissue damage
- **Convenient half-life** – A 3.6-day half-life means that Radspherin® can have ca. 10 days of clinically effective radiation and up to 8 days shelf life
- **Receptor Independence** – No cell specific target needed
- **Microparticle Depot** – Retains radiation, $CaCO_3$ microparticles naturally absorbed once radiation has reached sub-clinical levels

- **Alpha-radiation is highly effective, yet short-range in tissue. Ideal for large body cavity surfaces**



Alpha particles are high energy but only reach about 0.1 mm in tissue

Radspherin® - 68 patients treated in two indications

- Phase 1/2a fully recruited and first interim readout completed

- Two Phase 1/2a studies - assessing dose, safety and tolerability, dosimetry and signal of efficacy of intraperitoneal Radspherin®

RAD-18-001: Ovarian/fallopian tube cancer	• Oslo/Norway(PI: Yun Wang) • Leuven, Belgium (PI: Els van Nieuwenhuysen/Ignace Vergote) • Madrid/Pamplona, Spain (PI: Luis Chiva)
RAD-18-002: Colorectal carcinoma	• Oslo, Norway (PI: Stein Larsen) • Uppsala, Sweden (PI: Wilhelm Graf)

For both studies, dose escalation is completed and the highest dose of 7 MBq selected, recruitment completed Q4-23 – 68 patients treated in total. Continued stream of follow-up data.

Radspherin® is safe and well tolerated – reduced radiation exposure to organs vs systemic treatment

Well tolerated and considered safe to use	• So far, in patients that have finished the follow up period, no dose limiting toxicities were observed, no deaths, **no serious adverse events related to Radspherin®**, and no discontinuations due to adverse events were reported
Clinically relevant dose determined	• **7 MBq** dose determined to be safe. **Single-dosing!**
Biodistribution measured	• 80% of radioactivity dose remains in the peritoneal cavity • **Absorbed doses to other organs way below those associated with any toxicity, advantage over systemic treatment**
Good safety profile for hospital staff	• Low amount of activity in blood and urine • **No precautions related to external exposure required**

Absorbed Radiation Doses to Normal Organs are low

- Calculated doses well below known limiting thresholds

- None of the patients received absorbed doses higher than 1 Gy* for any normal organ
  - Biokinetic modelling resulted in highest uptake values for bone, blood, kidneys and liver
  - Highest absorbed doses to organs at risk for osteogenic cells (mean value 0.55 Gy*/7MBq), followed by liver, red marrow and kidneys (mean value ≤0.1 Gy*/7MBq)
  - No signs of hematological depression or negative effects on kidney or liver function observed in clinical studies

Tissue	Normal tissue tolerance for standardly fractionated external beam radiotherapy	**Corresponding administered activity of Radspherin (MBq)**
Colon	< 11 Gy‡	**>3 000**
Small intestine	≤ 15 Gy¶	**>4 000**
Stomach	≤ 45 Gy¶	**>10 000**
Liver	≤ 30 Gy¶	**>400**
Kidney	< 20 Gy¶	**>300**
	Threshold for possible major hematotoxicity§	
Red marrow	≤ 2 Gy§	**~30**

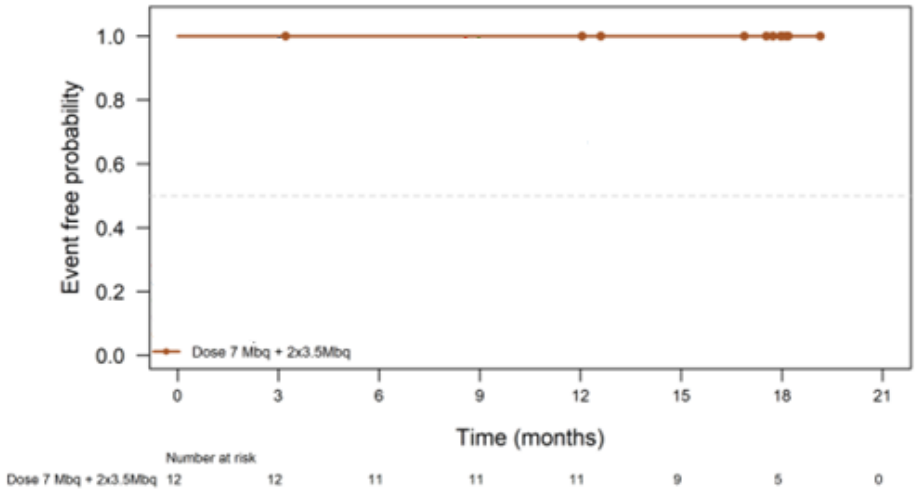
¶From clinical experience with standardly fractionated external beam radiation therapy, Emami et al. 2013, QUANTEC group review
‡ From SBRT, Emami et al. 2013.
§ Hobbs, R.F., et al., A bone marrow toxicity model for ^{223}Ra alpha-emitter radiopharmaceutical therapy. Phys Med Biol, 2012. 57: p. 3207-22.

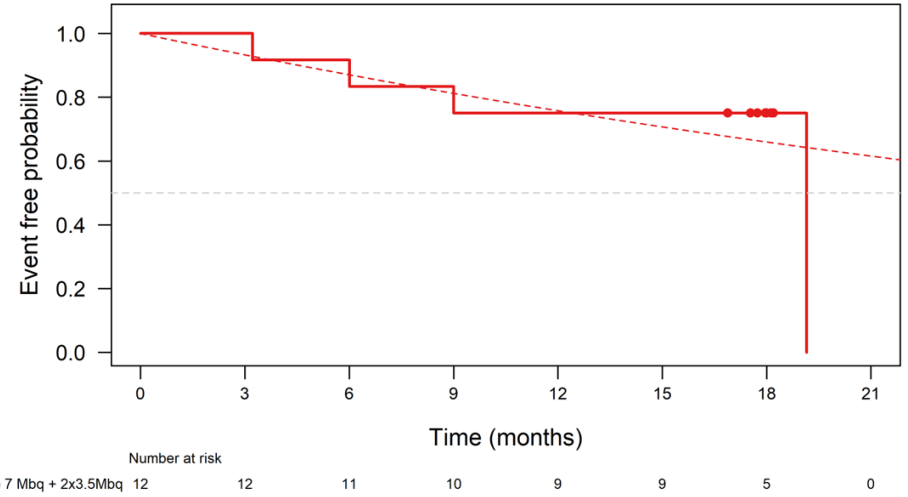
**To compare doses from alpha-radiation and external beam radiotherapy or beta-radiation head-to-head, a relative biological effectiveness (RBE) factor of 5 must be used for alpha-radiation.*

Efficacy - Data indicates substantial DFS Improvement

- Interim efficacy analysis phase 1/2a in CRC (n=22 all dose levels)

Disease-free survival at 18 months with 7 MBq Radspherin® in combination with SOC was 67 % (n=12)

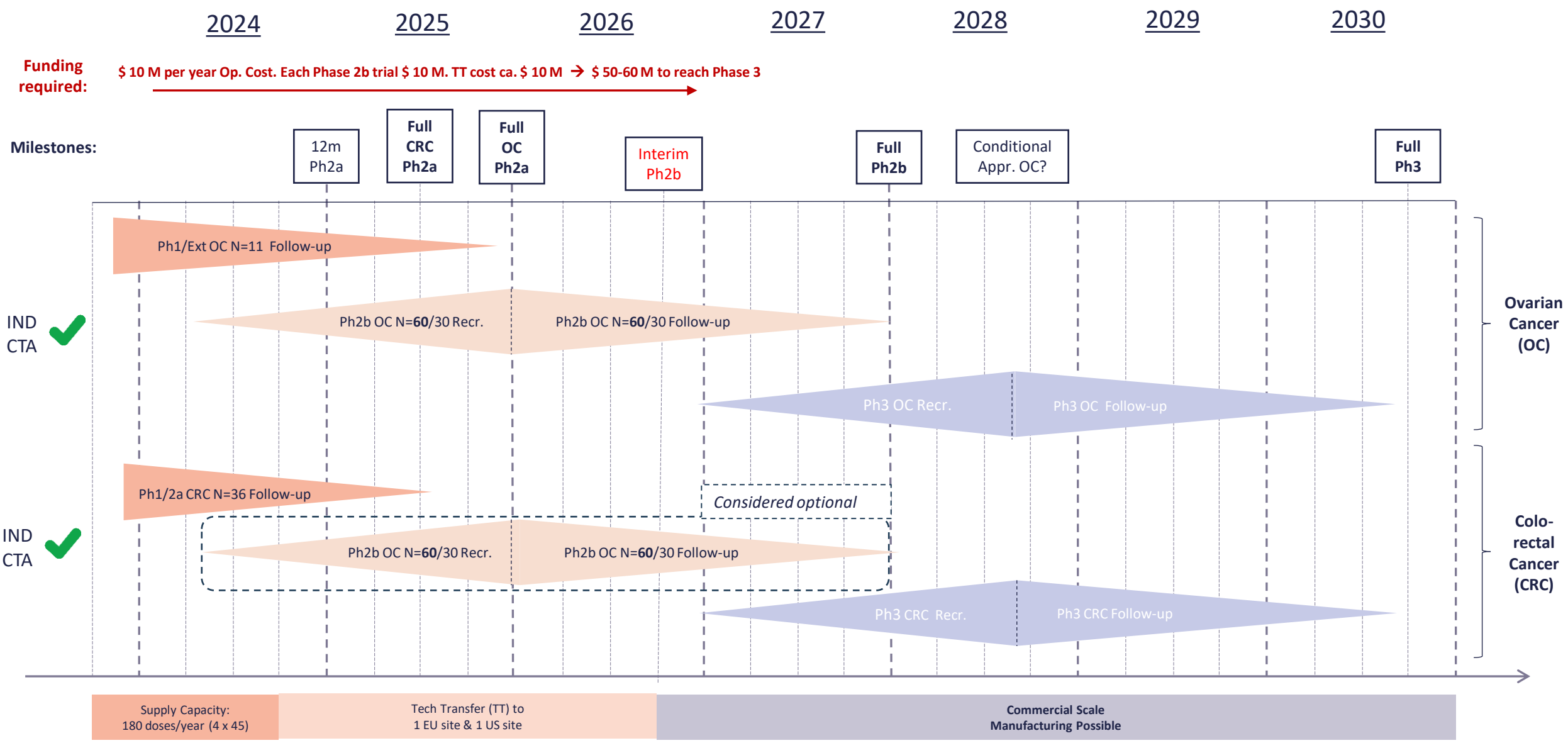




Local disease-free survival: No local recurrencies

Overall disease-free survival with dotted line corresponding to an **expected median of 30 months (vs. 12 months expected in current SOC).**

18-month safety and efficacy after intraperitoneal treatment with 224Radium-labelled microparticles (Radspherin) after cytoreductive surgery and HIPEC for colorectal peritoneal metastasis, Poster Presentation at PSOGI, October 2023


2024
2025
2026
2027
2028
2029
2030
Funding required:
$ 10 M per year Op. Cost. Each Phase 2b trial $ 10 M. TT cost ca. $ 10 M → $ 50-60 M to reach Phase 3
Milestones:
12m Ph2a
Full CRC Ph2a
Full OC Ph2a
Interim Ph2b
Full Ph2b
Conditional Appr. OC?
Full Ph3
Ph1/Ext OC N=11 Follow-up
IND CTA
Ph2b OC N=60/30 Recr.
Ph2b OC N=60/30 Follow-up
Ph3 OC Recr.
Ph3 OC Follow-up
Ovarian Cancer (OC)
Ph1/2a CRC N=36 Follow-up
Considered optional
IND CTA
Ph2b OC N=60/30 Recr.
Ph2b OC N=60/30 Follow-up
Ph3 CRC Recr.
Ph3 CRC Follow-up
Colo-rectal Cancer (CRC)
Supply Capacity: 180 doses/year (4 x 45)
Tech Transfer (TT) to 1 EU site & 1 US site
Commercial Scale Manufacturing Possible

High addressable patient numbers and unmet medical need

Ovarian Cancer	USA	Europe	Total
Patient Diagnosed (100%)	22,000	63,000	85,000
Peritoneal Mets (75%)	17,000	47,000	64,000
Eligible for Surgery (80%)	13,000	38,000	51,000
Achieve R0 (75%)	**10,000**	**28,000**	**38,000**

Colorectal Cancer	USA	Europe	Total
Patient Diagnosed Stage IV (100%)	39,000	113,000	152,000
Peritoneal Mets (25%)	10,000	28,000	38,000
Eligible for Surgery (90%)	9,000	25,000	34,000
Achieve R0 (90%)	**8,000**	**22,000**	**30,000**

Total Treatments per Year Targeted – ca. 68,000

(in PC from *ovarian* and *colorectal* cancers only, and in the US and Europe only)

Source: Market Research

Addressing a multi billion dollar market opportunity

- Targeted Patient Population: Up to 68,000 eligible patients per year (US & Europe)
- Average Pricing Estimate: $100,000 per treatment (conservative vs. benchmarks)
- **The total addressable market in the US and Europe alone is up to $7 billion**
- It takes a penetration rate of only 15% to reach a billion USD and thereby blockbuster sales levels

Product	PFS Benefit	OS Benefit	Price
Xofigo	N/A	3.6 m	USD 69.000
Lutathera	8.5 m	N/A	USD 190.000
Pluvicto	N/A	4.0 m	USD 255.000

PFS = Progression Free Survival, OS = Overall Survival

- Radspherin® has a targeted PFS improvement of 12 months and is currently trending at 18 months.

Key Intellectual Property

Patent	Priority date	Area covered	Geography
WO2017005648A1	03-July-2015	To provide particles comprising a degradable compound and an α emitting nuclide and/or a radionuclide generating an α emitting daughter nuclide, or a pharmaceutical composition comprising a suspension of the particles	DK NO RS PT PL SI EP ES HU US KR JP AU CA WO MX CN RU BR CN NZ JP
WO2015044218A1	24-Sept.-2013	The present invention relates to a novel anti-CD146 antibody and derivatives thereof. The antibody and/or derivatives can be used for therapy and/or imaging, diagnosis and/or immunostaining.	EP WO DK ES US
WO2018033630A1	19-Aug.-2016	The invention relates to chimeric antigen receptor (CAR) specific to p80 and CD146, vectors encoding the same, and recombinant T cells comprising the p80 or CD146 CAR. The invention also includes methods of administering a genetically modified T cell expressing a CAR that comprises a p80 or CD146 binding domain.	WO

Patent	Priority date	Area covered	Geography
WO2022058337A1	15-Sept.-2020	The present disclosure relates to a particle comprising a degradable compound, a radionuclide, and a phosphorus containing additive. Phosphorus containing additives, such as phosphonates, have the unique ability to control the size of particles for medical applications. The applications allow for use of the particles as medicaments and for imaging, especially within the field of cancer.	WO
WO2022058338A1	15-Sept.-2020	The present invention related to a combination of radium-224 (224Ra) and/or progeny of 224Ra, and a DNA repair inhibitor for use in the treatment of cancer. The DNA repair inhibitor can for example be a poly (ADP-ribose) polymerase inhibitor (PARPi), a MGMT inhibitor, a DNA-dependent protein kinase inhibitor (DNA-PK inhibitor), an ataxia telangiectasia and Rad3-related (ATR) kinase inhibitor, an ataxia telangiectasia mutated (ATM) kinase inhibitor, a Wee1 kinase inhibitor, or a checkpoint kinase 1 and 2 (CHK1/2) inhibitor. The radium-224 (224Ra) and/or progeny of 224Ra can be comprised in nano- and/or micro sized particles.	WO

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