(NASDAQ:DRTS)

Revolutionary Alpha-Emitters Radiotherapy

KOL Investor Event

July 18, 2022

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Today's Presenters

Raphi Levy
CFO
Alpha Tau

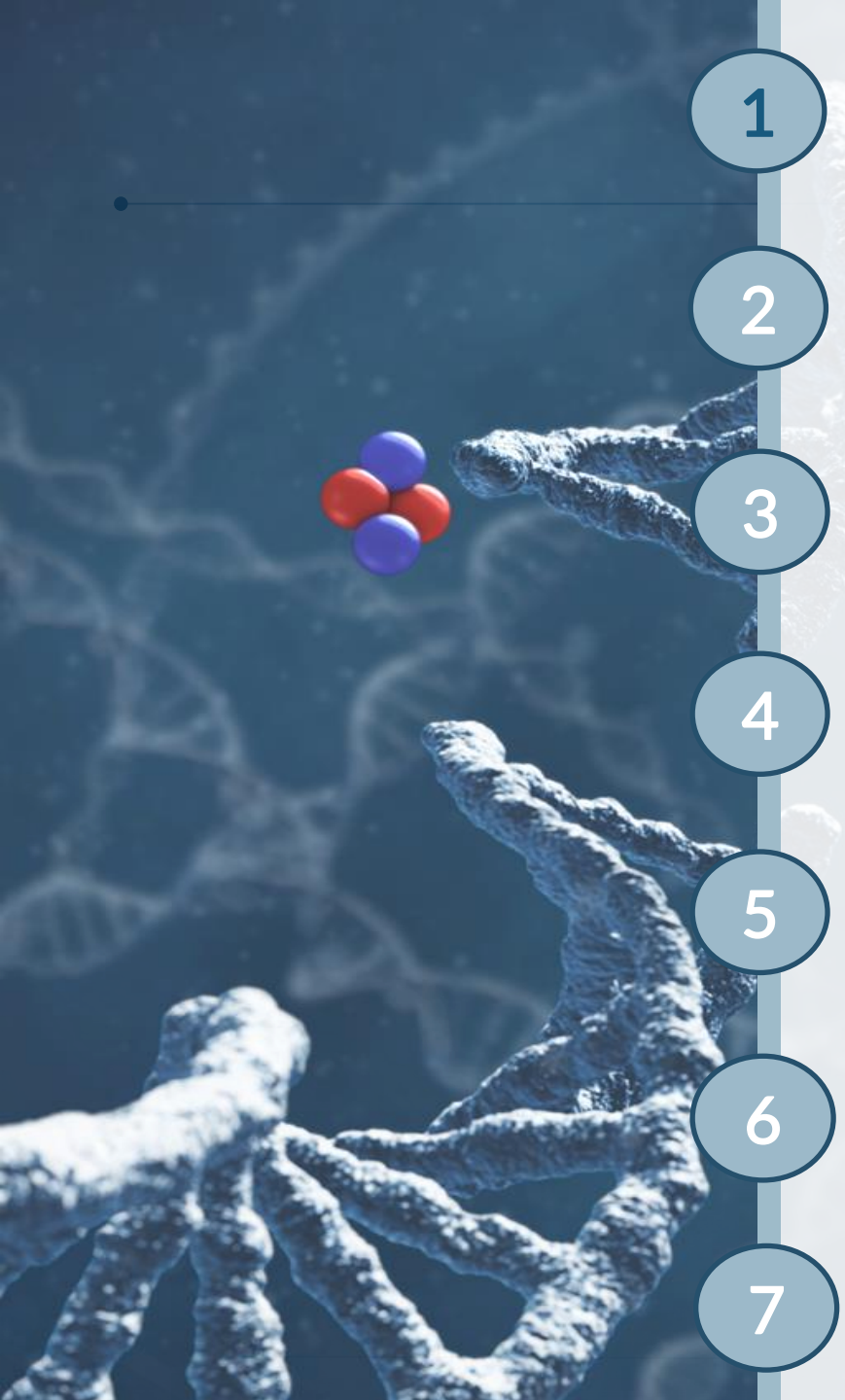
Dr. Robert Den
Radiation Oncologist
Alpha Tau Chief Medical Officer

Prof. Michael J. Zelefsky
Radiation Oncologist
Memorial Sloan Kettering Cancer Center
Alpha Tau Scientific Advisory Board

Dr. Marc D'Andrea
Radiation Oncologist
University Cancer Centers

AGENDA

1	Intro to Alpha Tau *Raphi Levy, CFO*	11:00 – 11:15
	Systemic Effect	
2	Overview of Potential Systemic Effect *Dr. Robert Den, CMO*	11:15 – 11:25
	Local Effect	
3	Results from Previous Clinical Studies *Dr. Michael Zelefsky, Memorial Sloan Kettering Cancer Center*	11:25 – 11:40
4	User Experience & Selected Case Studies *Dr. Mark D'Andrea, University Cancer Centers*	11:40 – 11:55
5	Upcoming Clinical Studies, Including US Pivotal Study *Dr. Robert Den, CMO*	11:55 – 12:15
	Closing Remarks	
6	Future Outlook *Raphi Levy, CFO*	12:15 – 12:20
7	Q & A	12:20 +



Intro to Alpha Tau

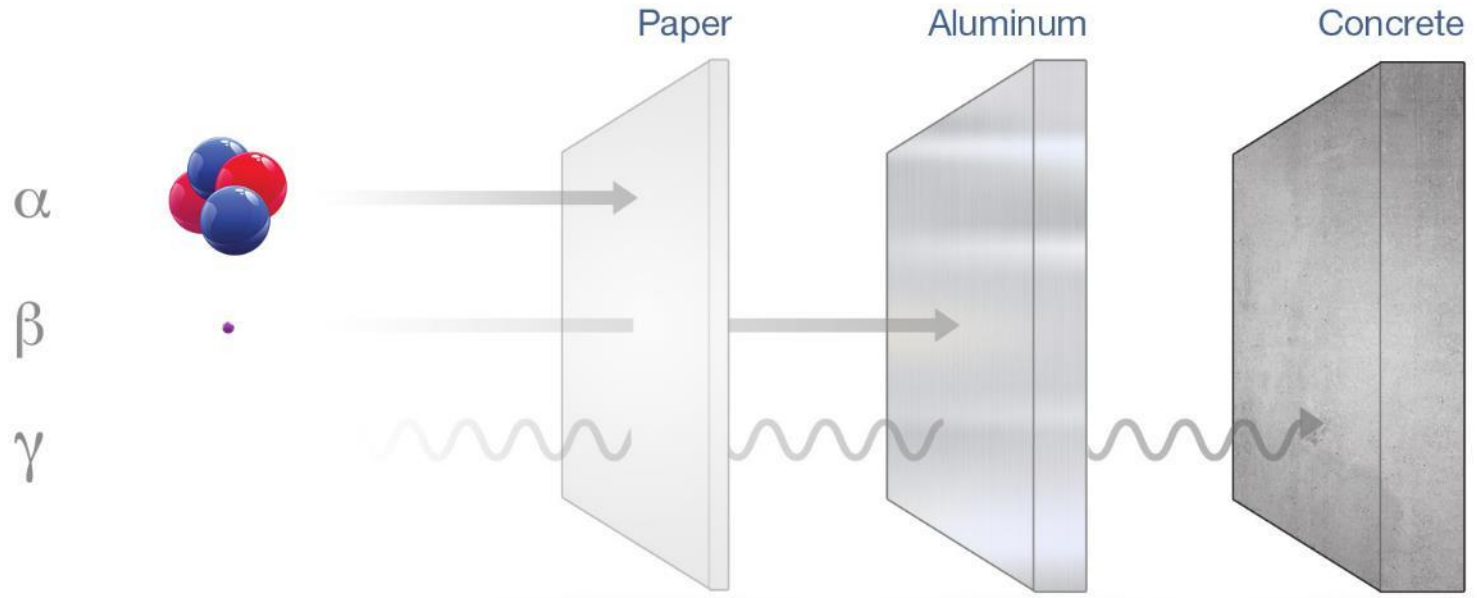
Raphi Levy, CFO

Alpha Tau – Key Investment Highlights

1. Proprietary Alpha DaRT designed to safely deliver alpha radiation with localized precision in solid tumors, sparing surrounding healthy tissue
2. Broad potential and preclinical evidence supporting evaluation across various solid tumors (skin, pancreas, breast, GBM, etc.) with 18 peer-reviewed pre-clinical papers
3. Compelling potential immuno-stimulatory effect and synergetic combination with other therapies
4. Exhibited 100% ORR and ~78% CR in first-in-human clinical trial in 28 SCC tumors. Over 100 superficial tumors treated to date, with a similar profile observed. 100% CR seen at 12 weeks in 1st US study
5. Favorable safety profile observed, no systemic toxicities
6. Robust clinical-trial strategy with leading global centers, with U.S. pivotal study forthcoming in recurrent cutaneous SCC. Two FDA Breakthrough Device Designations (skin & GBM)
7. Solid logistics based on purpose-built manufacturing facilities, built or in planning, in the US, Israel and Asia, with a highly scalable and optimized proprietary production process
8. Strong intellectual property (method and device) with over 160 issued and pending patents worldwide
9. Experienced management team, including Alpha DaRT's co-inventors, with expertise in oncology development, manufacturing scale up and commercialization

Types of Radioactive Decay

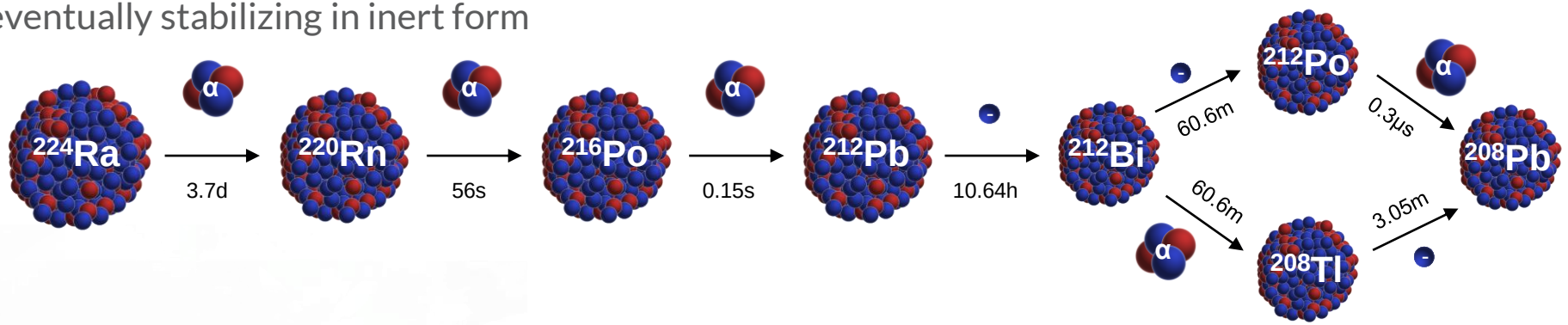
Due to the mass of the alpha particle, in comparison to beta particle, alpha has a low penetration power. This means that the outside layer of the human skin, for example, can block these particles.



Mechanism of Action of the Alpha DaRT Technology

^{224}Ra Decay Chain

- Alpha DaRT leverages the innate decay chain of Radium-224
- The decay chain of Radium-224 includes four alpha particles
- Radium-224 has a half-life of ~3.7 days, while the remaining decay chain has a total half-life of approximately 12 hours, before eventually stabilizing in inert form



Alpha DaRT

- The Alpha DaRT utilizes stainless steel sources that are impregnated with Radium-224
- The source is designed such that when injected into the tumor, the radium remains attached to the source while its daughter atoms detach, emitting cytotoxic alpha particle payloads as they move deeper into the tumor until stabilizing

Alpha DaRT is designed to overcome the range limitations of alpha particles through precise release of alpha emitters into the tumor, generating a potent and tight distribution of alpha radiation

Alpha DaRT - Diffusing Alpha-emitters Radiation Therapy

https://www.youtube.com/watch?v=nwfzJHm0fTQ

Intra-tumoral Delivery Methods

We Have a Total of Seven Applicators Which Have Been Developed for a Range of Potential Uses to Accommodate for:

Treatment Delivery Method

Duration of Implantation

Tumor Location

Our Applicators Allow Us Flexibility to Deliver Alpha DaRTs Into Both Superficial and Internal Tumors

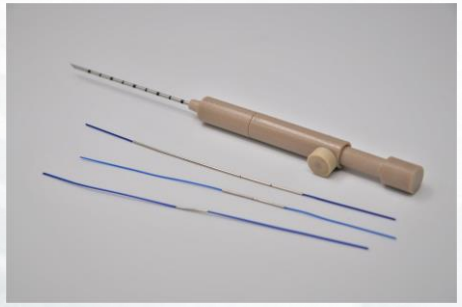
Temporary Implants (Superficial Tumors)

Applicators are supplied preloaded, sealed and designed for immediate use in the procedure room

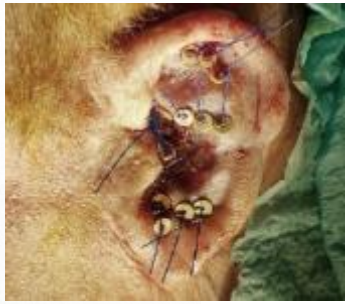
Sources are hollow and strung onto a surgical suture, allowing the clinician to insert the sources into the tumor and leave the suture in place

Example Indication: Superficial Tumors. *sources are affixed to a biocompatible suture and loaded inside the needle*

Alpha DaRT Needle Applicator



Needle Applicator in Action

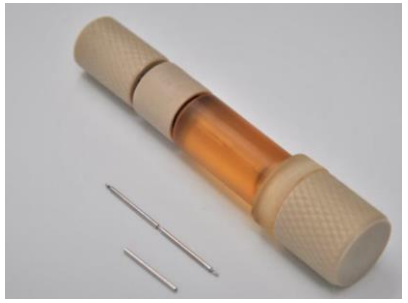


Permanent Implants (Internal Tumors)

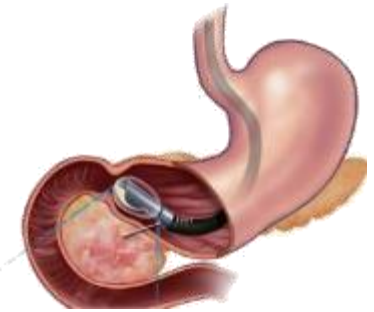
Applicators are supplied preloaded or unloaded, and are designed to allow clinicians flexibility to load the sources in the course of treatment and to select how many sources to deliver

Example Indication: Pancreatic Tumors. *Device is designed to be fitted to existing needles such as standard Fine Needle Aspirator (FNA) to ultimately deliver sources into the tumor*

Loading Device



Procedure: FNA in Conjunction with Endoscopic Ultrasound



Therapeutic Focus

We are focused on delivering solutions to three markets that we believe would be best served by the unique characteristics of the Alpha DaRT

Localized & Unresectable

- Localized tumors that are not surgical candidates and tumors that recur after surgery and are **resistant to other** therapies, specifically radiotherapy
- Alpha DaRT to be evaluated as **a later line therapy**
- Tumor types include **Skin SCC, H&N SCC and prostate**

High Unmet Need

- Solid tumors that have **standard of care options**
- Alpha DaRT could potentially target **broad patient populations**
- Tumor types include **GBM and pancreatic cancer**

Metastatic

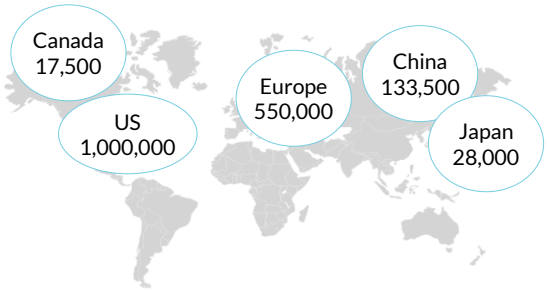
- Alpha DaRT would be evaluated for its potential to induce an **immune response** in **metastatic** tumors
- Alpha DaRT would be evaluated **in combination with check point inhibitors**
- Tumor types include **liver, breast and H&N (Head & Neck)** cancers

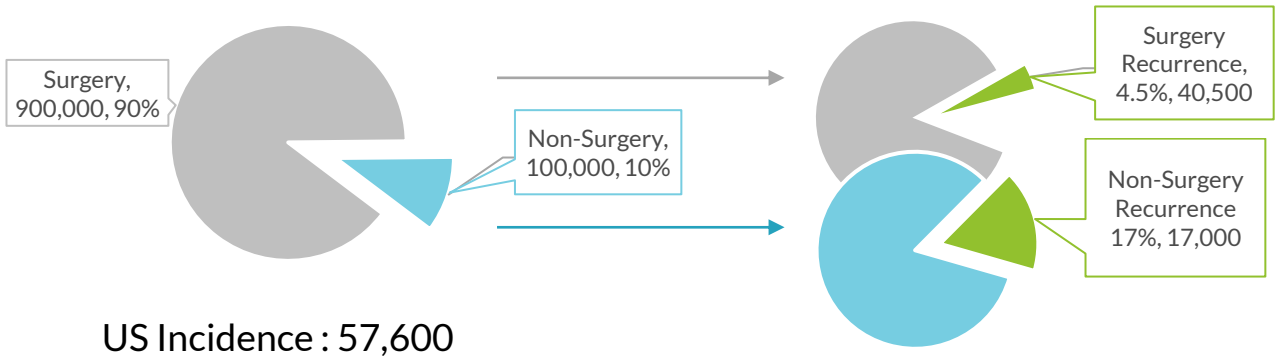
Applicable Market Size – Estimates of Annual Incidence Data

SCC / H&N Annual Incidence

US Incidence: ~1 million

US Applicable Mkt. Size



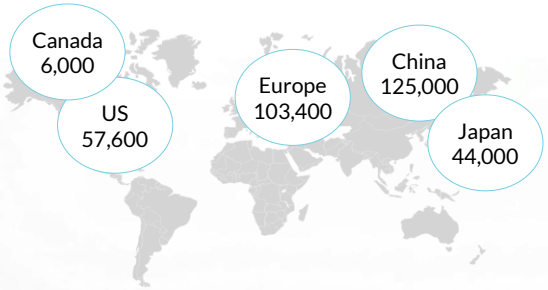


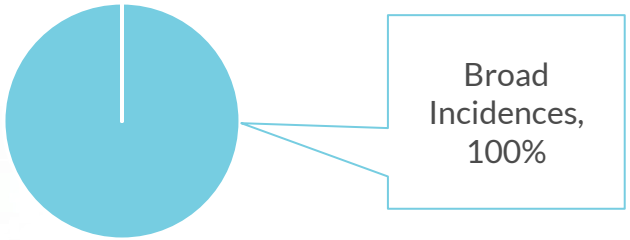
1L: 100,000
2L: 57,500

Pancreas Annual Incidence

US Incidence : 57,600

US Applicable Mkt. Size



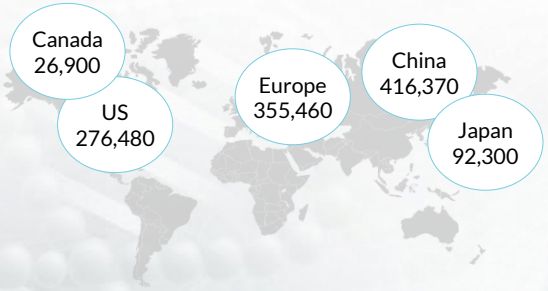


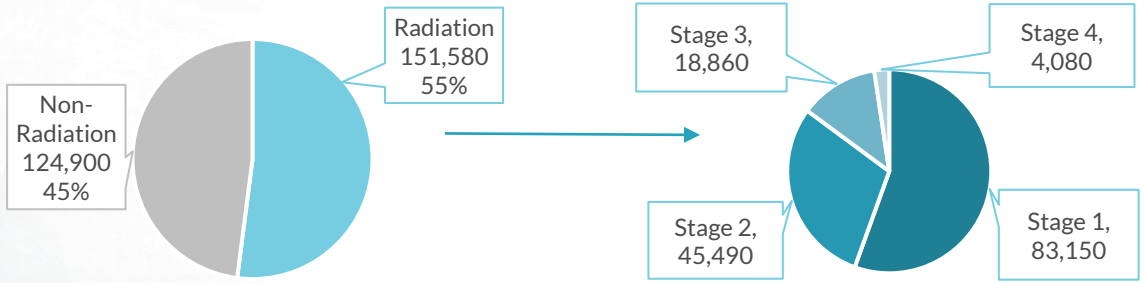
57,600

Breast Annual Incidence

US Incidence : 276,480

US Applicable Mkt. Size



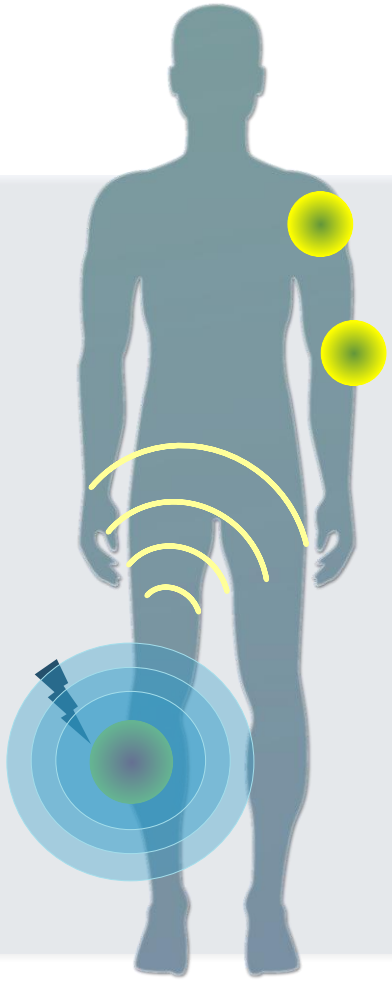


151,580

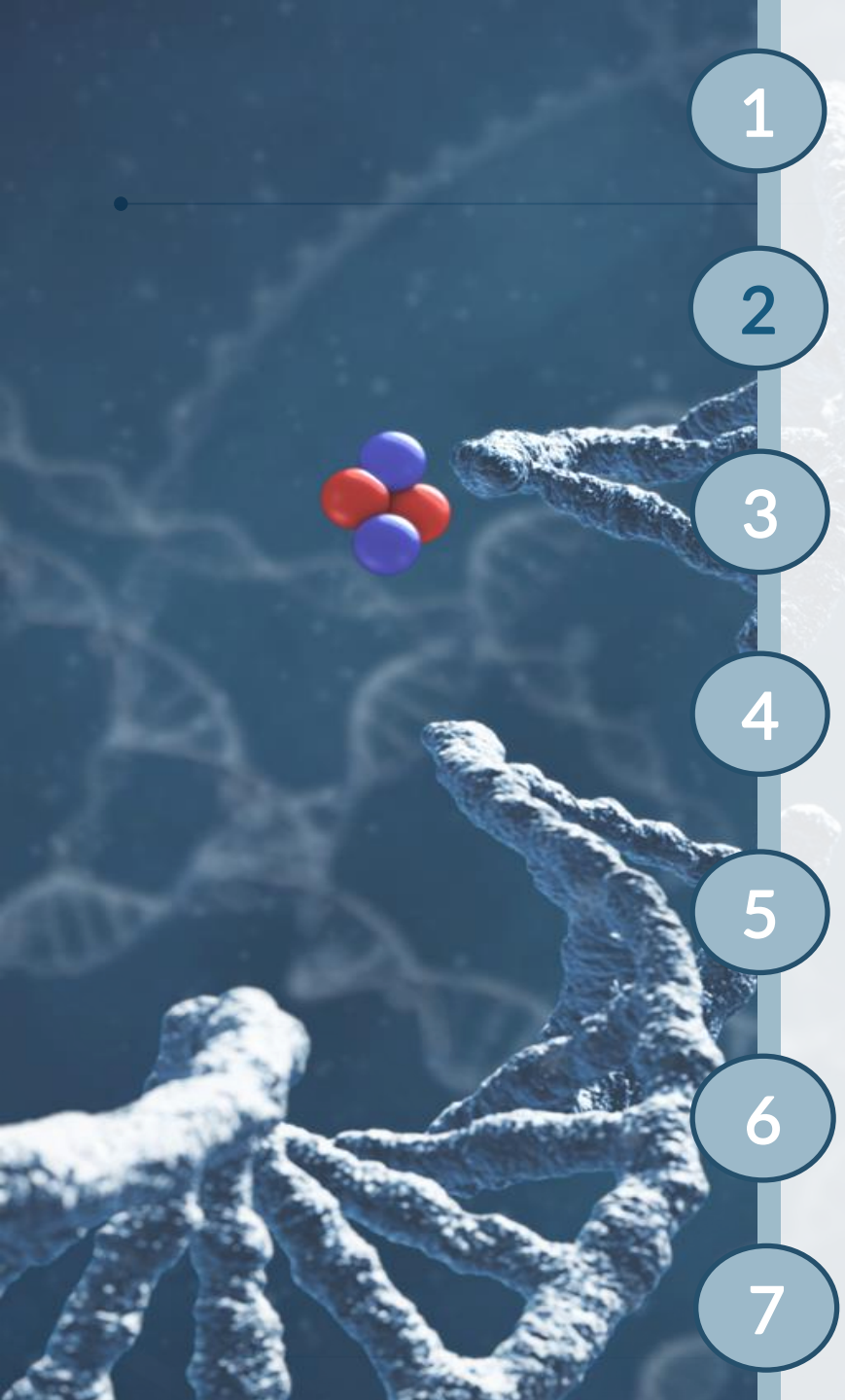
Source: Company estimates based on public industry sources.

Local Control & Immune/Abscopal Effect

LOCAL CONTROL
Dr. Marc D'Andrea &
Prof. Michael Zelefsky



SYSTEMIC EFFECT
Dr. Robert Den



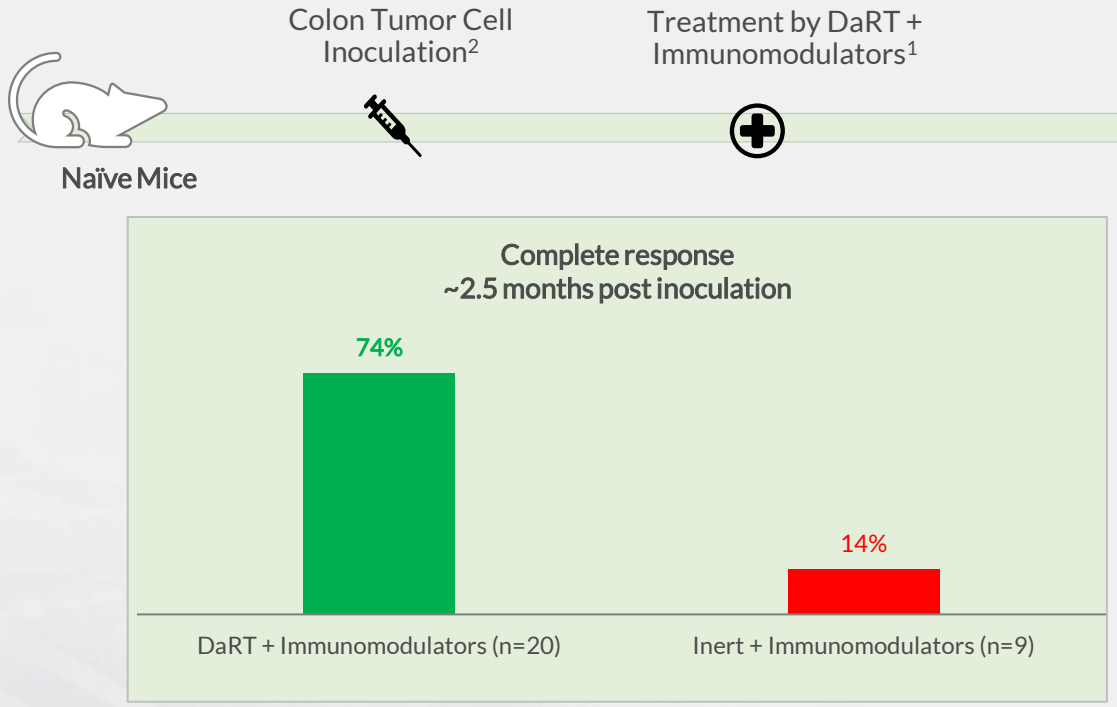
Overview of Potential Systemic Effect

Dr. Robert Den, CMO

Observed Cancer-Specific Immune Protection (1/2)

In challenging mice 4 months after treatment, those previously treated by the Alpha DaRT displayed a meaningful retained protection against regrowth of the same tumor type, as compared to the two control groups

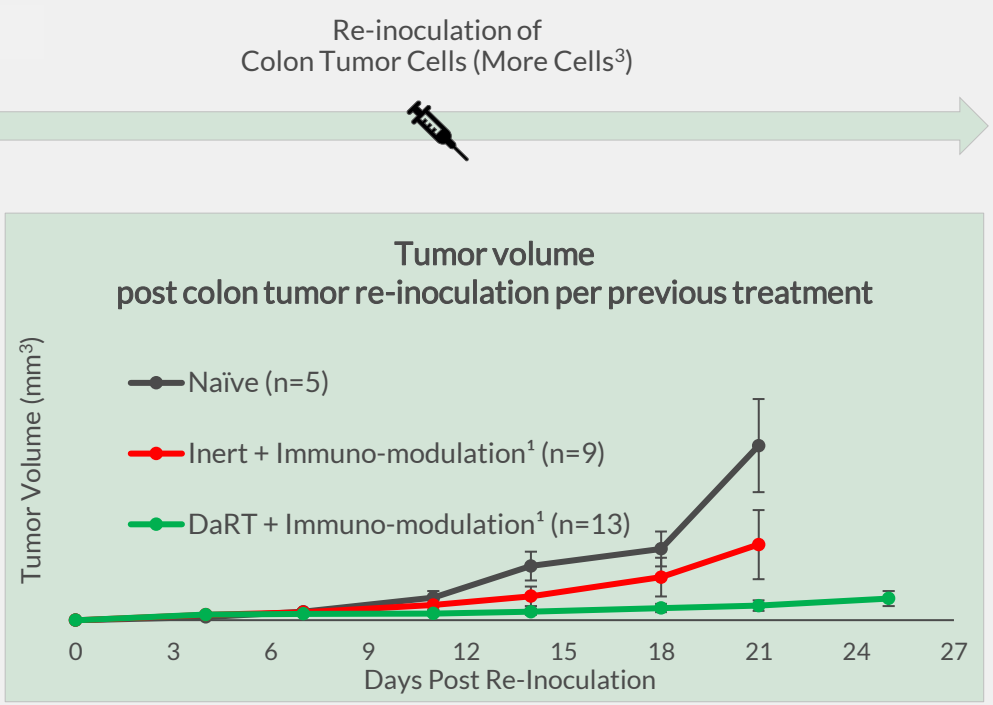
Tumor Treatment by DaRT + Immunomodulators[1]



~ 4 months

CR from Treatment / Surgical Resection

Tumor Re-Inoculation after Treatment by DaRT + Immunomodulators vs. Inert[1]



(1) Three groups of mice were inoculated with 5 x 10^5 CT26 tumor cells and then treated with (1) DaRT + CP, Sildenafil and 2xCpG, N=10 (2) DaRT + CP, Sildenafil and CpG, N=10 or (3) inert + CP, Sildenafil and 2xCpG, N=9. Complete responders or tumor-resected mice were re-challenged ~4 months after DaRT with 5 x 10^6 CT26 tumor cells.
(2) CT26 5 x 10^5.
(3) CT26 5 x 10^6.

Observed Cancer-Specific Immune Protection (2/2)


Combining alpha radiation-based brachytherapy with immunomodulators promotes complete tumor regression in mice via tumor-specific long-term immune response

Vered Domankevich, Adi Cohen, Margalit Efrati, Michael Schmidt, Hans-Georg Rammensee, Sujit S. Nair, Ashutosh Tewari, Itzhak Kelson & Yona Keisari

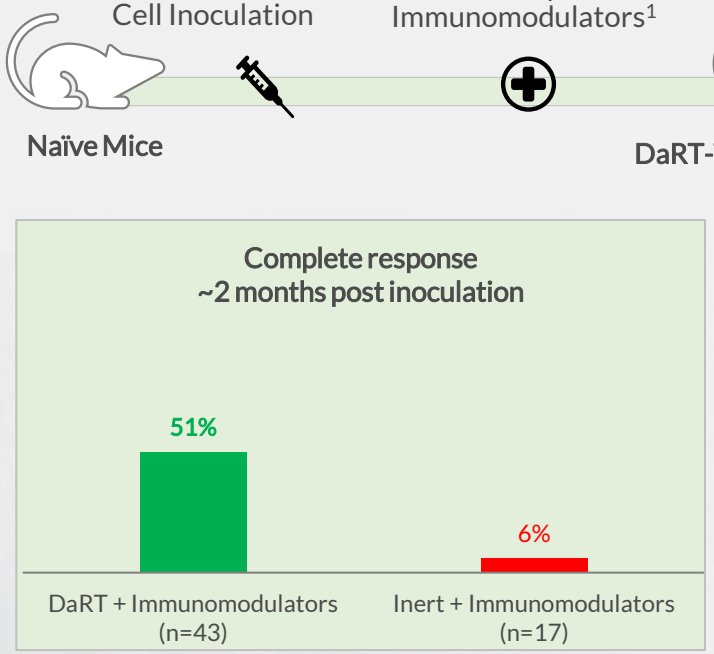
This activity was then shown to be tumor-specific – the challenge only resisted regrowth of the same tumor line. It was also shown to be transferrable via the transfer of splenocytes

Tumor Treatment by DaRT + Immunomodulators

Colon[3] Tumor Cell Inoculation

Treatment by DaRT + Immunomodulators[1]

Naïve Mice

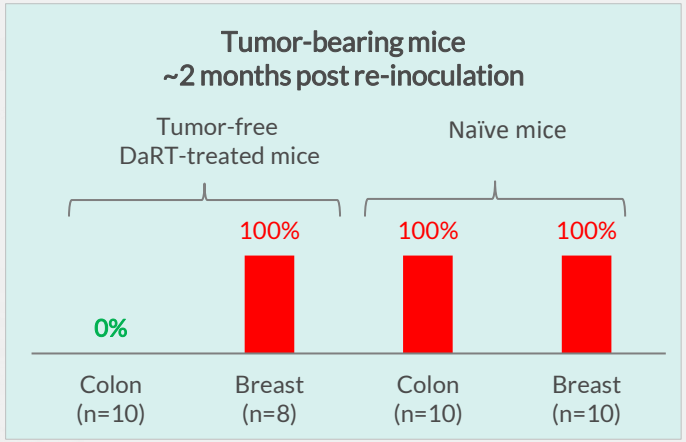


Tumor Re-Inoculation[2] (Challenge Assay)

DaRT-Treated Tumor-free + Naïve Mice

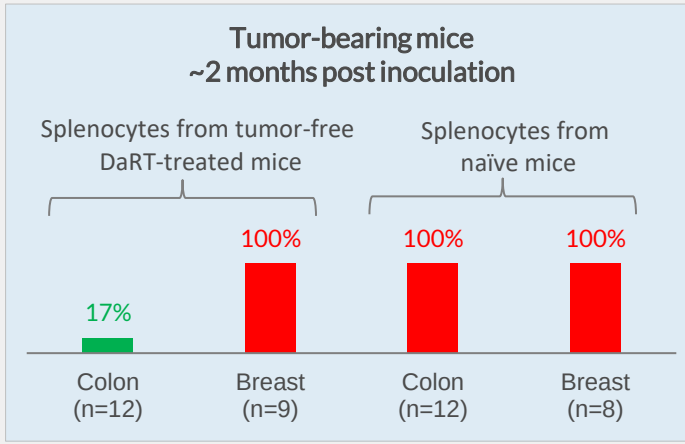
Colon[3] / Breast[4] Tumor Cell Re-inoculation

Naïve Mice



Immune-Memory Transfer[2] (Winn Assay)

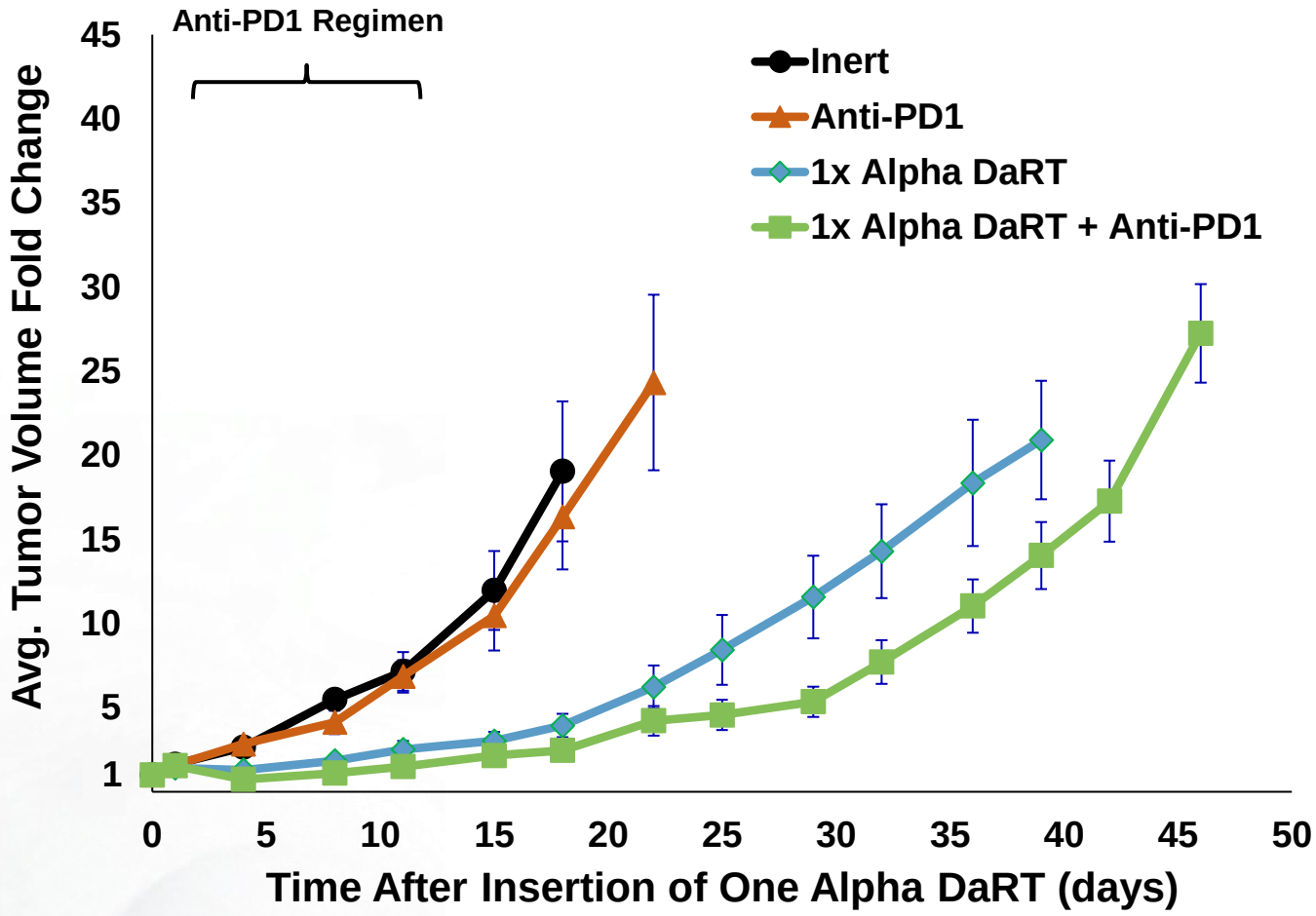
Inoculation of Colon[3] / Breast[4] Tumor Cells + **+ Splenocytes** from Tumor-free Pretreated Mice



(1) Immuno-modulation refers to a combination of low dose CP, Sildenafil and CpG.
(2) Mice with CR from DaRT + immuno-modulators (n = 18) and naïve mice (n = 20) were inoculated with 5 x 10^5 CT26 or DA3 cells 52 days post inoculation (Challenge Assay). Naïve mice were injected intradermally with splenocytes from either naïve or CT26-bearing mice treated by DaRT and immunomodulators, coupled with CT26 or DA3 tumor cells (Winn assay). The presented results are based on cumulative data from two different experiments.
(3) CT26 5 x 10^5.
(4) DA3 5 x 10^5.

Alpha DaRT Elicits Effect from anti-PD1 in SCC Mouse Model (SQ2)

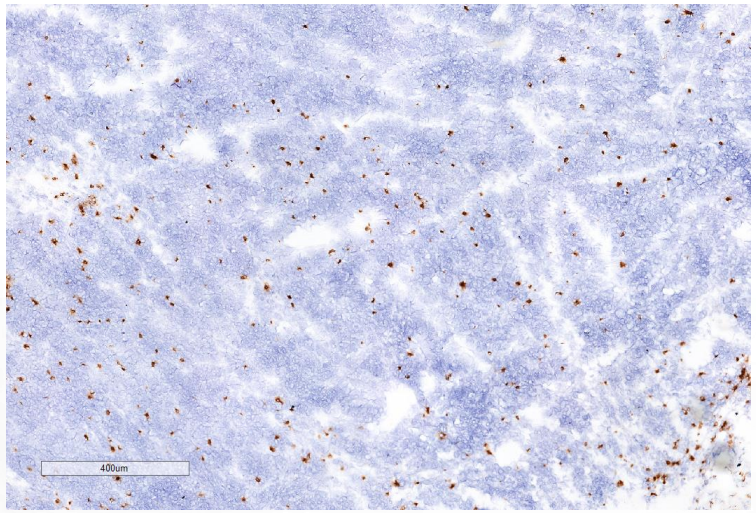
While mice with the SQ2 squamous cell carcinoma model showed little to no effect when treated with a murine anti-PD1 agent, the observed effect was larger for the combination with Alpha DaRT than for Alpha DaRT on its own



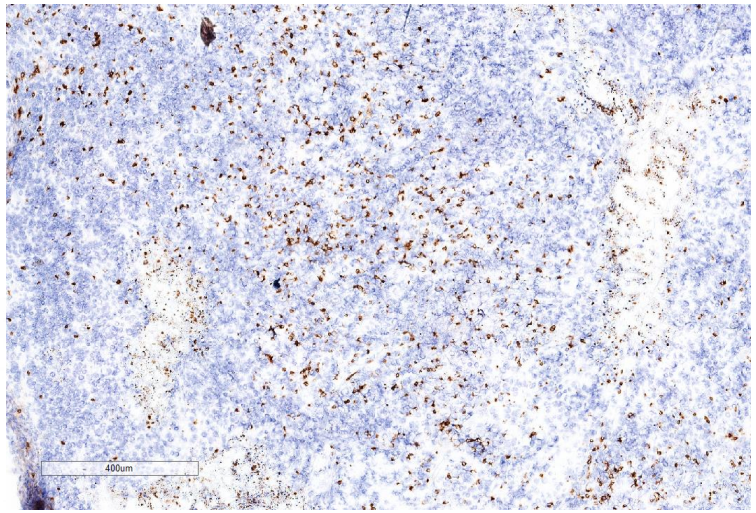
Alpha DaRT Increases Infiltration of CD3+ T-cells Into the Tumor

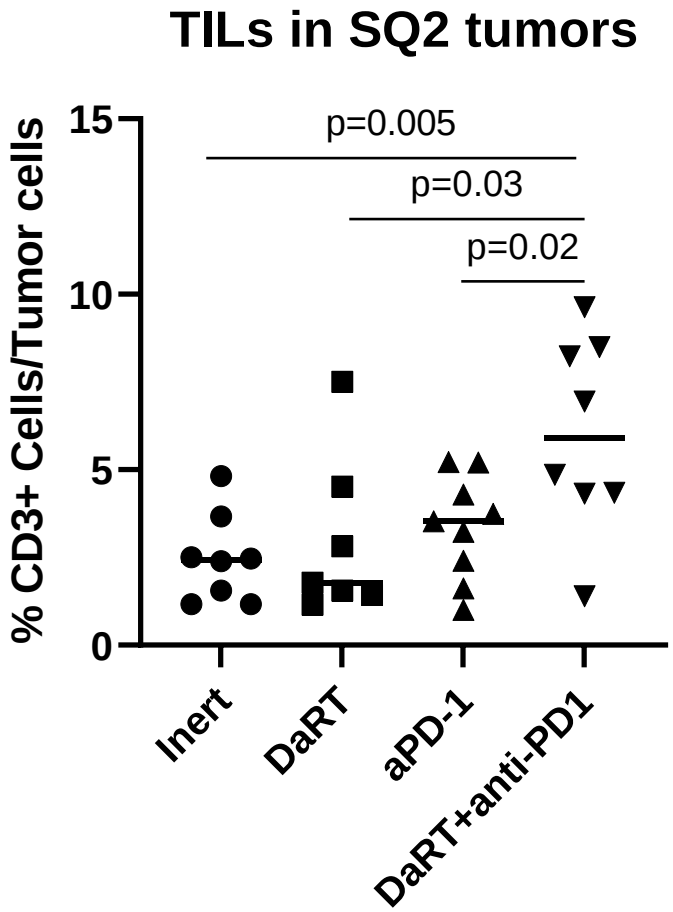
The combination of Alpha DaRT with anti-PD1 demonstrates the highest level of TILs in mice with SQ2 SCC tumors, potentially indicating an ability to potentiate the checkpoint blockade

anti PD-1



Alpha DaRT + anti PD-1





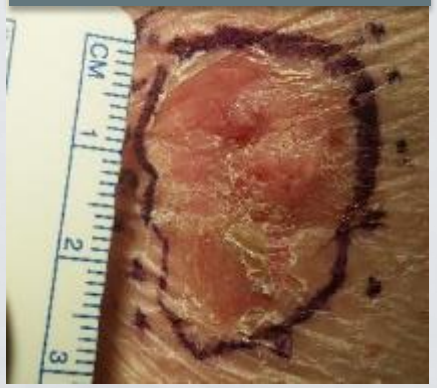
Potential Systemic Immune Effect Observed in One Patient Where a Second, Untreated Lesion Manifested CR

Complete Response + Potential Systemic Immune Effect

Treated Tumor

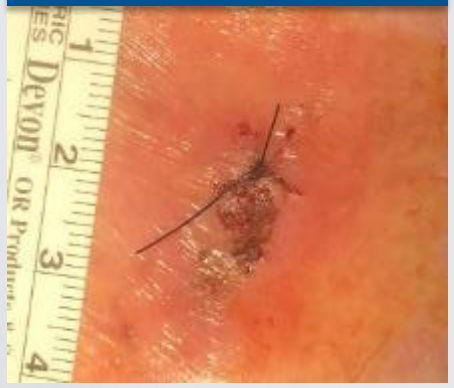
Before

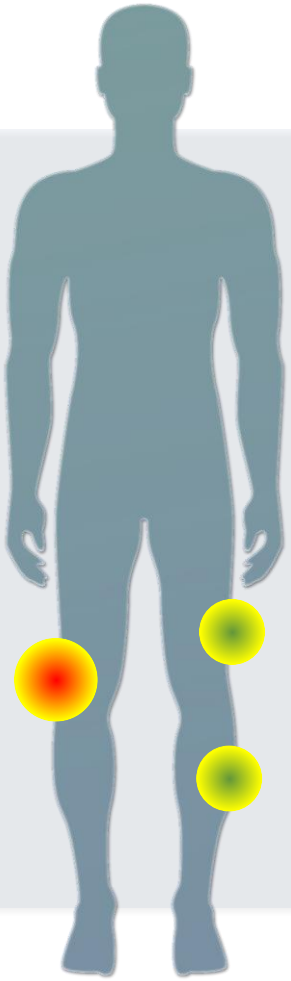
30-Nov-17



After

29-Dec-17

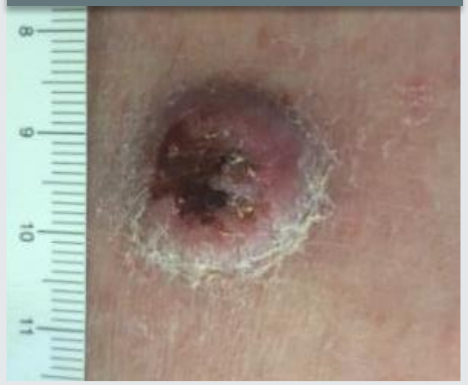




Untreated Tumors

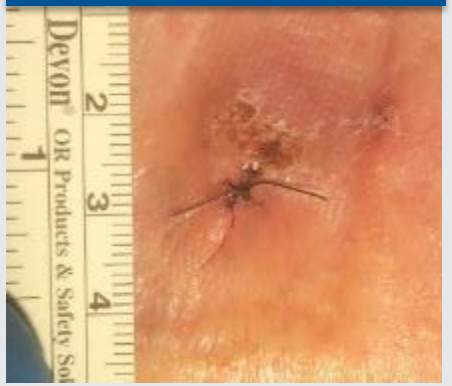
Before

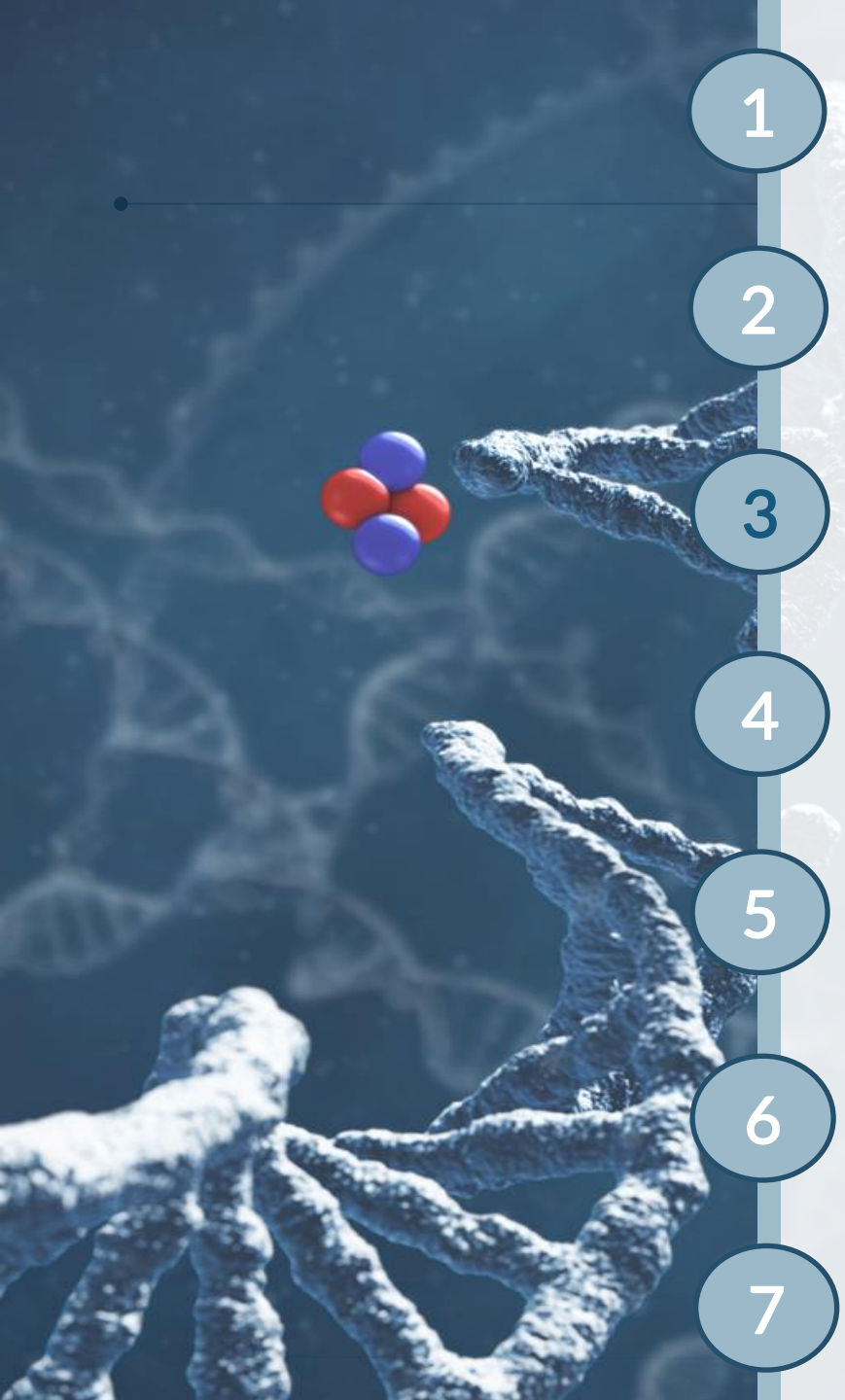
30-Nov-17



After

29-Dec-17





Results from Previous Clinical Studies

Michael J. Zelefsky, MD

Professor of Radiation Oncology

Chief, Brachytherapy Service

Memorial Sloan Kettering Cancer Center

Results from Previous Clinical Studies

CTP-SCC-00:
First Clinical Trial

Outline of Our First Clinical Study: Skin / Head & Neck SCC

Trial Sites: Israel, Italy

Objectives: Evaluate feasibility, safety & effectiveness

Key Eligibility Criteria

SCC histopathologically confirmed

Lesions ≤ 5 cm*

Age ≥ 18

ECOG performance scale ≤ 2

Patients W/O immunosuppression

De-novo or **recurrent** disease

Treatment and Procedure

Treatment plan based on CT-simulation

Sources 1cm length, 0.7mm diam.

Activity per source 2 μCi

Outpatient setting

Local anesthesia

Number of sources inserted: min 3, max 169

Timeline and Follow-Up

Alpha DaRT sources insertion

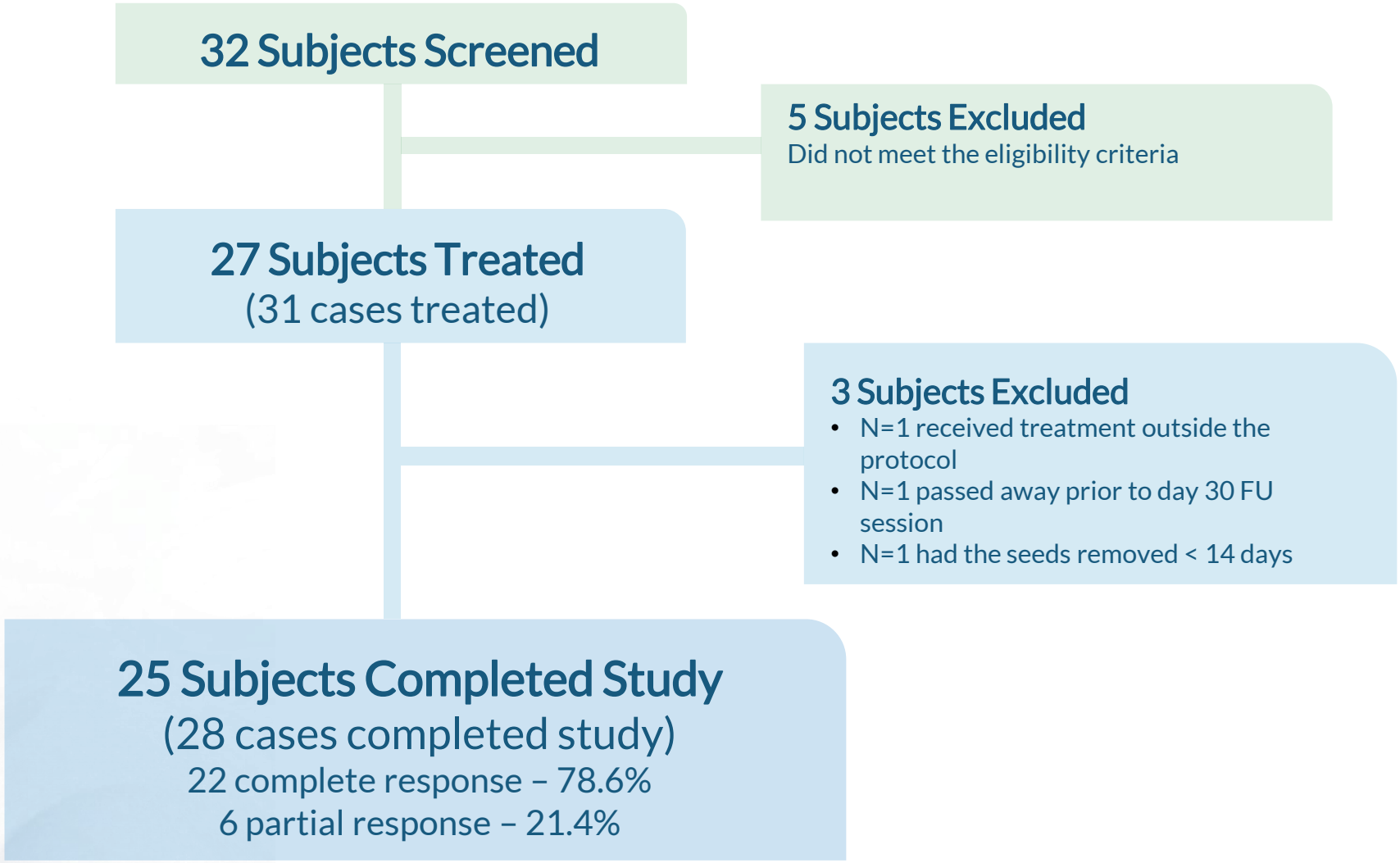
Removal after 15 days

Check-up on days 4, 9 and 30 after insertion

Long term follow up based on standard of care

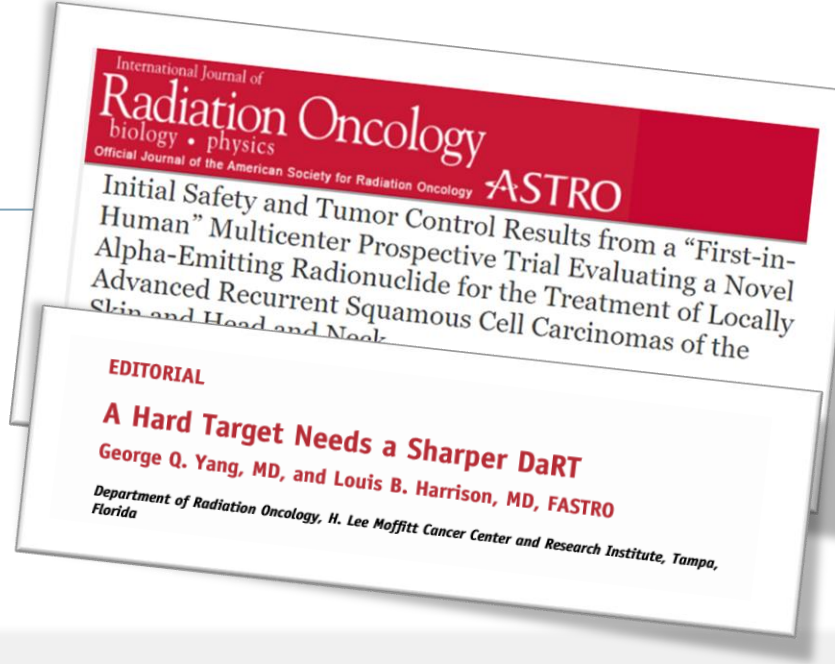
*in the longest diameter (without nodal spread).

CTP-SCC-00: Diagram of Study Subjects & Cases



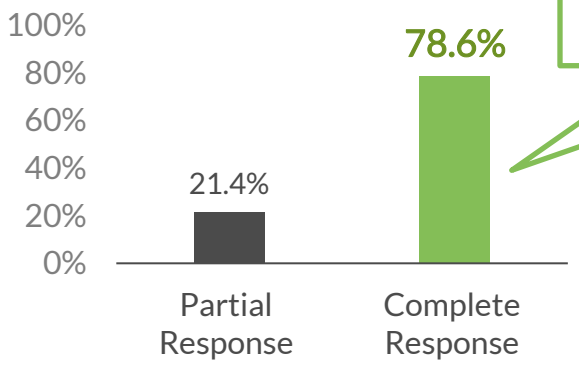
Skin / Head & Neck SCC Study Results

- 100% overall response rate
- Durable responses observed
- Responses observed within days
- Well tolerated; no systemic toxicity observed
- Similar response from radioresistant tumors

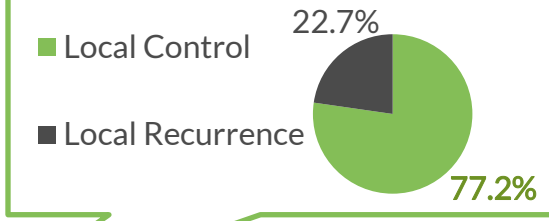


Efficacy Results

Overall Response (n=28)



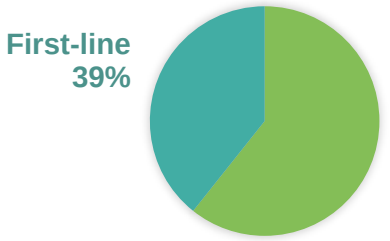
CR Durability (~7 months)



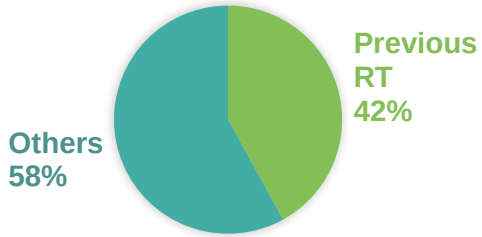
Baseline Disease Characteristics

(Patient median age = 80.5 years)

Previous Treatment[1]



Previous Radiotherapy

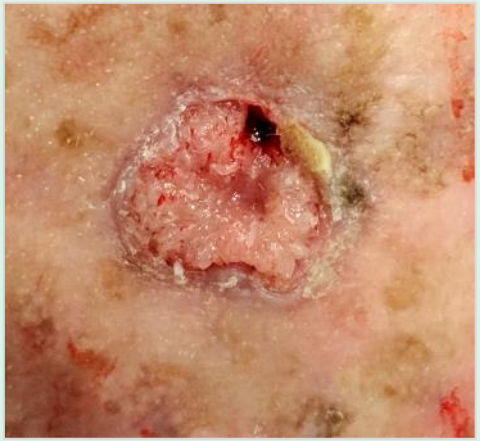


[1] Most patients (60.7%) had recurrent and previously treated disease by either surgery, prior external beam radiotherapy or both; 13 of 31 (42%) had received prior RT.

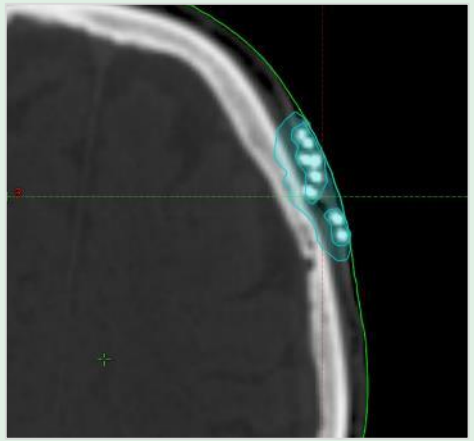
AP-022 Complete Response

Age	68
Previous treatments	None
Tumor initial volume [cm^3]	2.8

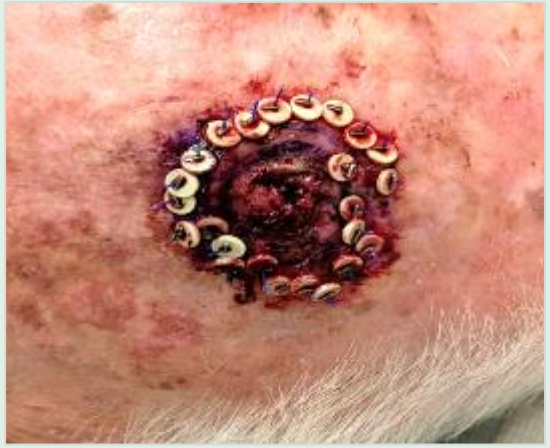
Applicators used	12
Alpha DaRT sources inserted	24
Total activity [µCi]	48



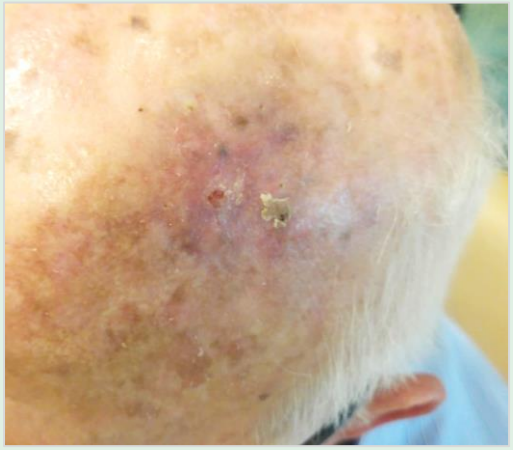
Before
27-Aug-2018



During
30-Aug-2018



During
30-Aug-2018



After
30-Sep-2018

Alpha DaRT Treatment was Well Tolerated

No systemic toxicities and minimal (≤ grade 2) local toxicities observed to date

Targeted treatment
Designed to spare neighboring healthy tissue

No systemic toxicity observed
Negligible and short-term radioactivity in the patient's body

Minimal local toxicity observed
Minimal local toxicity with grade ≤2 resolved within a month

Safe procedure for caregivers
No special shielding required

No suppression of immune system observed
Critical in these times of pandemic

Acute Local Toxicity	Incidence (%) Severity Grade 1	2	3
Administration site erythema	11 (41%)	9 (33%)	0 (0%)
Administration site edema	9 (33%)	10 (37%)	0 (0%)
Administration site pain	8 (30%)	11 (41%)	0 (0%)
Administration site exudate	2 (7%)	8 (30%)	0 (0%)
Administration site ulcer	4 (15%)	5 (19%)	0 (0%)
Administration site numbness	1 (4%)	0 (0%)	0 (0%)
Administration site pruritus	3 (11%)	0 (0%)	0 (0%)
Administration site bleeding	1 (4%)	0 (0%)	0 (0%)
Aural myiasis (administration site)	1 (4%)	0 (0%)	0 (0%)
Decreased appetite	1 (4%)	0 (0%)	0 (0%)

Results from Previous Clinical Studies

U.S. Pilot Skin / Superficial Soft Tissue Study

CTP-SCC-MSK-00

Outline of Our U.S. Pilot Skin / Superficial Soft Tissue Study

Primary objective: Demonstrate feasibility & safety malignant skin and superficial soft tissue tumors

Secondary objective: Evaluate tumor response, radiation exposure safety, stability of sources, QoL metrics

Key Eligibility Criteria

Malignant skin or superficial soft tissue

Lesions ≥ 1 to 5 cm, depth ≥ 4 mm

Suitable for **percutaneous interstitial radiotherapy**

Sample size N = 10 patients

Treatment and Procedure

Treatment plan based on CT-simulation

Sources 1cm length, 0.7mm diam.

Activity per source 2 µCi

Local anesthesia

Timeline and Follow-Up

Alpha DaRT sources insertion

Removal after 14 to 21 days

Check-up on days 4, 12, 30, 38 after insertion

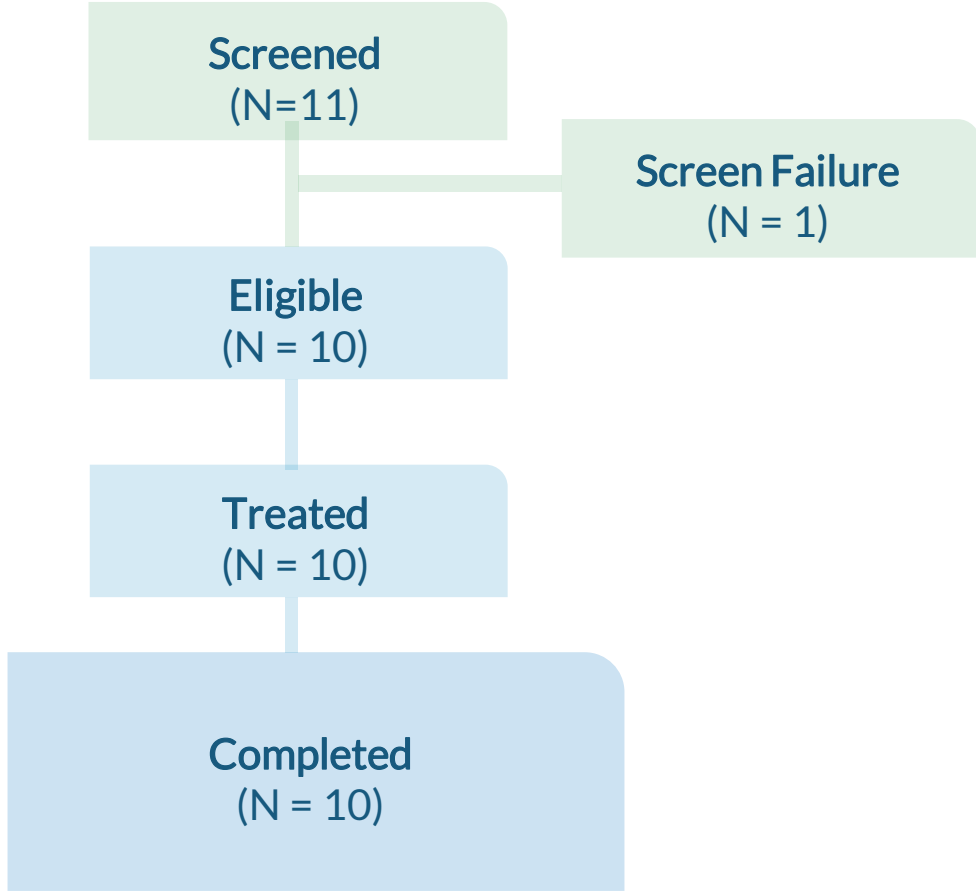
Long term follow up based on standard of care

Trial Overview & Subject Disposition

First Patient In:
July 2021

Last Patient In:
Oct. 2021

Last Patient Out:
March 2022



Patient / Tumor Characteristics

Demographics & Disease Characteristics

	Treated Subjects (N = 10)
Age, years	
mean ± std	73.9 ± 10.8
Median (min, max)	71.5 (57, 92)
Sex, n (%)	
Female	4 (40%)
Male	6 (60%)
Race, n (%)	
White	10 (100%)
Histopathology, n (%)	
Basal Cell Carcinoma (BCC)	6 (60%)
Squamous Cell Carcinoma (SCC)	4 (40%)
Stage, n (%)	
Stage I	7 (70%)
Stage II	3 (30%)

Tumor Characteristics

	Treated Subjects (N = 10)
Tumor Volume, cm^3	
Median (min, max)	2.1 (0.7, 12.7)
Time from first diagnosis, months	
Median (min, max)	18.7 (0.3, 284.5)
Longest Diameter (LD), cm	
Median (min, max)	2.4 (1.6, 4.3)
ECOG Score, n (%)	
0	8 (80%)
1	0
2	2 (20%)
Tumor Volume, cm^3	
Median (min, max)	2.1 (0.7, 12.7)

Safety Results

- Twenty-two (22) **total adverse events** (AEs) were reported in 7 subjects
- Most AEs were of **mild or moderate severity**
- Two (2) serious AEs (SAEs) in a single subject – **both not related to study device or procedure**

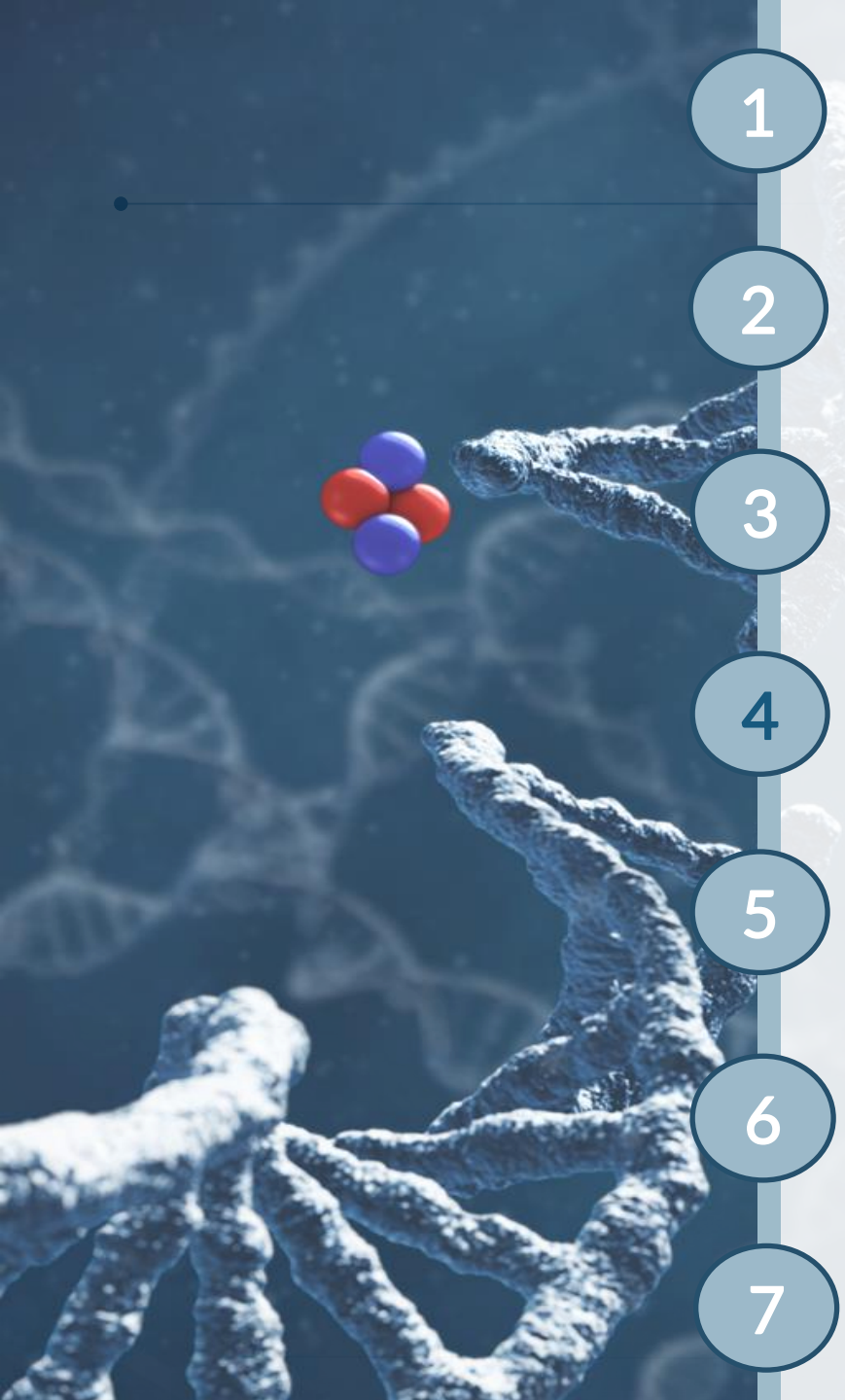
Number of Subjects with Procedure- or Device-Related* Adverse Events by Severity Grade

Adverse Event	Severity Grade		
	1	2	3
Dermatitis radiation	2	1	0
Localized edema	1	0	0
Joint range of motion decreased	0	1	0
Pain	0	1	0
Pruritis	2	0	0
Wound infection	0	1	0

Note: Adverse events are presented according to CTCAE V5 coded terms.
* Probably or possibly related

Efficacy Results

- All 10 subjects achieved a **complete response** (CR) at the 12-week follow-up visit
- There were **no reported relapses** of disease by the final study visit at 24 weeks



User Experience & Selected Case Studies

Dr. Mark D'Andrea, University Cancer Centers

UNIVERSITY CANCER CENTERS

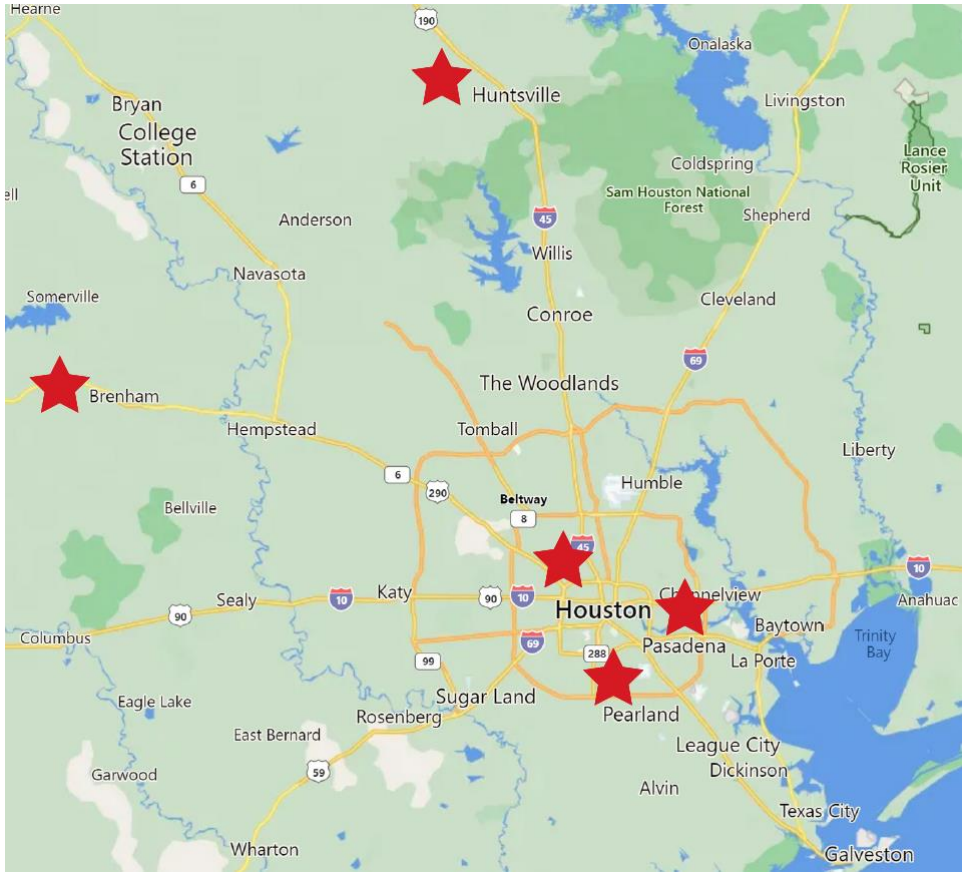
My Background

Rural Areas

- High prevalence of **Skin Cancer**

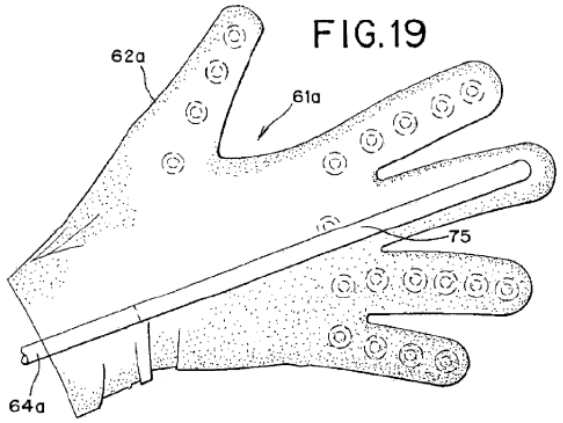
Southeast Texas

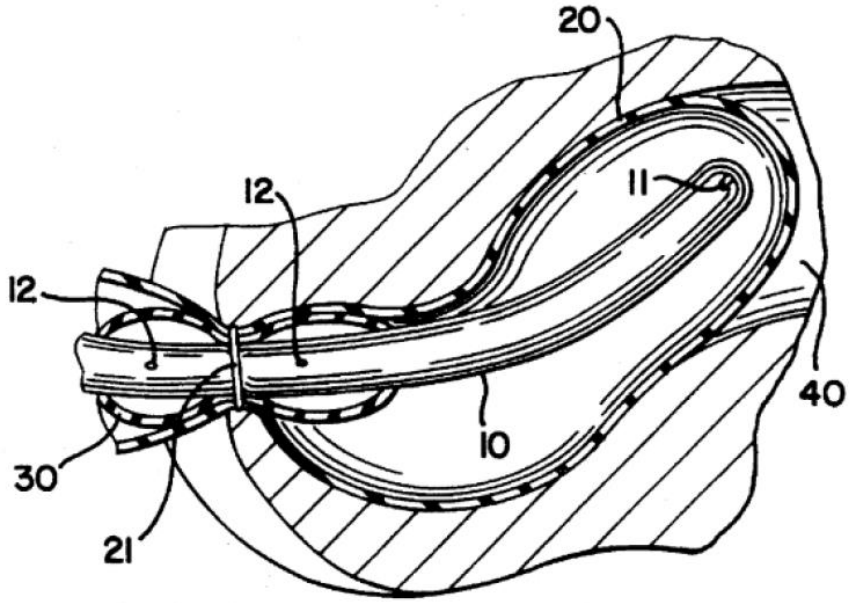
- Network of 5 cancer centers in **SE Texas**
- Patient draw of **100's Square Miles**

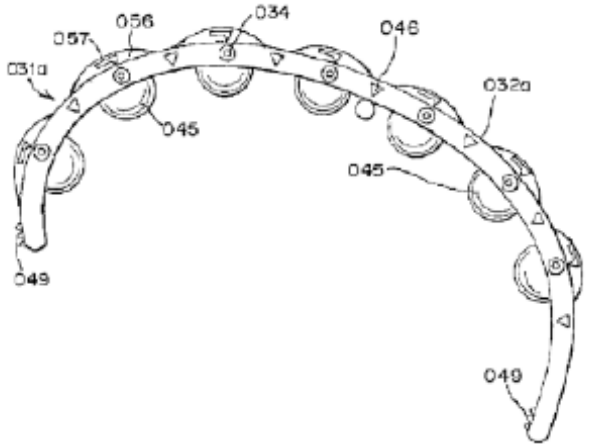


My Research Interests (1/2)

- **Dozens of patents** for radiotherapy / brachytherapy devices and methods of treatment for use in:
  - Head & Neck
  - Bladder
  - Rectum
  - Sarcoma
  - Gynecologic
  - Others

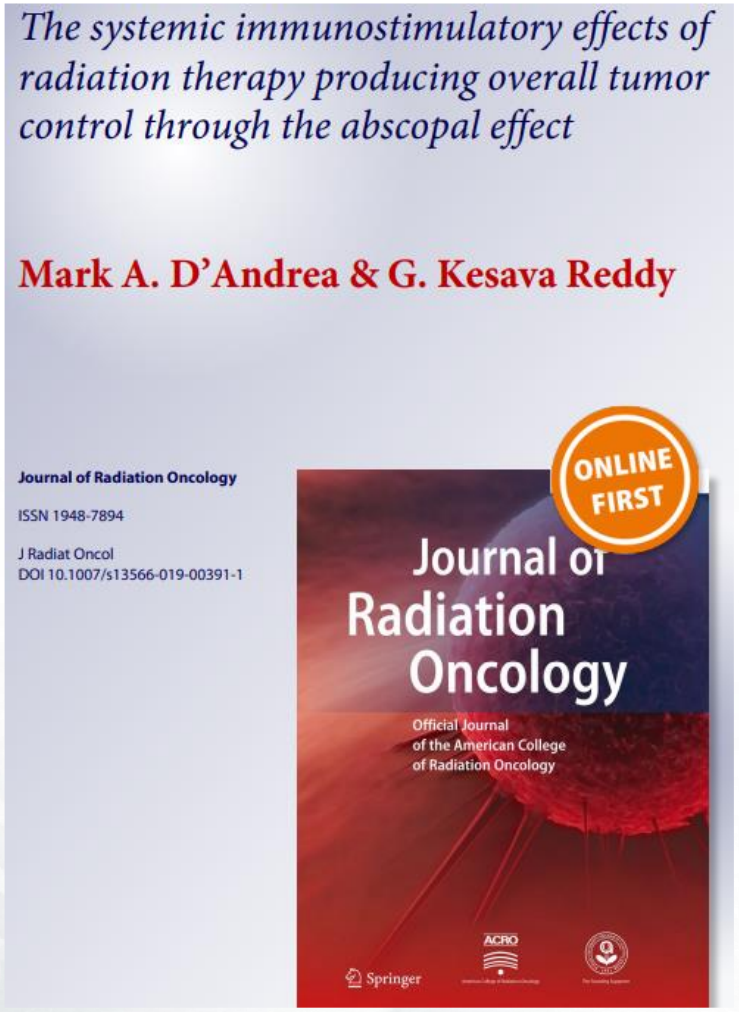


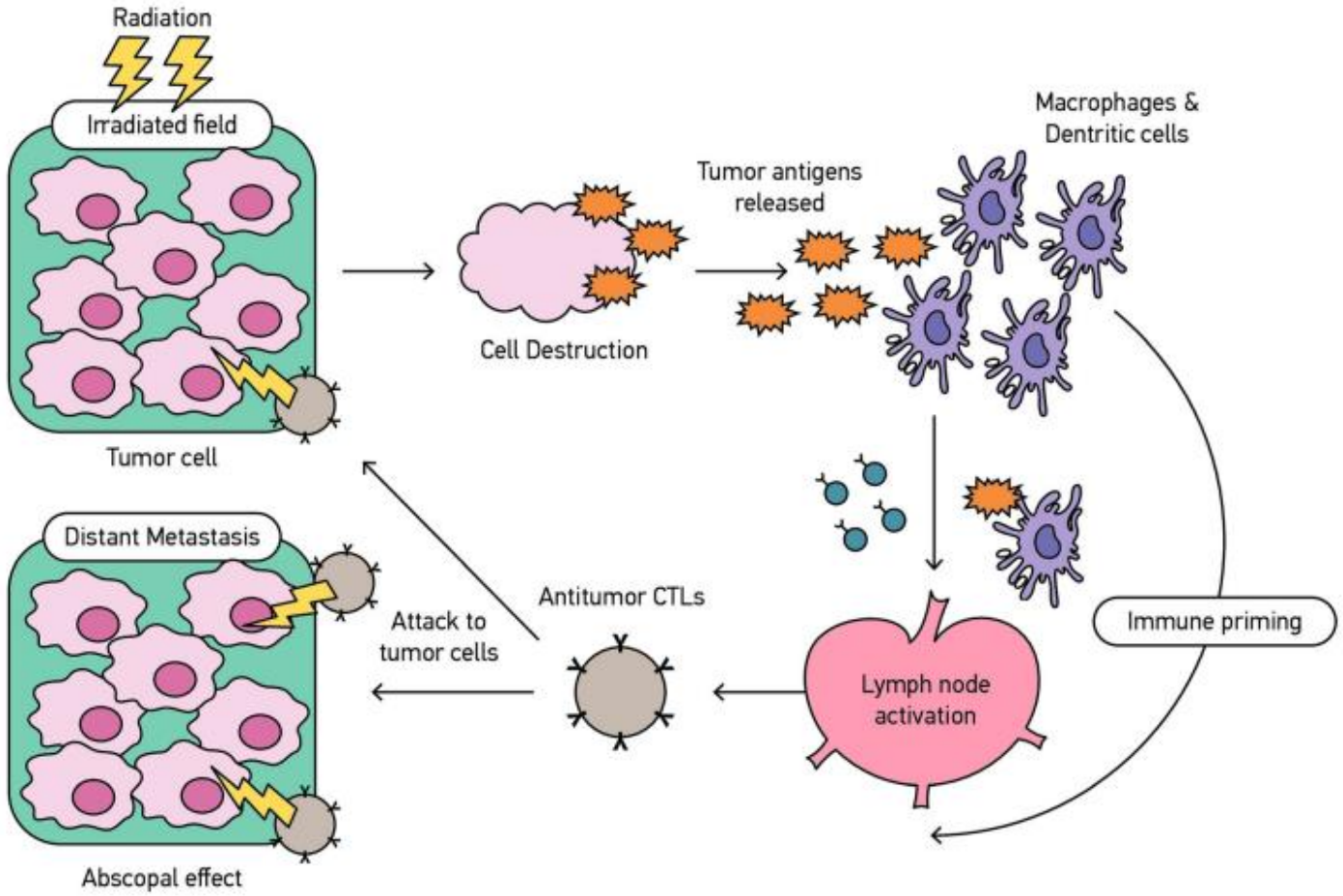




My Research Interests (2/2)

- Authored **a chapter** on the **abscopal effect** in radiotherapy





Case 1 - 77 Y/O with Recurrent BCC on the Nose

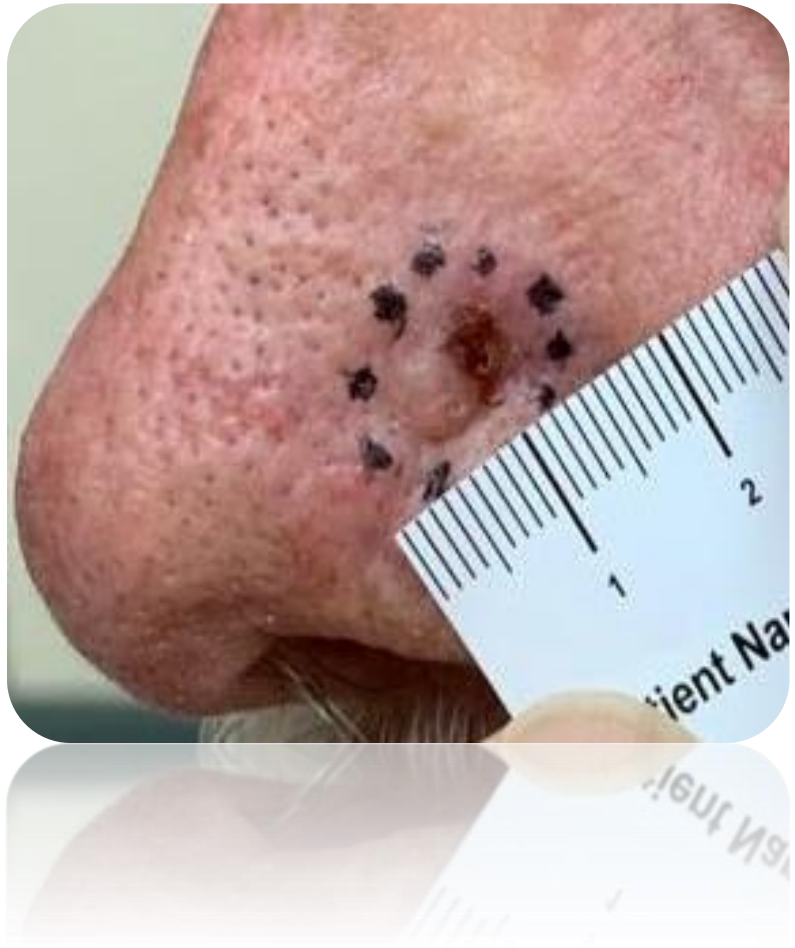
Prior treatments:	Surgery (2005)

Tumor Size:

Longest diameter	1.59 cm
Depth	0.5 cm
Volume	0.65 ml

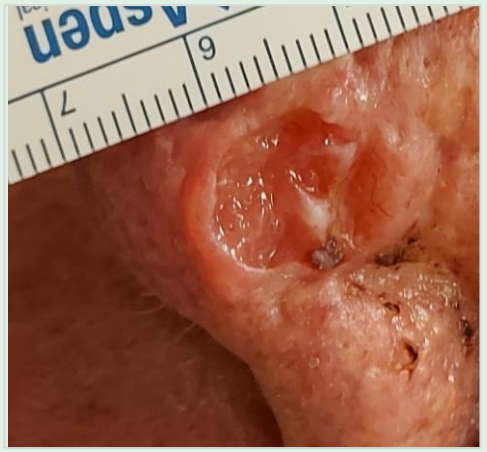
Alpha DaRT Treatment:

Applicators used	15
Alpha DaRT sources inserted	20
Total activity [µCi]	40

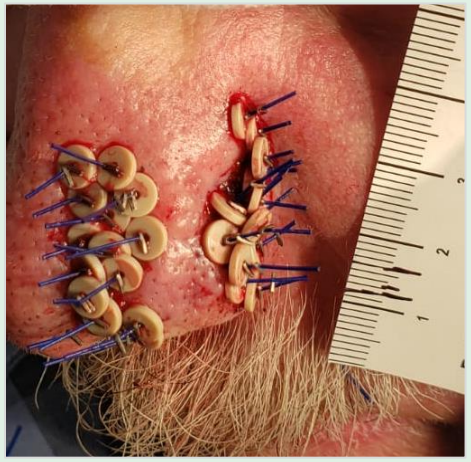


Case 1 - 77 Y/O with Recurrent BCC on the Nose

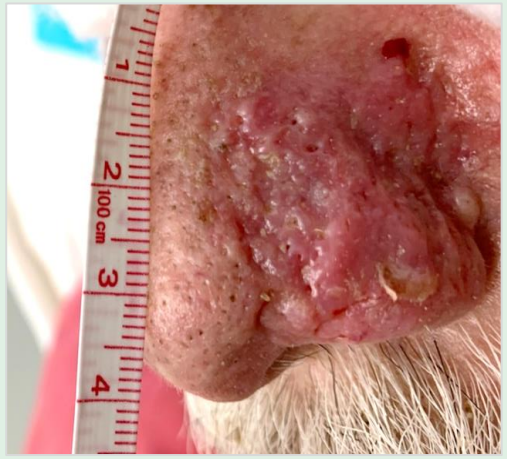
Results



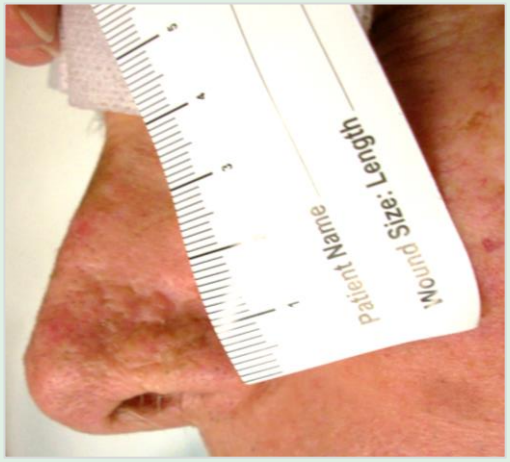
Simulation Day



Insertion Day



Removal Day
15 days



Complete Response
12 weeks

Case 2 - 92 Y/O with BCC on the Chin

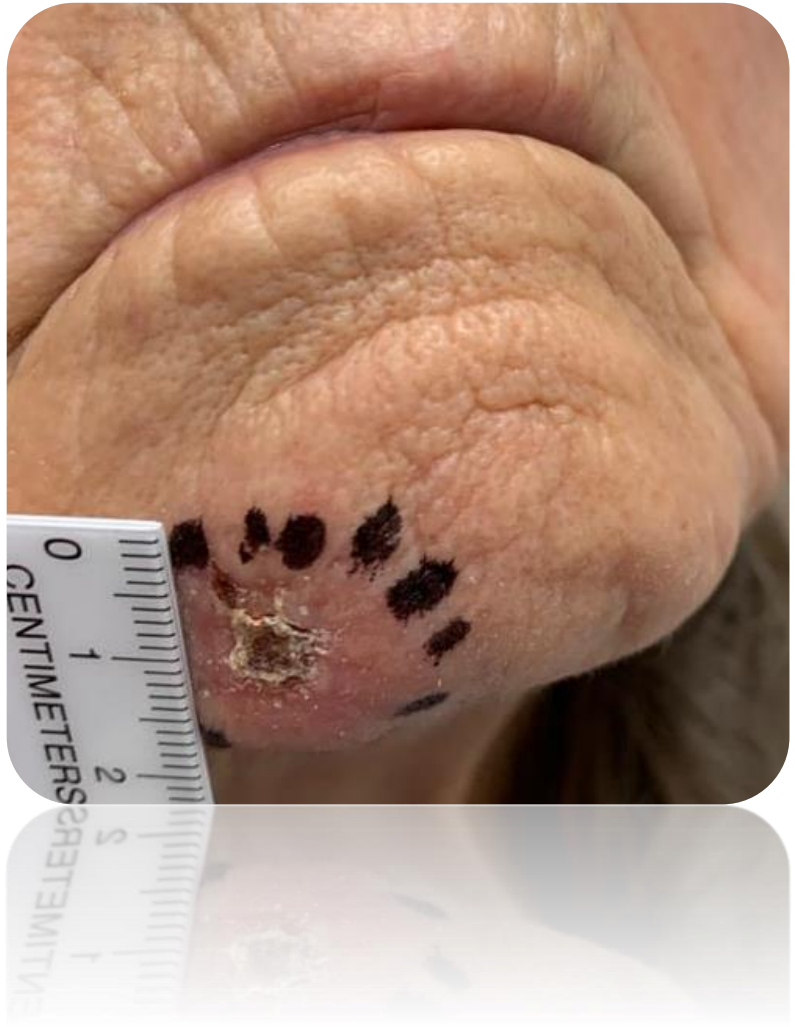
Prior treatments:	None

Tumor Size:

Longest diameter	2.38 cm
Depth	0.84 cm
Volume	2.3 ml

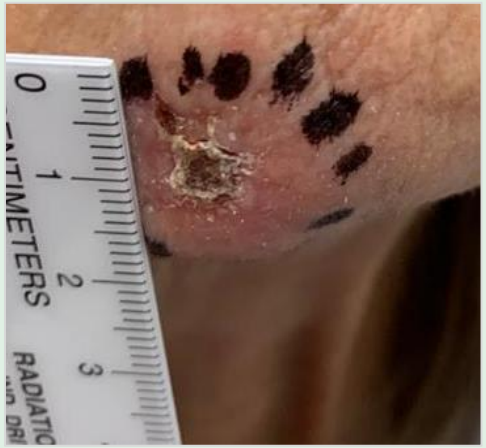
Alpha DaRT Treatment:

Applicators used	29
Alpha DaRT sources inserted	58
Total activity [µCi]	116

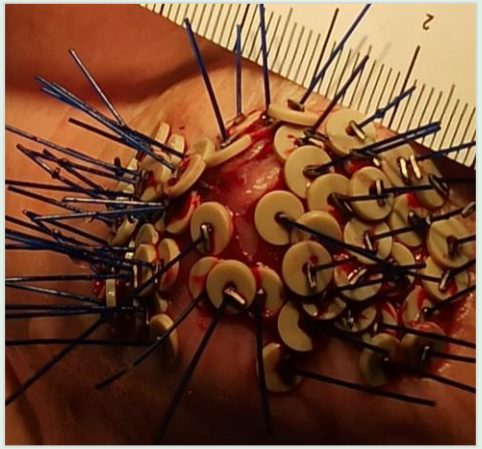


Case 2 - 92 Y/O with BCC on the Chin

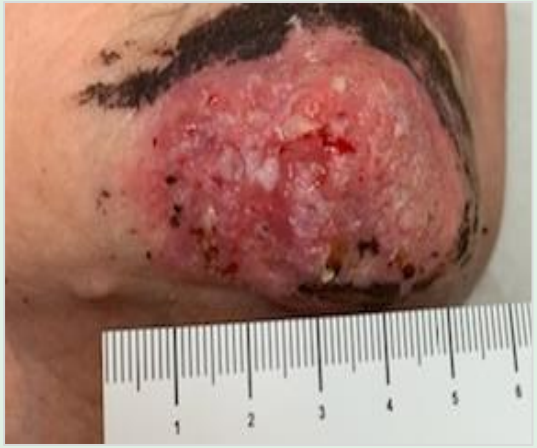
Results



Simulation Day



Insertion Day



Removal Day
15 days

Complete Response
12 weeks

Case 3 - 75 Y/O with BCC on the Chin / Cheek

Prior treatments:	None

Tumor Size:

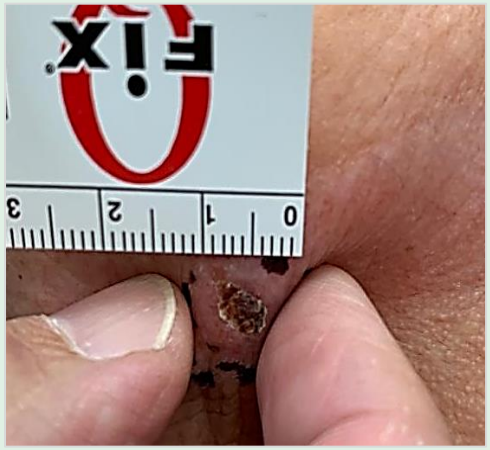
Longest diameter	1.7 cm
Depth	0.9 cm
Volume	1.7 ml

Alpha DaRT Treatment:

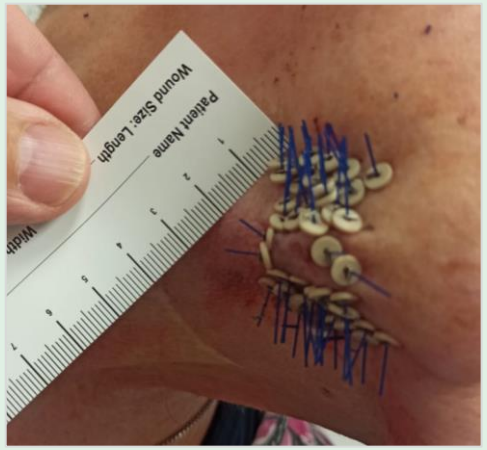
Applicators used	23
Alpha DaRT sources inserted	35
Total activity [µCi]	70

Case 3 - 75 Y/O with BCC on the Chin / Cheek

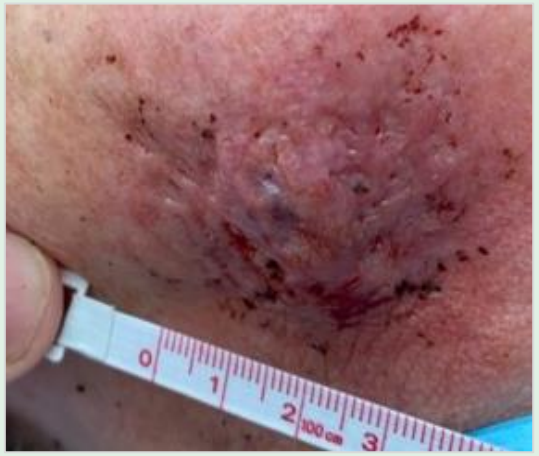
Results



Simulation Day

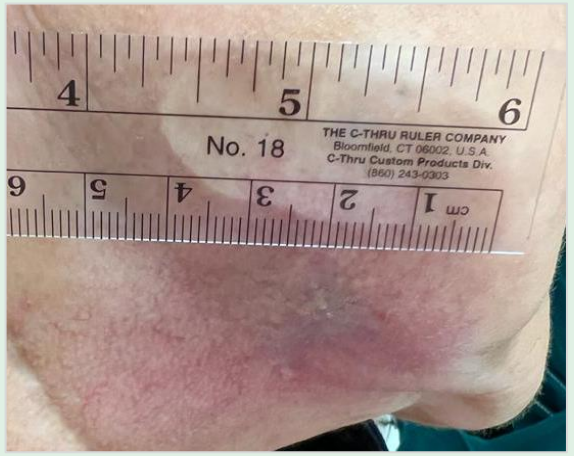


Insertion Day



Removal Day

15 days



Complete Response

12 weeks

Case 4 - 71 Y/O with BCC on the Nose

Prior treatments:	Cryotherapy (1998), Resection (2005)

Tumor Size:

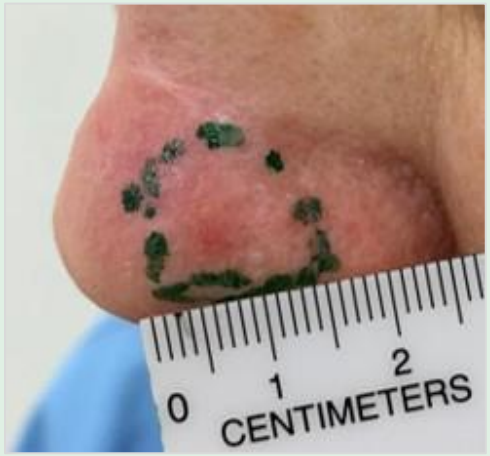
Longest diameter	2.59 cm
Depth	0.6 cm
Volume	1.95 ml

Alpha DaRT Treatment:

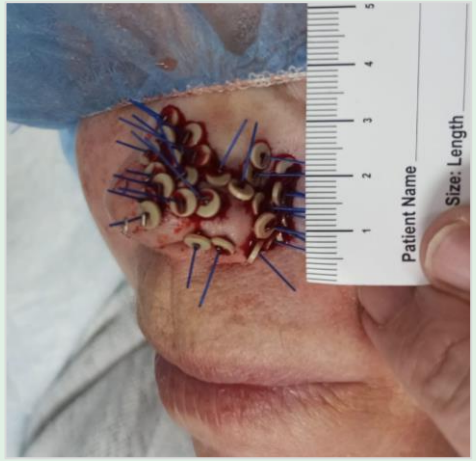
Applicators used	15
Alpha DaRT sources inserted	23
Total activity [µCi]	46

Case 4 - 71 Y/O with BCC on the Nose

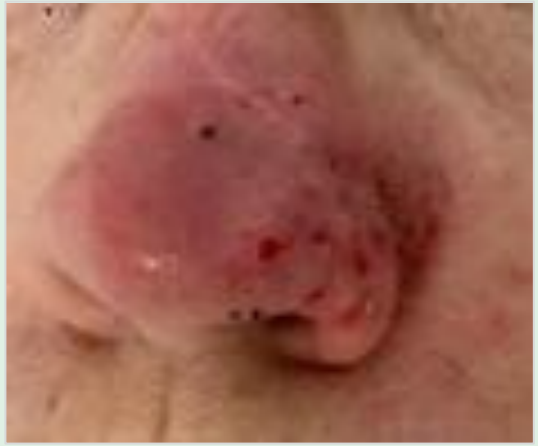
Results



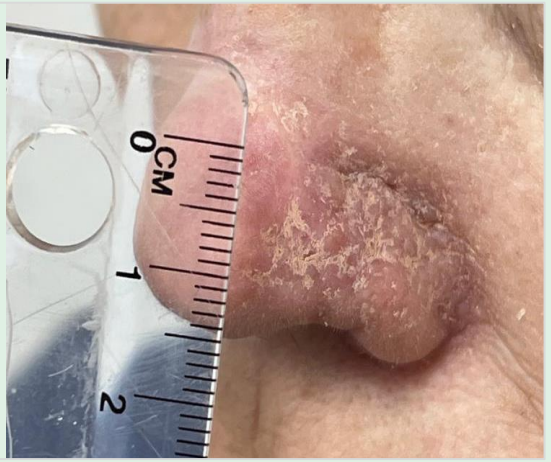
Simulation Day



Insertion Day



Removal Day
15 days



Complete Response
12 weeks

Case 5 - 66 Y/O with Recurrent SCC on the Eye

Prior treatments:	Cryotherapy (2000)

Tumor Size:

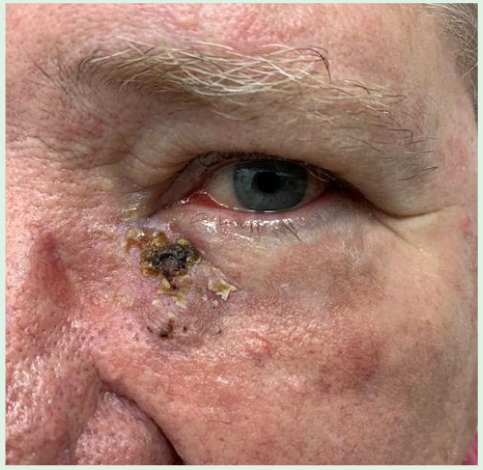
Longest diameter	1.63 cm
Depth	0.6 cm
Volume	0.98 ml

Alpha DaRT Treatment:

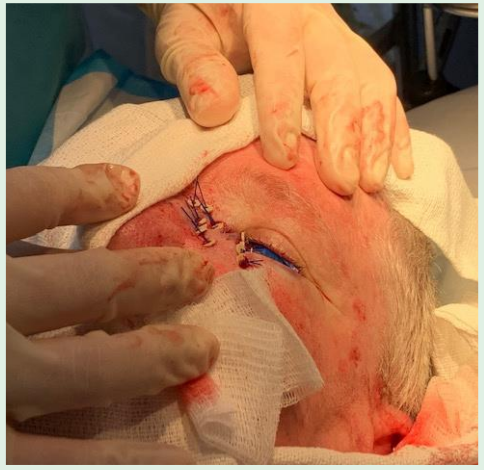
Applicators used	16
Alpha DaRT sources inserted	25
Total activity [µCi]	50

Case 5 - 66 Y/O with Recurrent SCC on the Eye

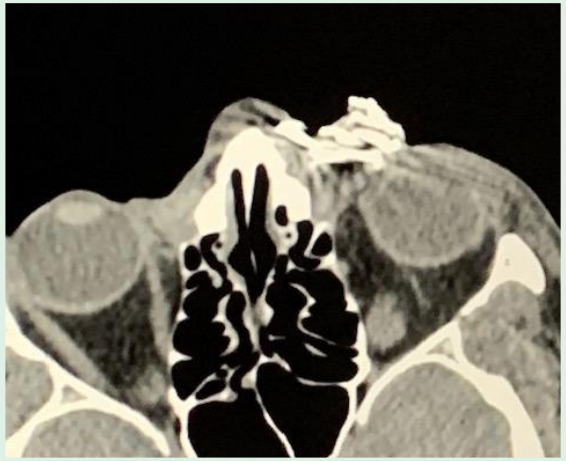
Treatment



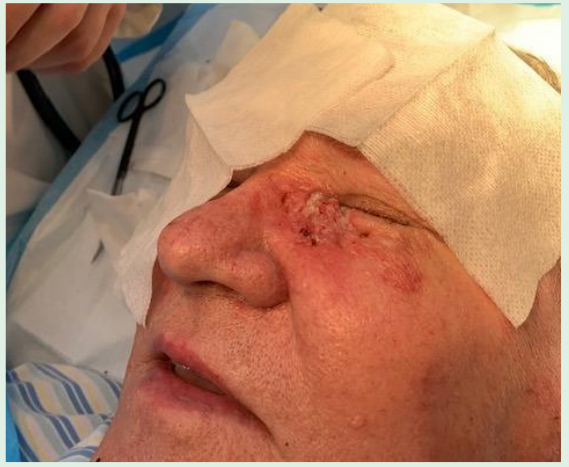
Before



Insertion Day



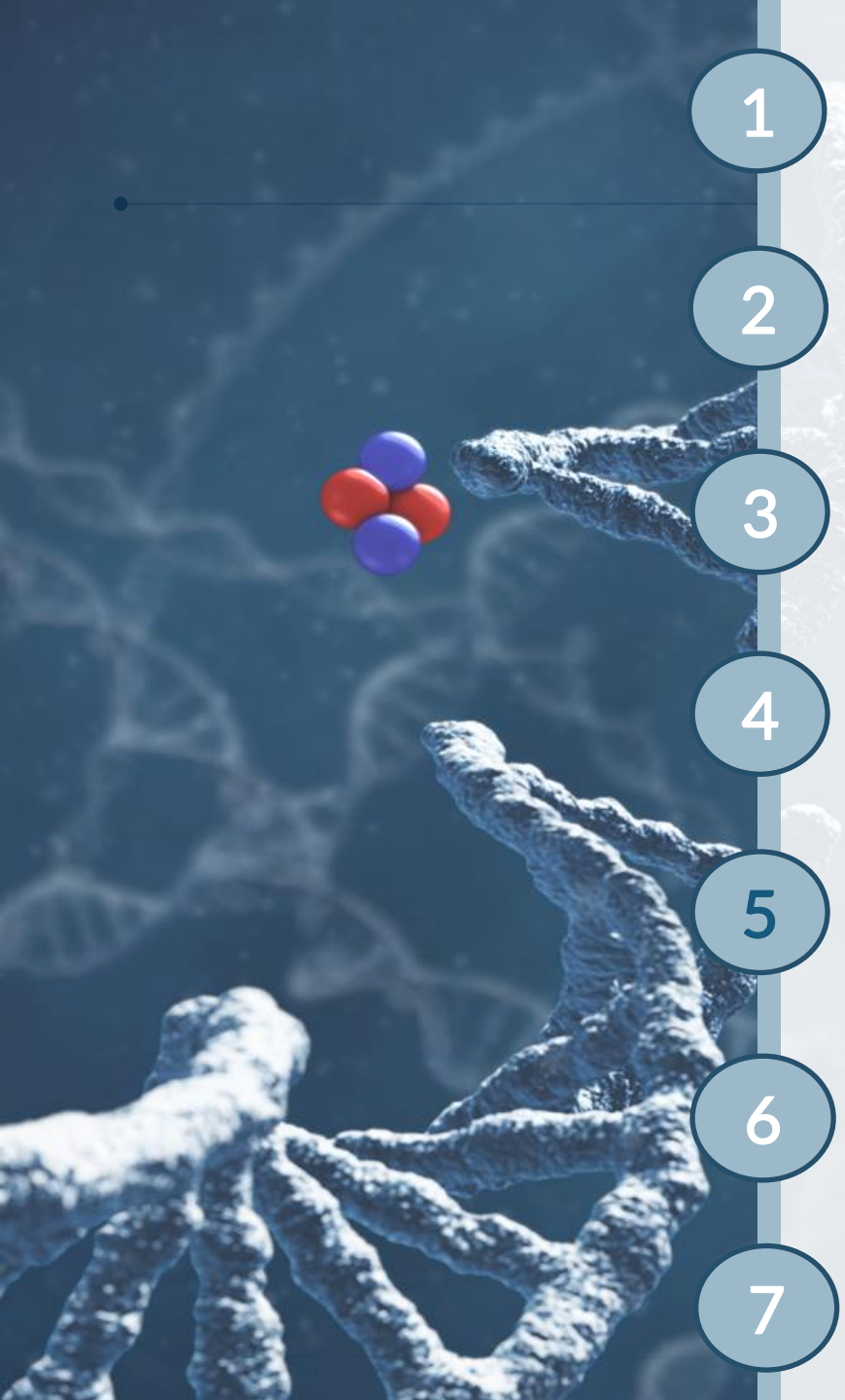
Insertion Day



Removal

Case 5 – Patient Testimonial

https://www.youtube.com/watch?v=t2MXPoS5ql4



Upcoming Clinical Studies, Including US Pivotal Study

Dr. Robert Den, CMO

How Are We Moving Forward?

- Our guiding principle is to have our scientific discoveries inform our clinical trials and then have our clinical trials inform our scientific research

- Toward that end:

Laboratory	Clinic
Design experiments that mirror the clinic	Focused on neo-adjuvant setting
Mechanism	Built in biomarkers for immune response
Interrogate novel combinations using FDA approved agents	Interrogate novel combinations using FDA approved agents

Clinical Trial Portfolio

Superficial to Internal Organs

Temporary Implants

Japan Pivotal Trial

US Multi-center Pivotal Trial

Expanding to Other Histologic Types: **Israel**

Pathologic Response

Neoadjuvant Prostate: Israel

Liver: Two-stage Hepatectomy: Canada

Breast Cancer: Israel

Unmet Need / Inoperable

Pancreas: Israel/Canada

Liver: Israel/Canada

Breast: Israel/Europe

Intraluminal GI tumors: Israel

Recurrent GBM: Israel/US

Study Specifics

A Prospective International Multicenter, Pivotal, Single Arm, Open Label Clinical Study to Assess the Efficacy and Safety of Intratumoral Alpha DaRT224 for the Treatment of Patients with Recurrent Cutaneous Squamous Cell Carcinoma

Protocol Number: CTP-SCC-03

Outline of Our Multicenter Pivotal Recurrent SCC study

Primary / safety objectives:

- ORR based on Best Overall Response
- DOR 6 months after initial response
- Assess the safety based on statistics of device-related AEs (per CTCAE v5)

Secondary objectives: Evaluate O-DOR, local control, PFS and OS (all up to 12 months), and QoL Metrics

Key Eligibility Criteria

Recurrent non-metastatic cutaneous **SCC**

Patient with **no curative standard-of-care options**

No **previously untreated SCC**

Treatment and Procedure

Treatment plan based on CT-simulation

Sources 1cm length, 0.7mm diam.

Activity per source 3 µCi

Local anesthesia

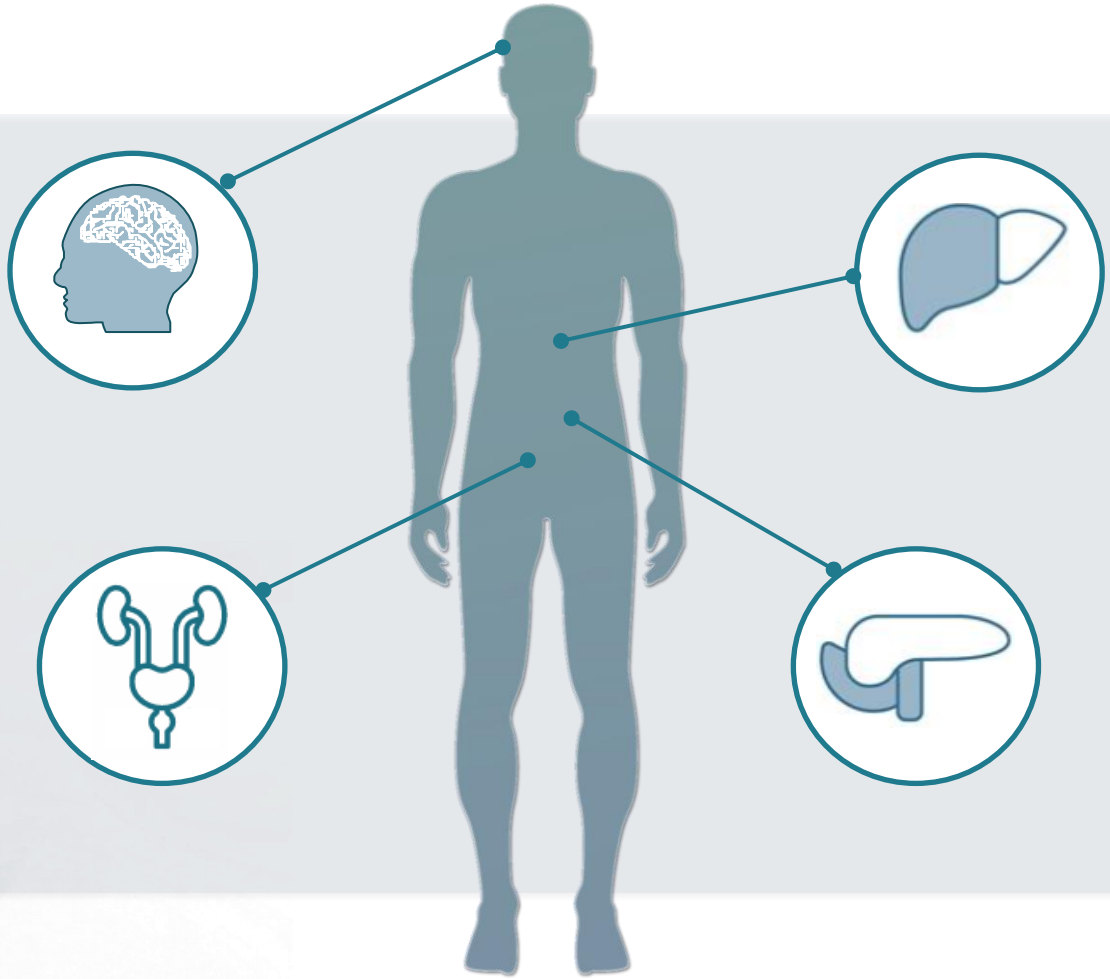
Timeline and Follow-Up

Alpha DaRT sources insertion

Removal after 14 to 21 days

Weekly **follow-up** during the treatment period

Sample size N = 86 patients



Other Indications

Other Indications

Alpha DaRT In Men With Prostate Cancer

CTP-PRST-02

Outline of our Neoadjuvant Prostate Study

Primary objectives: Feasibility & safety of intra-tumoral insertion of Alpha DaRT sources into prostate

Secondary objectives: Evaluate pathological & radiological ORR and change in QoL metrics

Key Eligibility Criteria

Resectable prostate adenocarcinoma

Non-metastatic tumor

Lesions ≤ 3 cm*

Targetable lesion

Previously **untreated** :

No prior **TURP** or **prostate surgery**

No prior **pelvic radiation**

Treatment & Procedure

Treatment plan based on PSMA PET-CT or multiparametric MRI

Sources 0.7 mm in diameter and 1 cm in length

Activity per source 5 µCi

General anesthesia

Timeline and Follow-Up

Alpha DaRT sources insertion

Prostate surgery after 50 days

Check-up on days 7, 15, 22 after insertion

Follow-up duration up to 75 days

Sample size N = 10 patients

Plant Applicator Overview

https://www.youtube.com/watch?v=hSKbj16moFQ

Other Indications

A Feasibility and Safety Study of Intratumoral Diffusing Alpha Radiation Emitters on Advanced Pancreatic Cancer

AT-PANC-101

Outline of the Pancreas Study

Primary objective: Evaluate feasibility & safety of Alpha DaRT sources inserted into pancreas in terms of incidence of device related AEs & SAEs.

Secondary objective: Evaluate efficacy (radiological ORR and change in tumor markers), OS, stent durability, and QoL

Key Eligibility Criteria

Locally **advanced (Stage II or III)** or **metastatic (Stage IV)** pancreatic adenocarcinoma

Inoperable pancreatic cancer because:

- **Unresectable**
- **Metastatic** disease
- Medically **unfit** for surgery

No **concomitant chemotherapy** or **immunotherapy**

Sample size N = 30 patients

Treatment and Procedure

Treatment plan based on CT

Sources 0.7 mm in diameter and 10 mm in length

Activity per source 3 µCi

Source insertion using **endoscopic ultrasonography**

General anesthesia

Timeline and Follow-Up

Alpha DaRT sources insertion

Check-up on days 6, 15, 21, 35, 60 after insertion

Follow-up duration up to 2 years

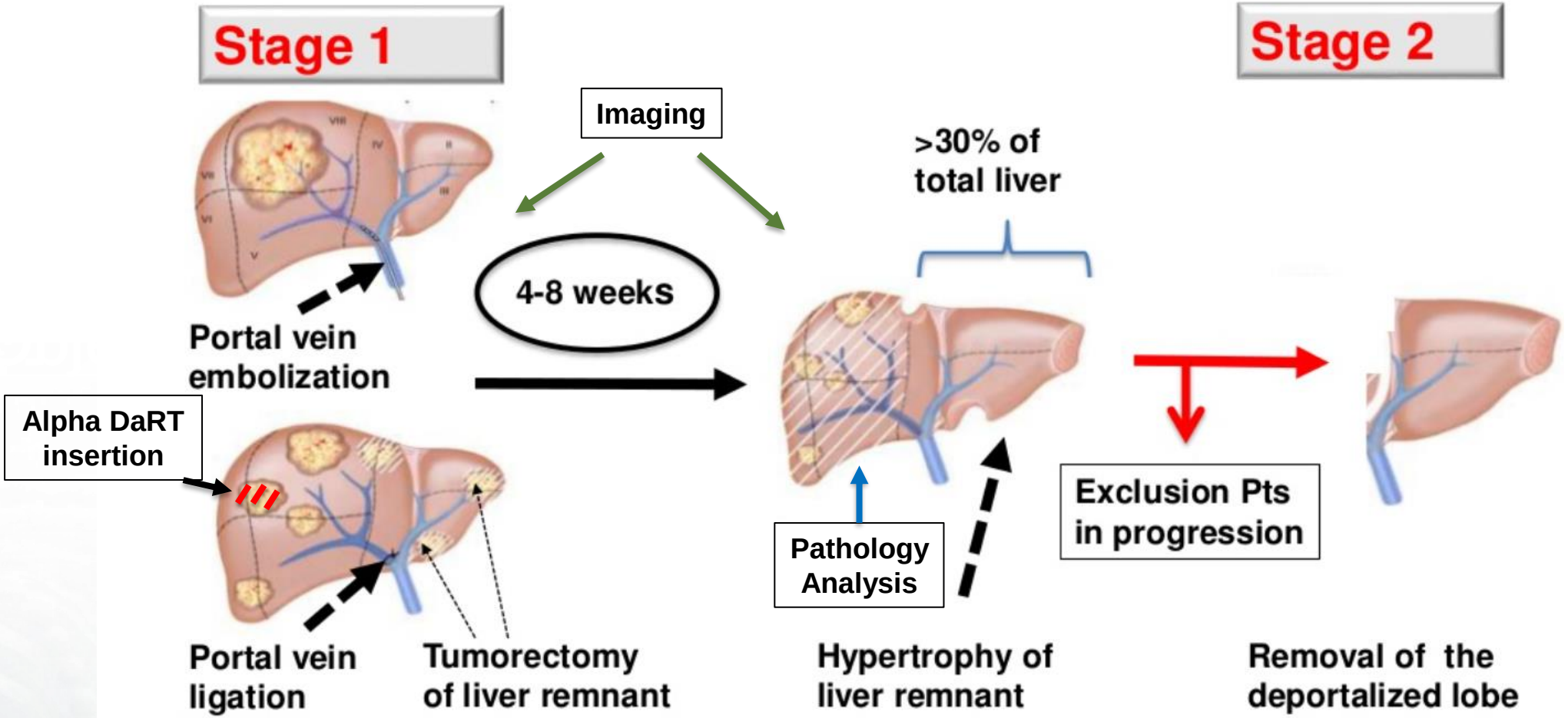
Other Indications

A Feasibility and Safety study of Intratumoral Diffusing Alpha Radiation Emitters for the Treatment of Liver Metastases

CTP-LIV-00

Study Schema

Liver study



Clavien et al. Strategies for safer liver surgery. NEJM, 2017

Outline of Draft Liver Metastases Study

Primary objectives: Evaluate feasibility & safety of Alpha DaRT implanted in liver metastases

Secondary / exploratory objectives: Evaluate pathological and radiological response, determine immunological impact, stratify differences in response by histopath. growth patterns (vascular / immuno.)

Key Eligibility Criteria

Referred for a **two-staged hepatectomy** to resect liver metastases of colorectal cancer

No prior use of **systemic investigational agents** for primary cancer

Sample size N = 10 patients

Treatment and Procedure

Treatment plan based on CT scan or MRI

Sources 0.7 mm in diameter and 1 cm in length

Activity per source 3 µCi

General anesthesia

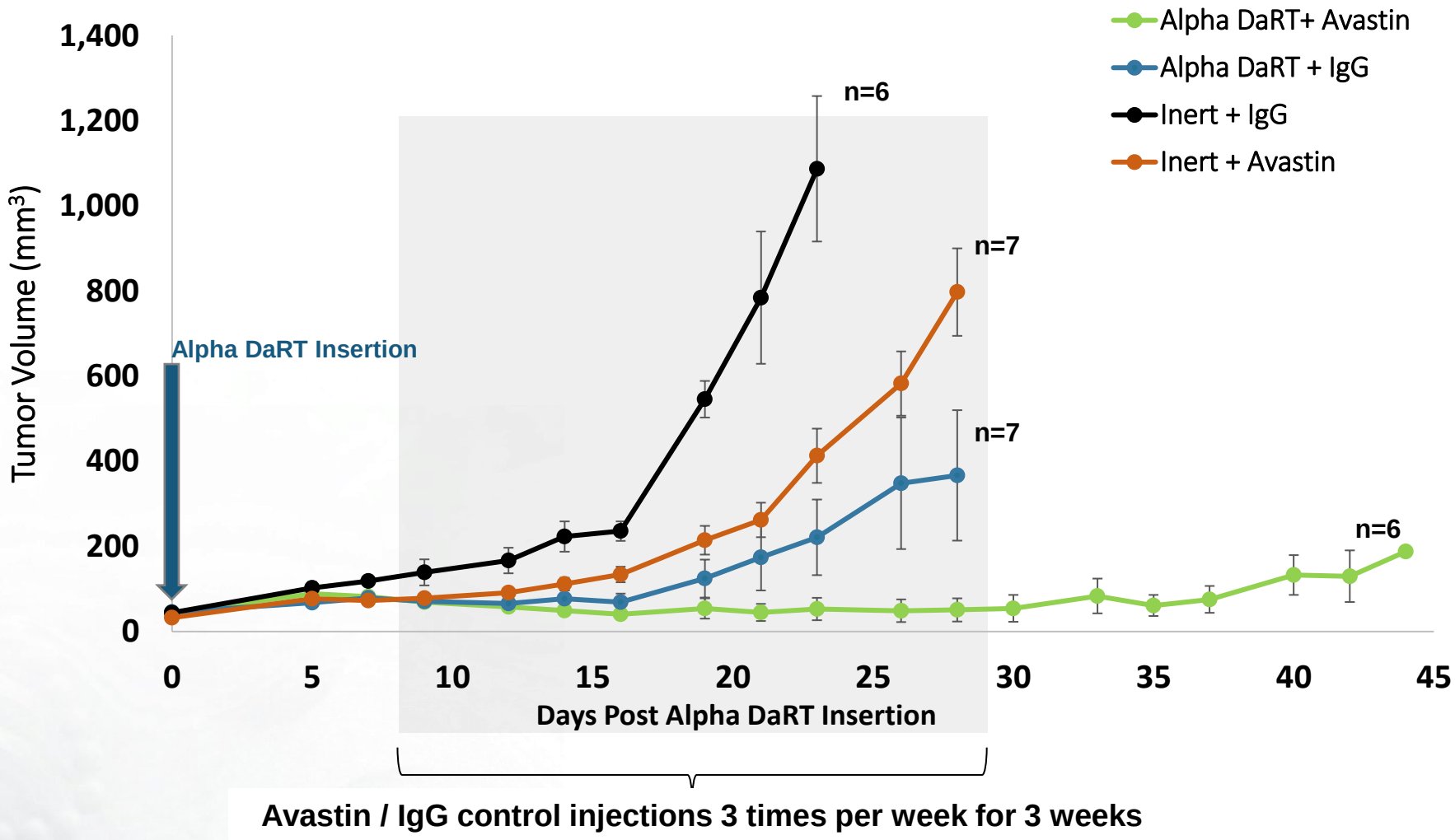
Timeline

- **1st operation:** one side of the liver is cleared from its metastases & Alpha DaRT sources are implanted in the other side of the liver
- 3 - 4 cycles of **chemotherapy** (6 - 8 weeks)
- **2nd operation:** The liver lobe containing the metastasis with the sources is resected, to leave the patient with a disease-free liver

Other Indications

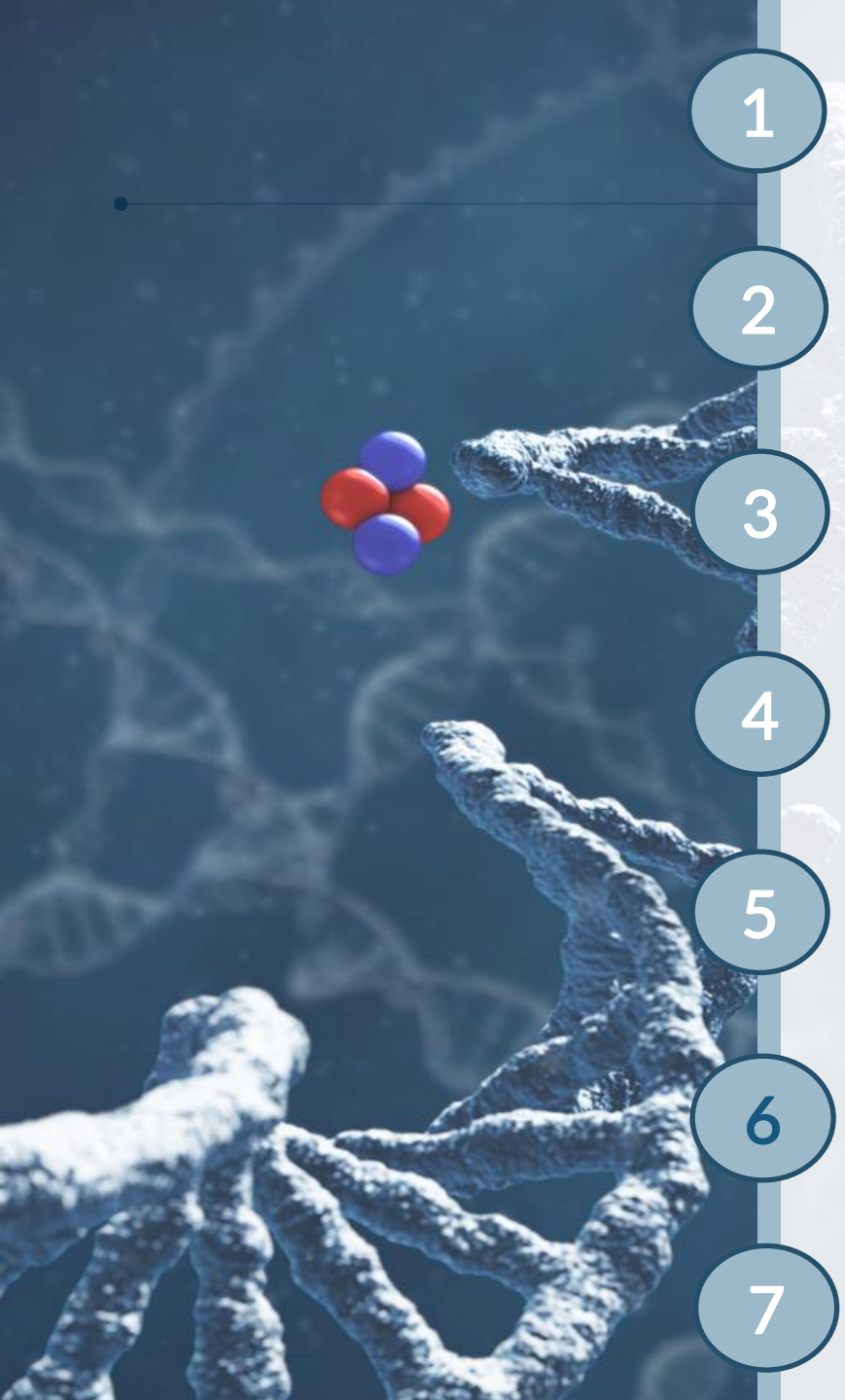
Early Look at Efforts in Glioblastoma Multiforme

Alpha DaRT + Avastin Combo Showed Attenuated Growth of GBM Xenografts



Radial Applicator Overview

https://www.youtube.com/watch?v=IJY965J0xMk



Future Outlook

Raphi Levy, CFO

Development Pipeline

- Our clinical trial strategy involves progressing our lead program (superficial tumors), particularly in the US, and conducting feasibility studies in other tumors to evaluate the Alpha DaRT in tumors of high unmet need or metastatic disease
- FDA Breakthrough Device Designation received for certain uses in skin cancer and GBM

Geography	Indication	Pre-Clinical Research / Feasibility Trial / Pivotal Trial / Marketing Authorization	Anticipated Milestones
North America	Skin Cancers	U.S.	• First patient into US pivotal trial targeted for 2H 2022
	Pancreatic Cancer	Canada	• First patient in feasibility trial 2H 2022
	Liver Cancer	Canada	• Trial in planning
Israel	Skin & Oral SCC		
	All Skin & Oral Cancers		• Trial completion and submission
	Ia/mHNSCC (combo with pembrolizumab)		• Feasibility combination trial with Keytruda initiated 4Q 2021; awaiting interim results
	Pancreatic Cancer		• Initiate feasibility trial 4Q 2022
	Breast Cancer		• Trial in planning
	Prostate Cancer		• Trial initiated 2Q 2022 – data ~2Q 2023
Europe	Skin Cancers		• Trials underway
	Pancreatic Cancer		• Trial in planning
Japan	Head & Neck SCC		• Potential PMDA submission in 3Q 2022
	Breast Cancer		• Trial underway
Additional Tumors	Hepatic Cell Carcinoma , GBM, lung		• Development / pre-clinical trials underway

Anticipated Milestones

Geography	Indication	2H 2022	1H 2023	2H 2023
North America	Recurrent Cutaneous SCC (United States)	First patient treated in multi-center pivotal trial		Completion of multi-center pivotal trial recruitment
	Pancreatic Cancer (Canada) *(Tentative)*	First patient in feasibility trial	Interim read-out of feasibility trial	
Israel	Prostate Cancer		Read-out of prostate cancer trial data	
	Pancreatic Cancer	Initiate feasibility trial		
Japan	Head & Neck SCC	Potential submission of pivotal trial for PMDA review	Potential PMDA approval	

Clinical / Enrollment Regulatory

Questions?