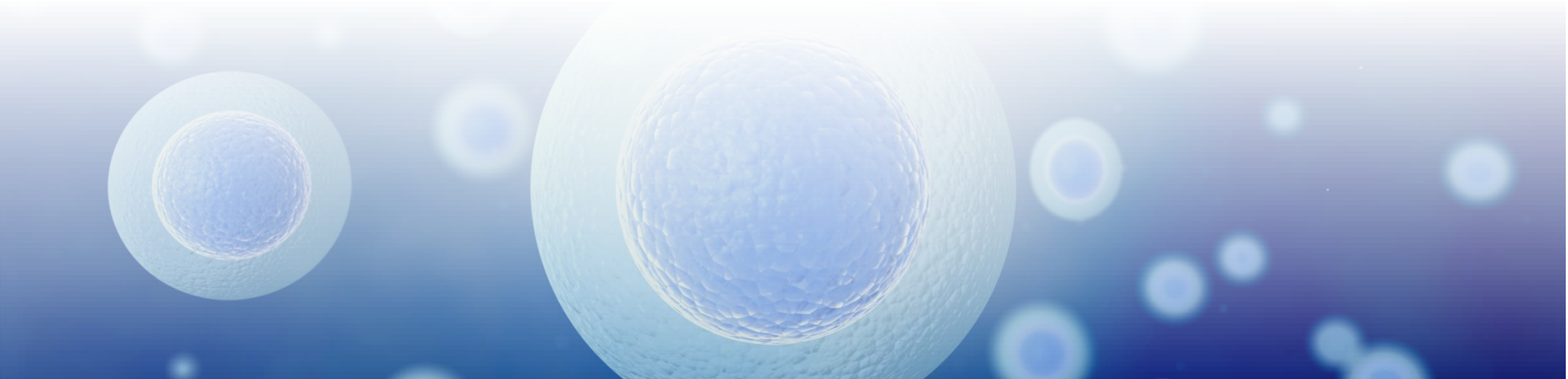
PharmaCyte Biotech

BIO International Convention

The Global Event for Biotechnology



Safe Harbor Statement

- This document may include statements that constitute “forward looking statements,” which are often characterized by the terms “may,” “believes,” expects” or “anticipates” and do not reflect facts.

- Forward-looking statements involve risks, uncertainties and other factors that may cause actual results, performance or achievements of PharmaCyte Biotech and its subsidiaries to be materially different from those expressed or implied by such forward-looking statements. Forward-looking statements speak only as of the date the statement was made. PharmaCyte does not undertake, and specifically declines, any obligation to update any forward-looking statements.

- Factors that may affect forward-looking statements and PharmaCyte’s business generally include, but are not limited to: (i) the risk factors, cautionary and other statements set forth in PharmaCyte’s periodic filings with the Securities and Exchange Commission available at www.sec.gov; and (ii) other factors that PharmaCyte is currently unable to identify or quantify, but may exist in the future.

Cellular Platform Technology

Encapsulate Genetically Modified Live Cells to Treat Diseases

- Cancer:
  - Encapsulate genetically modified live cells that convert a prodrug from its inactive form to its cancer killing form
  - Encapsulated cells are implanted near the site of the tumor; low dose chemotherapy prodrug given IV. Encapsulated cells act as an artificial liver to convert the prodrug at the site of the tumor
  - Optimal cytotoxic effect with no treatment-related side effects
- Diabetes:
  - Encapsulated cells produce, store and release insulin in response to concentrations of glucose in the body
  - Encapsulated cells are implanted to act as an artificial pancreas for insulin production

Cell-in-a-Box® Capsules

Encapsulation Material

- Capsules are made of bio-inert material (cellulose/cotton)
- Capsules have pores for nutrient and waste transfer
- Pores are too small for immune system cells to enter or encapsulated live cells to leave
- Long-term (5+ years) frozen storage of encapsulated live cells with more than 95% viability of live cells upon thawing
- Manageable logistics and long shelf-life
- Other live cell encapsulation technologies use alginate – derived from seaweed – for the encapsulation material. All are far less robust and stable. None can be frozen to ship the encapsulated live cells
- Capsules shown to be safe, effective and durable for at least two years in the human body

Product Pipeline

Pancreatic Cancer:
Encapsulated live cells converting ifosfamide – antitumor effectiveness

Abdominal Cancers:
Encapsulated live cells converting ifosfamide – delaying malignant ascites fluid production and accumulation

Diabetes:
Encapsulated live cells producing insulin – treatment for Type 1 and insulin-dependent Type 2 diabetics

Cannabinoids:
Encapsulated live cells converting cannabinoid prodrug – antitumor effectiveness

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Problem: Pancreatic Cancer

Aggressive Cancer with Poor Prognosis

- Third leading cause of cancer-related deaths in the western world
- Overall survival rate is 8%
- Expected pancreatic cancer patients in 2017: U.S. >53,000; Europe >80,000
- Approximately 72% die within the first year of diagnosis
- More than 90% die within 2 years of diagnosis

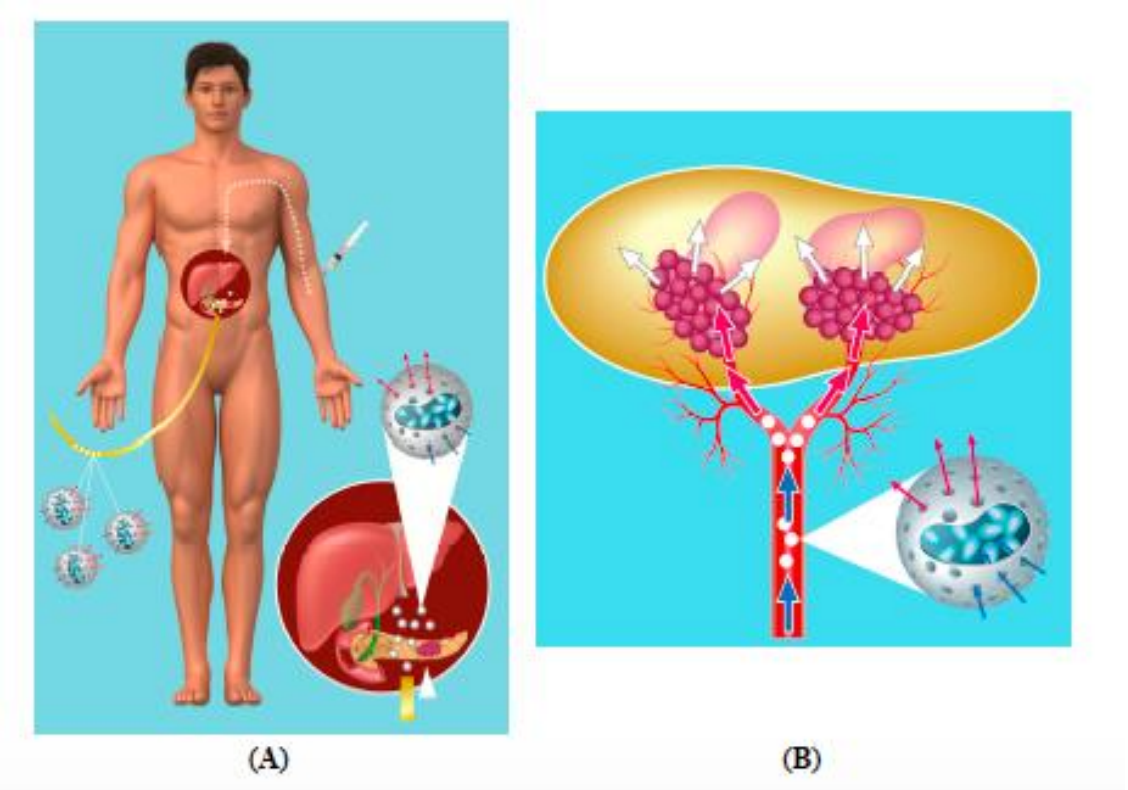
- Usually not diagnosed until cancer is advanced and inoperable
- No cure unless cancer is surgically removed in its earliest stages
- Since the first drug (gemcitabine) was approved for pancreatic cancer in 1996 approximately 40 pivotal clinical trials have been conducted
- Little improvement in median survival time and percentage of 1-year survivors for almost 20 years
- Most success has been achieved with gemcitabine + another chemotherapy drug

Solution: Targeted Chemotherapy

Cell-in-a-Box® + Ifosfamide Targeted Chemotherapy

- Ifosfamide at “normal dose” has shown success in treating testicular cancer, but cannot be used at normal dose due to severe toxicity
- Cell-in-a-Box® capsules containing genetically modified live cells that produce an enzyme which converts ifosfamide into its cancer-killing form are implanted in blood supply near the tumor
- Ifosfamide is given intravenously at 1/3 the normal dose. Ifosfamide is converted at site of tumor instead of the liver
- Placement of Cell-in-a-Box® capsules near the tumor enables optimal concentrations of the “cancer-killing” form of ifosfamide at the site of the tumor
- Cancer-killing metabolite of ifosfamide has a short half-life, resulting in little to no collateral damage to other organs in the body
- Significantly reduces tumor size with no treatment-related side effects

Targeted Deployment and Activation



- Capsules containing live ifosfamide-activating cells are implanted in the blood vessels leading to the pancreas tumor
- Low dose ifosfamide is given intravenously
- Ifosfamide is converted to its cancer-killing form by the encapsulated live cells

Blue Arrow: Ifosfamide enters capsules
Red Arrow: Conversion to active form
White Arrow: Activated ifosfamide targets tumor

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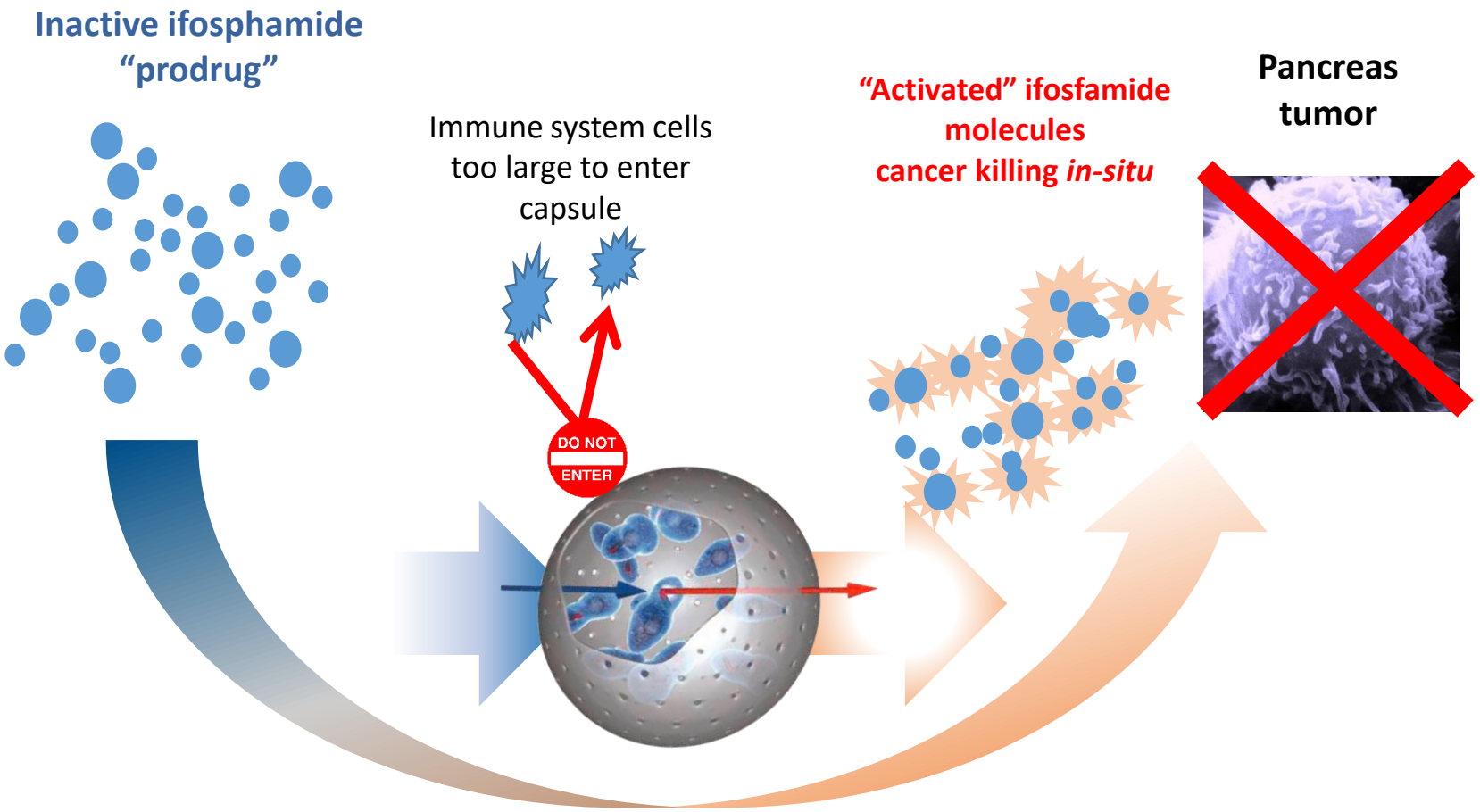
Mechanism of Action



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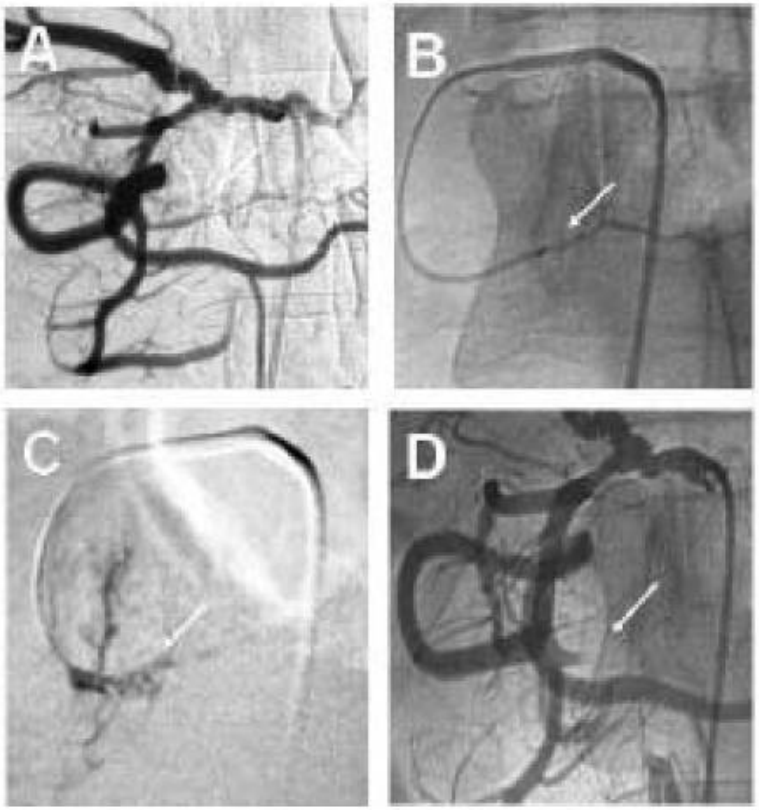
Placement of Encapsulated Cells



A. Angiography of blood vessels to the pancreas

B. Insertion of catheter into the pancreas blood vessel (arrow)

C. Injection of microcapsules

D. Angiography shortly after capsule implantation (arrow)

Blood supply to the pancreas is not impeded by the capsules

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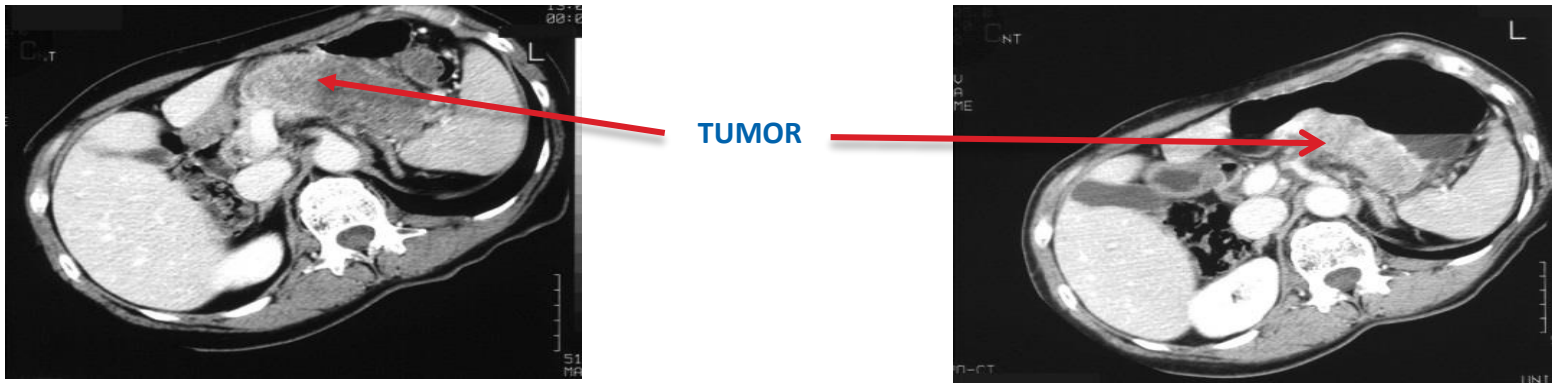
Phase 1/2 Trial

Trial Design and Endpoints

- Fourteen patients were treated with only two courses of ifosfamide at 1/3 (1 g/m^2) of the dose normally used to treat other forms of cancer
- Patients with advanced, inoperable pancreatic cancer were treated in a single-arm (no comparator arm) trial at a single study site in Rostock, Germany
- Feasibility, safety, tolerability and clinical benefit were endpoints
- Tumor responsiveness to treatment was determined by response rate, median survival and percentage of one-year survivors
- Results were compared to historical data for gemcitabine, the “gold standard” of treatment for pancreatic cancer at the time



Before Treatment

20 Weeks after Treatment

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Previous Trials in Pancreatic Cancer

Phase 1/2 Clinical Trial with Two Courses of Low Dose Ifosfamide

- Median survival: gemcitabine = 5.7 months *vs.* Cell-in-a-Box® + ifosfamide = 10 months
- Percentage of 1-year survivors: gemcitabine = 18% *vs.* Cell-in-a-Box® + ifosfamide =36%
- Treatment-related side effects: gemcitabine = significant *vs.* Cell-in-a-Box® + ifosfamide = none

Phase 2 Clinical Trial with Two Courses of Twice the Amount of Ifosfamide

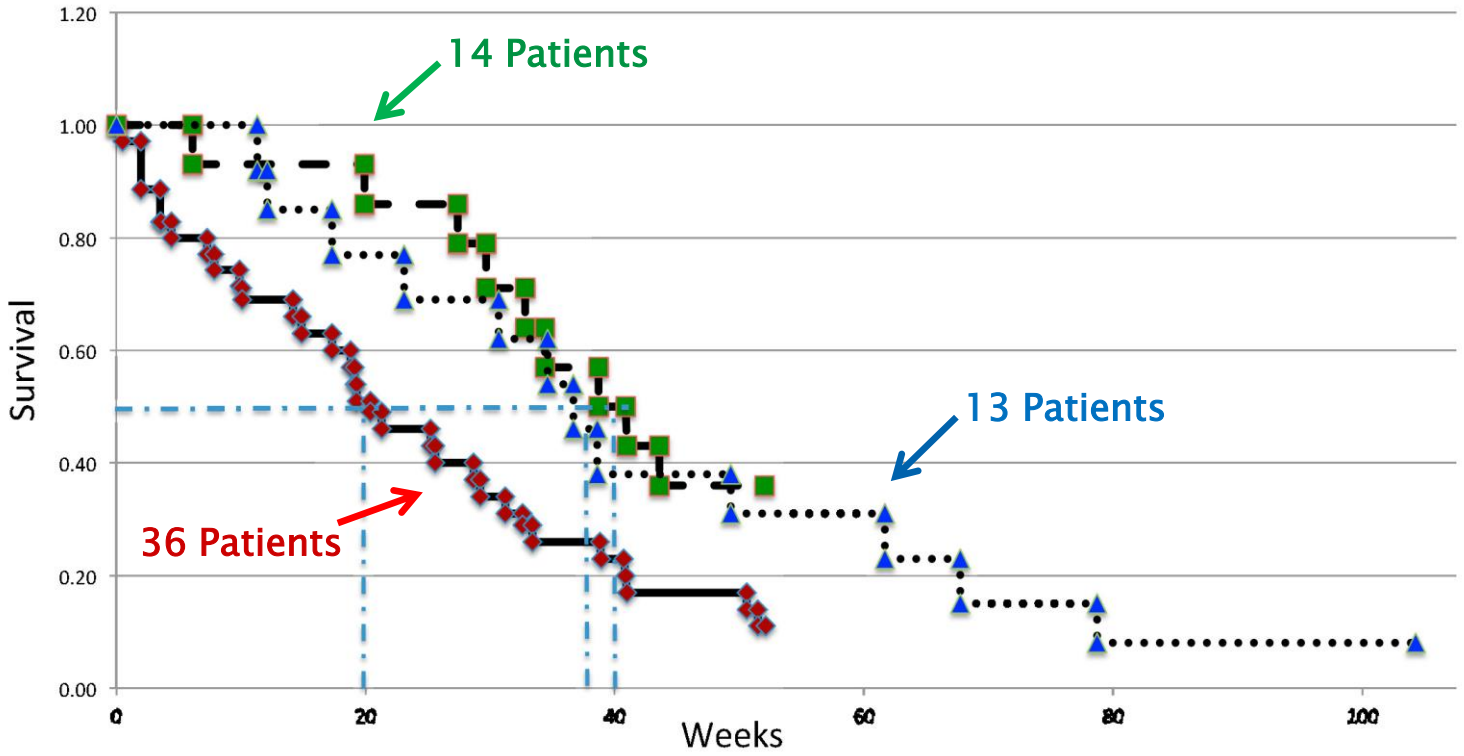
- Thirteen patients with advanced, inoperable pancreatic cancer were treated in a single-arm, multi-site (3 in Germany [Rostock, Berlin, Munich], 1 in Berne, Switzerland) study. The only difference from the Phase 1/2 trial was that the dose of ifosfamide was doubled to 2 g/m^2 in an attempt to get better antitumor effects
- Doubling the dose of ifosfamide did not result in greater antitumor effectiveness, but resulted in treatment-related side effects

Overall Comparison of Results of the Two Clinical Trials

- When used in combination with Cell-in-a-Box® capsules, ifosfamide should be given at 1/3 of its normal dose to maximize anti-tumor effect and eliminate side effects. The therapy was deemed to be safe, effective and well tolerated by patients. In some cases, the patient's tumor went from inoperable to operable

Survival Results of Trials

Kaplan–Meier Curves Describing Patient Survival



- Phase 1/2 clinical trial in green boxes
- Phase 2 clinical trial in blue triangles
- Age and disease stage matched historic control group receiving the best available standard care in red diamonds

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Pancreatic Cancer Treatment Options

Current Standard of Care is Combination of Abraxane® + Gemcitabine

- Combination approved by FDA in September 2013
- Increased median survival by 1.8 months as compared to gemcitabine alone
- Increased the percentage of one-year survivors from 22% with gemcitabine to 38% with Abraxane® + gemcitabine
- Severe side effects from Abraxane® + gemcitabine therapy

Another Widely Used Combination is FOLFIRINOX

- A combination of 4 drugs: folinic acid, 5-fluorouracil, irinotecan and oxaliplatin
- Phase 3 clinical trial done in France. Never achieved marketing approval
- Should only be used in otherwise healthy patients
- Severe side effects from FOLFIRINOX therapy

Pivotal Trial to Address Unmet Medical Need

PharmaCyte Addressing Critical Unmet Medical Need

- A critical unmet medical need exists for patients with advanced pancreatic cancer whose tumors are locally advanced, non-metastatic and inoperable but no longer respond to Abraxane® + gemcitabine
- These patients have no effective treatment alternative once their tumors fail to respond to this combination therapy
- Commonly used treatments for such patients are 5-fluorouracil (5-FU) or capecitabine (a prodrug of 5-FU) chemotherapy +/- radiation
- These treatments are marginally effective in treating the tumor and result in substantial side effects
- The goal of the trial is to show that PharmaCyte's therapy for pancreatic cancer can serve as a "consolidation therapy" with Abraxane® + gemcitabine and address the unmet medical need for these pancreatic cancer patients

Pivotal Trial Design Oncologists

Dr. Daniel Von Hoff

Dr. Manuel Hidalgo

Dr. Matthias Löhr

Pivotal Trial Design Oncologists (cont'd)

Dr. Daniel Von Hoff

- The world's leading oncologist in the development of drugs to treat pancreatic cancer
- Involved in clinical trials of more than 200 anticancer and biologic drugs
- Conducted early clinical trials for most of the cancer agents approved in the U.S. in the last 20 years
- Intimately involved in the clinical development gemcitabine and Abraxane® for pancreatic cancer
- Editor of numerous oncologic scientific journals; recipient of numerous awards for cancer-related activities
- Professor of Medicine at Mayo Clinic Scottsdale and University Arizona College of Medicine, Chief Scientific Officer of Scottsdale Healthcare and U.S. Oncology, Physician-in-Chief and Distinguished Professor of the Translational Genomics Research Institute (TGen) and Chief Development Officer of TD2

Dr. Manuel Hidalgo

- Internationally-renowned oncologist and clinical investigator in pancreatic and other cancers
- Co-founder and Chairman of the International Pancreatic Cancer Research Team
- Assisted in the development of more than 30 novel oncology drugs; several for pancreatic cancer
- Head of Clinical Development at the Spanish National Cancer Research Center in Madrid and Co-Director of Drug Development and Gastrointestinal Oncology at Johns Hopkins University
- Currently Clinical Director of the Rosenberg Clinical Cancer Center and Chief of the Division of Hematology-Oncology at Beth Israel Deaconess Medical Center in Boston

Dr. Matthias Löhr

- Europe's leading authority in diseases of the pancreas (pancreatic cancer and diabetes)
- Has published numerous important articles and commentaries on pancreatic cancer and on the use of the Cell-in-a-Box® technology
- Principal Investigator for previous clinical trials of PharmaCyte's pancreatic cancer treatment
- Chairman of PharmaCyte's Scientific Advisory Board
- Currently Professor of Gastroenterology and Hepatology at Sweden's famed Karolinska Institute

Pivotal Trial Design

Elements of Trial Design

- **Design:** Trial will be two-armed
- **Location:** Trial will be conducted in the United States and Europe
- **Objective:** Trial is designed to show Cell-in-a-Box® + low-dose ifosfamide can serve as an effective and safe consolidation chemotherapy for patients whose tumors no longer respond to Abraxane® + gemcitabine
- **CRO Administration:** Trial will be conducted in the U.S. by Translational Drug Development (TD2) and in Europe by Clinical Network Services (CNS) in alliance with TD2
- **TD2 Responsibilities:** Clinical development plans, program analysis, medical writing, clinical management and database development
- **Imaging Endpoints Responsibilities:** Coordinating implantation of the Cell-in-a-Box® capsules and all measurements of antitumor effectiveness of the therapy through CT and PET scans
- **Start Date:** Trial is expected to start in Q4 of 2017
- **Eligibility:** Only patients whose tumors are locally advanced, inoperable and non-metastatic will be eligible to be enrolled

Pivotal Trial Design (cont'd)

Elements of Trial Design (cont'd)

- **Eligibility (cont'd):** Patients must have been treated with Abraxane® + gemcitabine for 4-6 months and their tumors no longer respond to this therapy
- **Randomization:** Patients will be randomized into two groups. One group will receive 5-fluorouracil + leucovorin. The other group will receive PharmaCyte's pancreatic cancer therapy
- **Treatment Group:** Each patient treated with PharmaCyte's therapy will receive a single implantation of 300 Cell-in-a-Box® capsules + multiple courses of low-dose ifosfamide until they become refractory
- **Primary Endpoints:** Overall survival (OS) assessed at 14, 26 and 52 weeks and safety and tolerability of the comparative therapies
- **Secondary Endpoints:**
  - Progression-free survival (PFS) assessed at 26 and 52 weeks
  - Objective response rate at 14, 26 and 52 weeks as measured by CT and PET scans
  - Assessment of a patient's tumor going from inoperable to operable after 14, 26 and 52 weeks
  - Time to onset of pain and pain management after 14, 26 and 52 weeks
  - Assessment of patients' overall quality-of-life while undergoing PharmaCyte's therapy

Trial Preparations

Manufacturing Capability

- cGMP facility successfully audited and deemed ready for production
- Production of trial material being validated
- Trial material expected to be available Q3 2017

Trial in United States and Europe

- Dr. Manuel Manuel Hidalgo selected as Principal Investigator
- Pre-IND meeting held with FDA in January 2017
- Trial design completed
- Protocol being finalized
- IND application being drafted
- Trial sites being identified
- 2017 ASCO meeting with potential investigators
- First patient expected to be enrolled in Q4 2017

Questions?

Answers

Thank you