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## THANK YOU TO OUR WEBINAR SPONSORS



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## THANK YOU TO OUR CURRENT SCIENTIFIC & MEDICAL AFFAIRS INDUSTRY MEMBERS

abbvie



angiodynamics



RAFAEL  
"The Science of Life is The Science of Discovery"

TEMPUS



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## HOW TO PARTICIPATE

### Q&A

**Please enter questions in the Q&A box.**

Our panelists will take your questions and comments at the end of the discussion.

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## HOW WE'RE TAKING ON PANCREATIC CANCER



**Research and  
Clinical Initiatives**



**Government  
Advocacy**



**Patient Services**



**Community  
Engagement**

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## PanCAN's STATEMENT REGARDING CLINICAL TRIALS

Pancreatic cancer patients who participate in clinical research have better outcomes. Every treatment available today was approved through a clinical trial. The Pancreatic Cancer Action Network strongly recommends clinical trials at diagnosis and during every treatment decision.

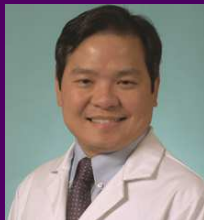


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## PANCREATIC CANCER CLINICAL TRIALS



**Kian Lim MD, PhD**

Associate Professor

Director, GI Oncology Program

Washington University School of Medicine

St. Louis, Missouri

Precision Promise Principal Investigator

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## AGENDA

Overview of the current treatment strategies in pancreatic cancer

Clinical trials

- Why do we need clinical trials?
- How do clinical trials work?
- Common myths/misconceptions about clinical trials

Novel clinical trials based on new understanding of pancreatic cancer

- Innovative clinical trials
- An example of a patient being treated on a clinical trial

- Take home messages



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## CURRENT TREATMENT FOR PANCREATIC CANCER

STAGE	TREATMENT
Localized / resectable 10%	Surgery → chemotherapy → radiation(?) Clinical trial
Locally advanced Borderline resectable 25-30%	Chemotherapy ± chemoradiation → surgery(?) Clinical trial
Metastatic 55-60%	Chemotherapy (FOLFIRINOX, Gemcitabine/Abraxane) Clinical trial

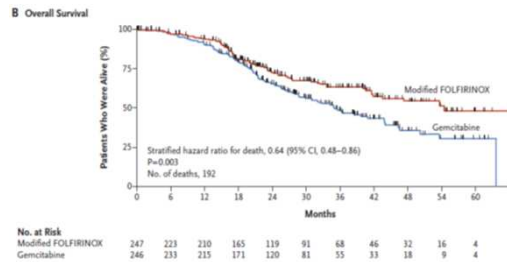


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## CURRENT STATUS: YEAR 2020

### FOLFIRINOX or Gemcitabine as Adjuvant Therapy for Pancreatic Cancer

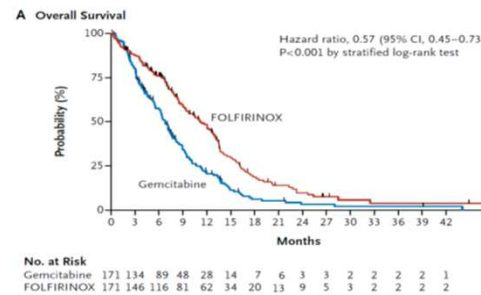
T. Conroy, P. Hammel, M. Hebbar, M. Ben Abdelghani, A.C. Wei, J.-L. Raoul, L. Choné, E. Francois, P. Artru, J.J. Blagi, T. Lecomte, E. Assenat, R. Farou, M. Ychou, J. Volet, A. Sauvanet, G. Braysacher, F. Di Fiore, C. Cripps, P. Kavan, P. Texereau, K. Bouhvier-Lepoint, F. Khemissa-Akrouz, J.-L. Legoux, B. Juzyna, S. Gourgou, C.J. O'Callaghan, C. Jouffroy-Zeller, P. Rat, D. Malka, F. Castan, and J.-B. Bachet, for the Canadian Cancer Trials Group and the Unicancer-GI-PRODIGE Group\*



Resectable: 10-15% of all patients

### FOLFIRINOX versus Gemcitabine for Metastatic Pancreatic Cancer

N ENGL J MED 364:19 NEJM.ORG MAY 12, 2011

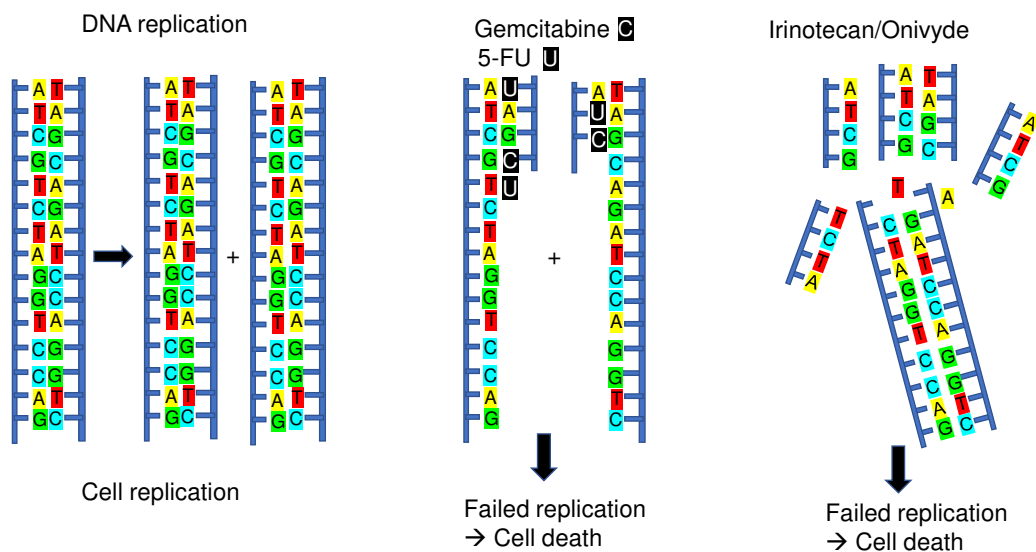


Unresectable: >85% of all patients

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## CHEMOTHERAPY WORKS BY DISRUPTING DNA REPLICATION



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## CHEMOTHERAPY IS HEAVILY USED IN PANCREATIC CANCER

**Early stage:** surgery → chemotherapy

**Advanced stage:** Chemotherapy (FOLFIRINOX, Gemcitabine/Abraxane)

### Limitations:

- side effects: nausea, vomiting, diarrhea, neuropathy, low blood counts, hair loss, loss of appetite, taste change, infection, etc.
- doesn't work for a long time
- doesn't work in every patient



**We need to improve our treatments**

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## NECESSARY ELEMENTS TO IMPROVE PATIENT CARE

### **Clinical aspect: optimization of care**

- Pancreatic cancer patients are faced with many challenges
  - pain, weight loss, poor appetite, jaundice, bowel obstruction, ascites
  - side effects from chemotherapy
  - fear, frustration, helplessness, loneliness, guilt for burdening others
- A multimodality team is needed
  - surgeons, medical oncologists, radiation oncologists, interventional gastroenterologists, interventional radiologists, pain specialists, nutritionists, nurses, psychologists, patient support groups

### **Research aspect: development of more effective treatment**

- Scientific research to develop new treatment strategies in the lab
- Clinical research to bring new treatment to patients: **Clinical trials**

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## CLINICAL TRIAL PARTICIPATION

- Clinical trial participation is **critical** for us to make progress in fighting cancer
- Patients do better on clinical trials than on standard therapy – closer oversight
- Access to cutting-edge therapies
- Clinical trial participation is generally low
  - Only ~5% of newly diagnosed pancreatic cancer patients are enrolled in clinical trials



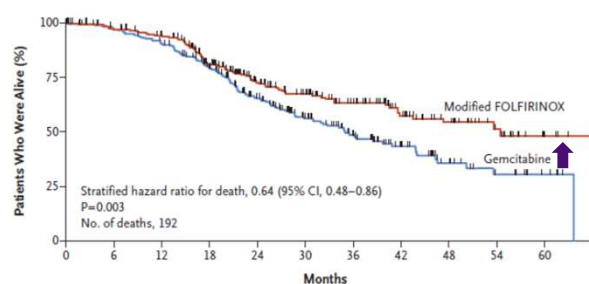
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## CLINICAL TRIALS FUEL PROGRESS

### FOLFIRINOX or Gemcitabine as Adjuvant Therapy for Pancreatic Cancer

T. Conroy, P. Hammel, M. Hebbard, M. Ben Abdelghani, A.C. Wei, J.-L. Raoul, L. Choné, E. Francois, P. Artru, J.J. Biagi, T. Lecomte, E. Assenat, R. Faroux, M. Ychou, J. Volet, A. Sauvanet, G. Breysacher, F. Di Fiore, C. Cripps, P. Kavan, P. Texereau, K. Bouhier-Leporrier, F. Khemissa-Akouz, J.-L. Legoux, B. Juzyna, S. Gourgou, C.J. O'Callaghan, C. Jouffroy-Zeller, P. Rat, D. Malka, F. Castan, and J.-B. Bachet, for the Canadian Cancer Trials Group and the Unicancer-GI-PRODIGE Group<sup>a</sup>

#### B Overall Survival



No. at Risk											
Modified FOLFIRINOX	247	223	210	165	119	91	68	46	32	16	4
Gemcitabine	246	233	215	171	120	81	55	33	18	9	4

#### BUT....

- Study opened for 4.5 years (April 2012 -October 2016)
- Published in December 2018→ 6.5 years
- 77 hospitals in France and Canada

#### Can we do better?

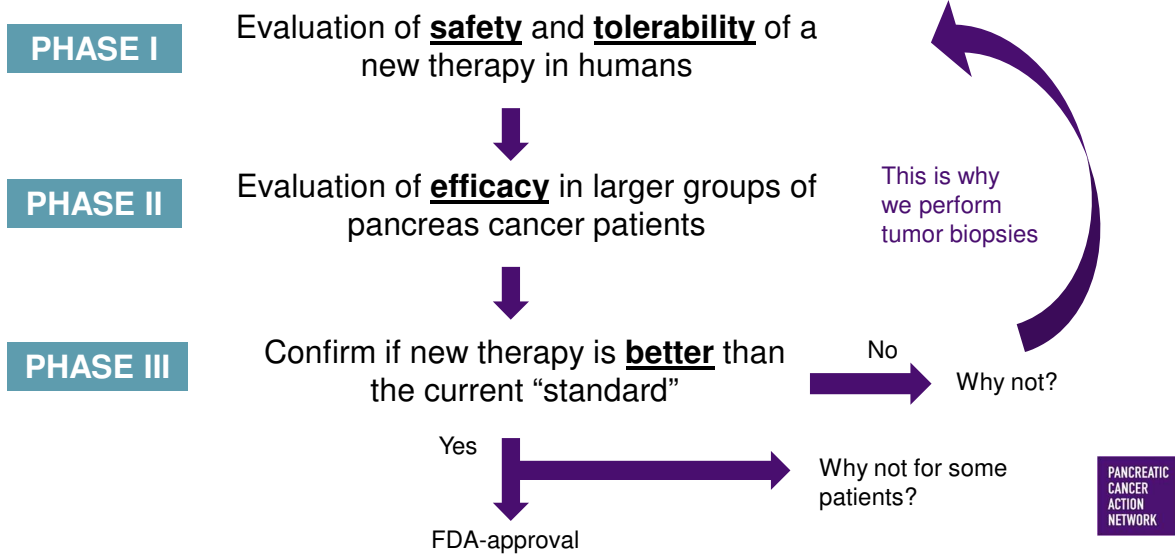
- **Faster accrual**
- **More effective treatments**



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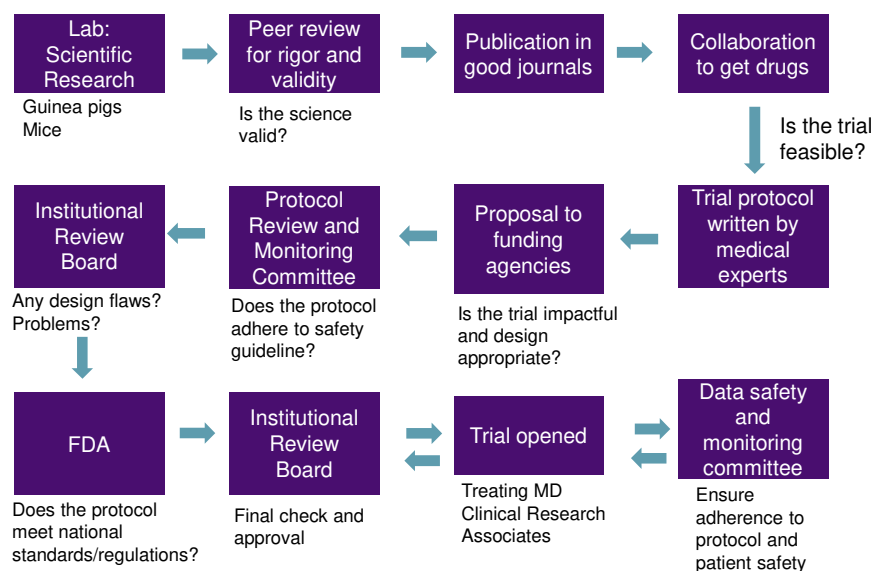


## CLINICAL TRIAL DEVELOPMENT PROCESS



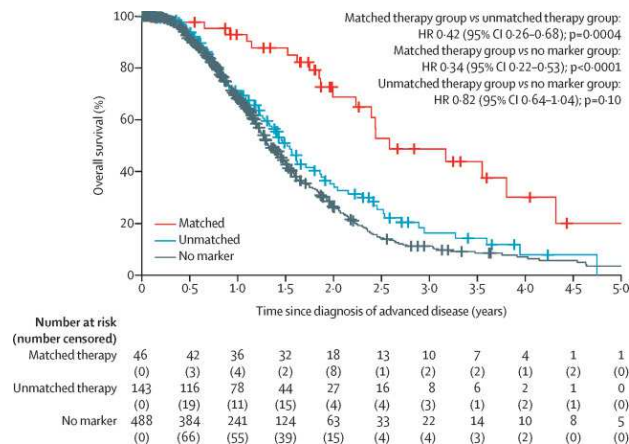
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## CLINICAL TRIAL DEVELOPMENT IS HIGHLY REGULATED



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## PANCREATIC CANCER PATIENTS TREATED ACCORDING TO THEIR TUMOR GENETICS HAVE BETTER OUTCOMES



Lancet Oncol. 2020 Apr;21(4):508-518. doi: 10.1016/S1470-2045(20)30074-7

**KNOW YOUR TUMOR**

Powerful Knowledge. Personalized Treatment.

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## COMMON MISCONCEPTIONS/MYTHS ABOUT CLINICAL TRIALS

MYTHS	TRUTHS
Patients are treated as guinea pigs.	<b>Patient safety is a top priority</b> in clinical trials. Patients are closely monitored and have rights that protect them.
Clinical trials are for patients that have run out of options.	A clinical trial is always an option, regardless of when the patient was diagnosed or what treatments they received.
Patients may receive a placebo, not a treatment.	Placebos are never used in replacement of standard of care.
Clinical trials are more expensive for the patient.	Federal law requires most health insurance plans cover the routine care costs of a clinical trial. Research costs are those related to taking part in a trial, which are covered by the trial sponsor.
Participation in clinical trials is not important.	Participation in clinical trials is crucial. Every treatment available today was approved through a clinical trial.

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## KNOW OUR ENEMY: WHY IS PANCREATIC CANCER SO DIFFICULT TO TREAT

### Clinical manifestation

- No early symptoms, no screening tools or early detection test
- Anatomically located in a delicate area with a lot of surrounding blood vessels and organs
- High rate of metastasis when diagnosed

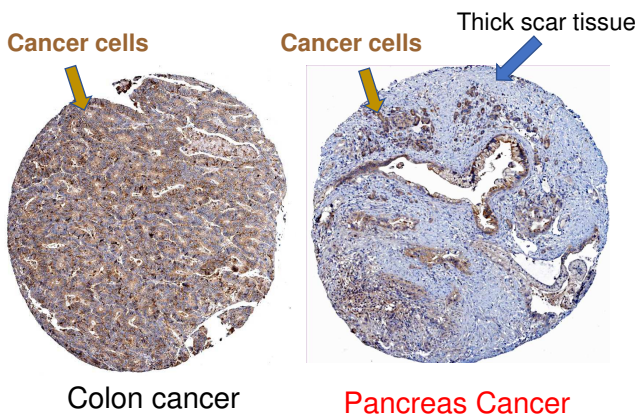
### Biology

- Powerful genetic defects leading to aggressive behavior  
Solution: Identify the cancer's genetic vulnerabilities
- Shielded by thick fibrotic/scar tissues and become invisible to our body's immune defense system  
Solution: Innovative clinical trials to unleash our immune defense



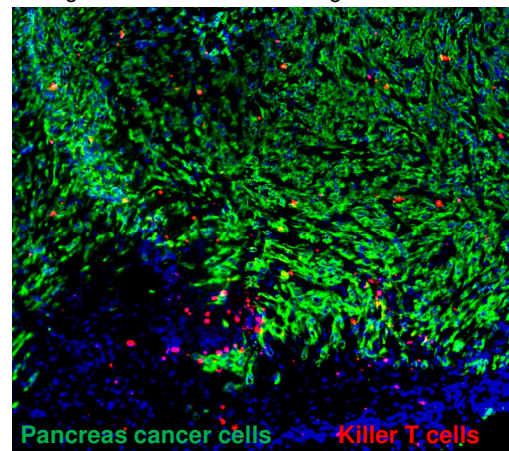
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## PANCREAS CANCER CELLS ARE WELL-SHIELDED FROM IMMUNE ATTACK



*Adopted from The Human Protein Atlas*

Our good immune cells can't get inside the tumor



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# DIFFERENT TREATMENT APPROACHES BEING STUDIED IN CURRENT PANCREATIC CANCER CLINICAL TRIALS

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## TYPES OF TREATMENT APPROACHES

- Targeted Therapies
- Immunotherapy
- Metabolism and Nutrition

### THE RECALCITRANT CANCER RESEARCH ACT AN IMPORTANT STEP TOWARD IMPROVING PANCREATIC CANCER SURVIVAL

#### Four Priorities for Pancreatic Cancer Research

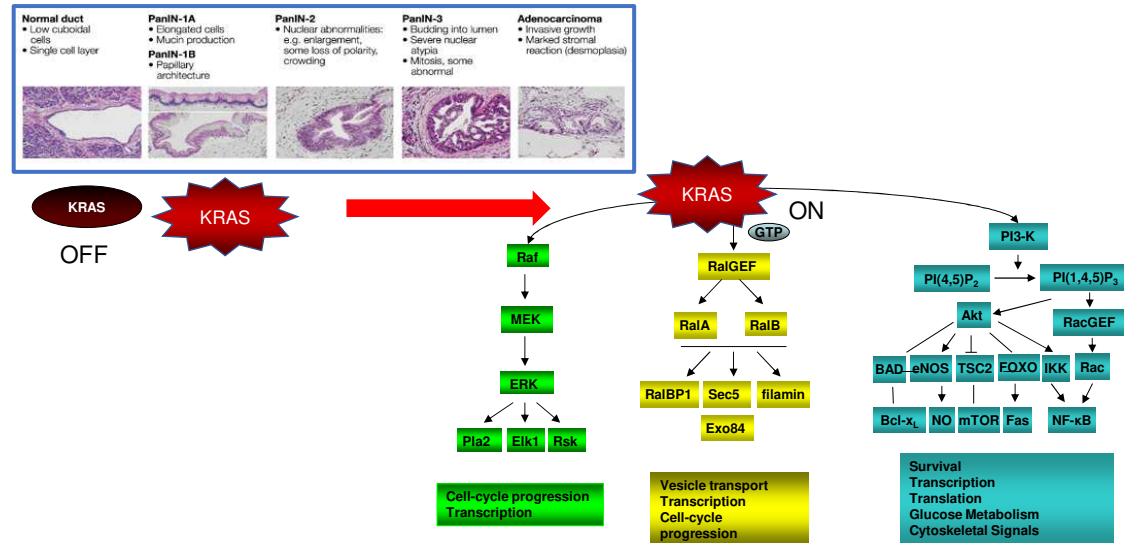
1. New therapeutic strategies in **immunotherapy**
2. New treatment approach that interferes with **RAS oncogene dependent pathways (Targeted therapies)**
3. Understanding relationship between diabetes and pancreatic cancer
4. Pancreatic cancer biomarker



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## TARGETED THERAPY APPROACH

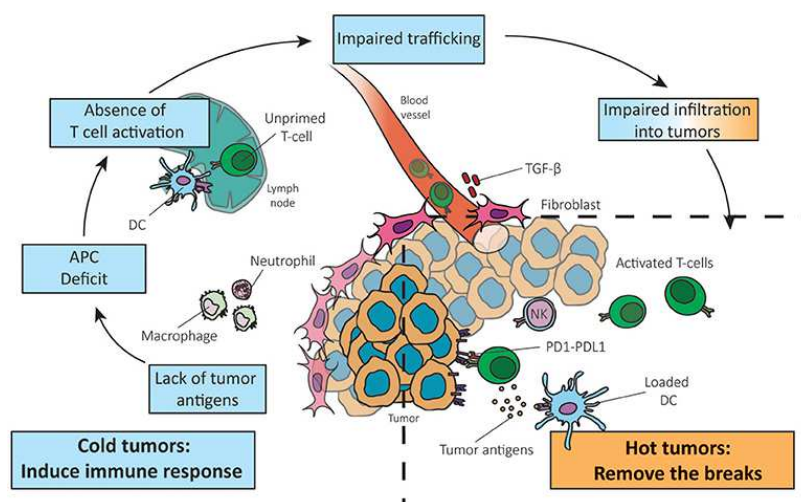
>90% OF PANCREATIC CANCER IS DRIVEN BY KRAS GENE MUTATION



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## IMMUNOTHERAPY APPROACH

EFFECTIVE ANTI-TUMOR T CELL IMMUNITY IS HINDERED BY MANY OBSTACLES



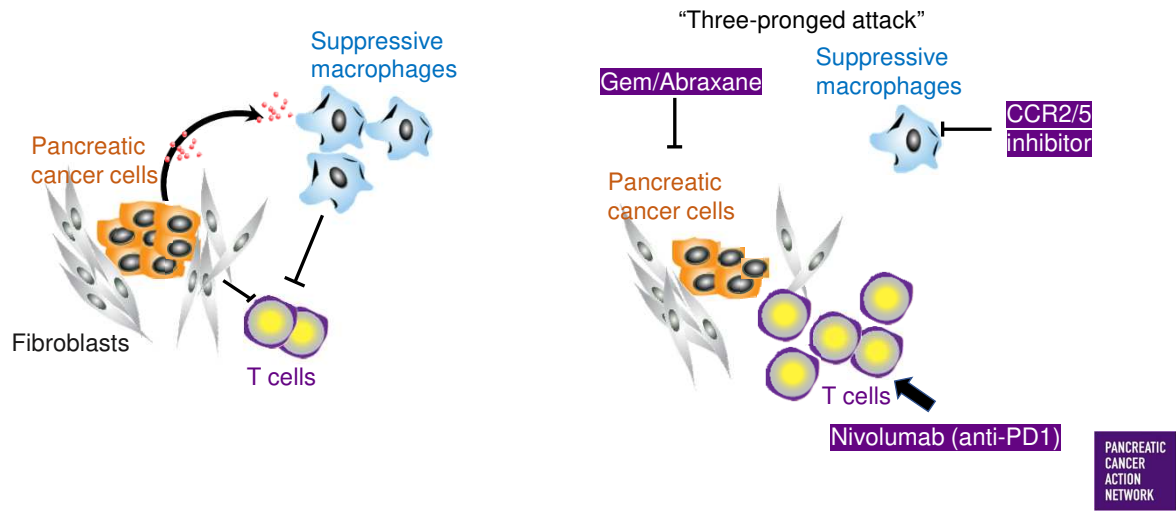
Front. Immunol., 08 February 2019

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### IMMUNOTHERAPY APPROACH

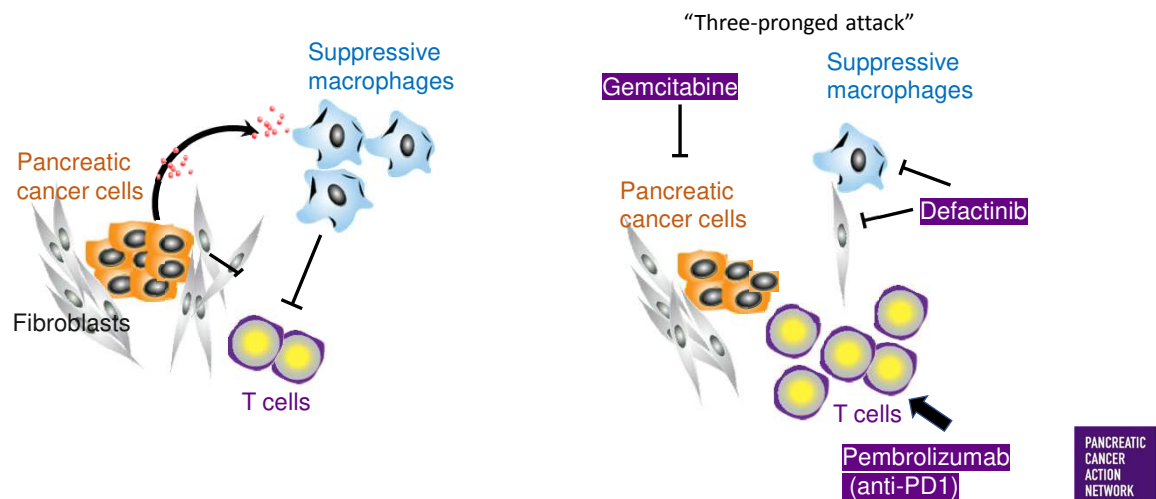
#### BMS-813160 WITH NIVOLUMAB AND GEMCITABINE AND NAB-PACLITAXEL IN BORDERLINE RESECTABLE AND LOCALLY ADVANCED PANCREATIC CANCER (NCT03496662)



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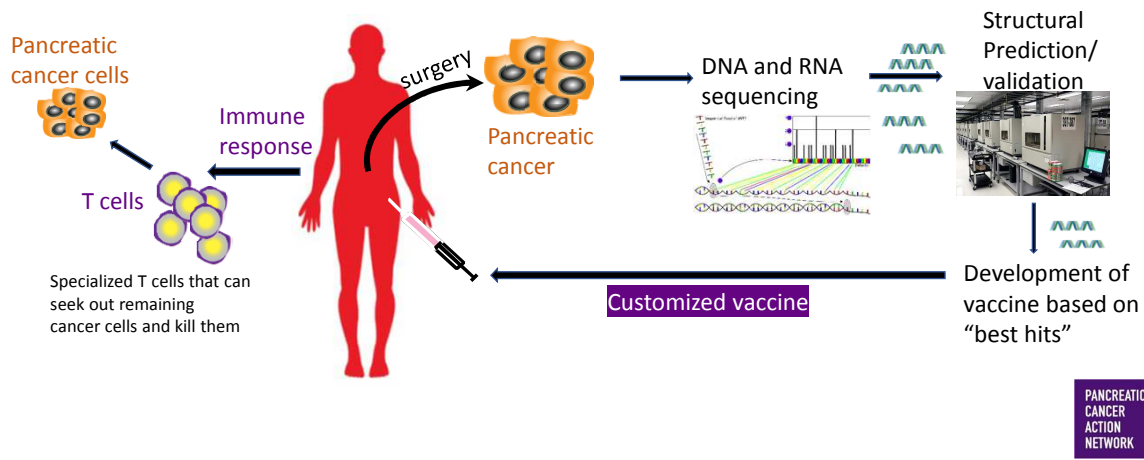
### IMMUNOTHERAPY APPROACH

#### DEFACTINIB COMBINED WITH PEMBROLIZUMAB AND GEMCITABINE IN PATIENTS WITH ADVANCED PANCREATIC CANCER (NCT02546531)



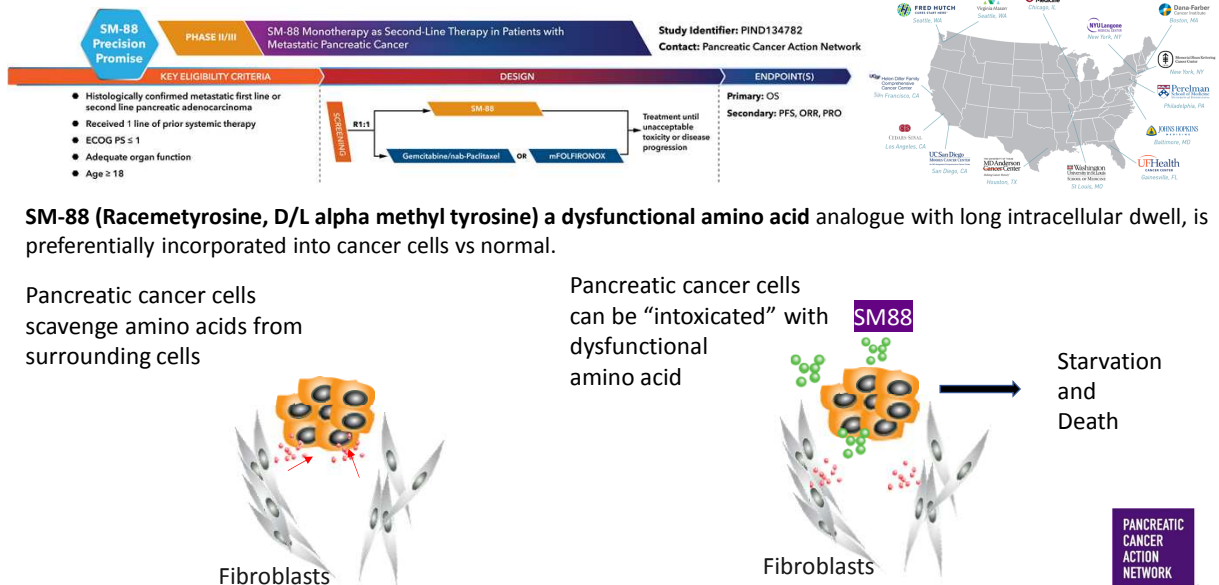
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## IMMUNOTHERAPY APPROACH NEOANTIGEN PEPTIDE VACCINE STRATEGY IN PANCREATIC CANCER PATIENTS FOLLOWING SURGICAL RESECTION AND ADJUVANT CHEMOTHERAPY (NCT03956056)



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## METABOLISM AND NUTRITION APPROACH SM-88 FOR SECOND LINE TREATMENT



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## **INNOVATIVE CLINICAL TRIAL DESIGNS**

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**PanCAN's PRECISION PROMISE  
IS AN INNOVATIVE ADAPTIVE  
CLINICAL TRIAL DESIGN**

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## PanCAN's PRECISION PROMISE ADAPTIVE CLINICAL TRIAL

Has a unique statistical approach, which allows it to “adapt”

Tests multiple drugs simultaneously

Experimental treatment arms stop if they are not working, or go faster if they are

Only requires 175 patients per experimental arm

As little as 3.5 years to complete

Patient can receive up to 2 treatments

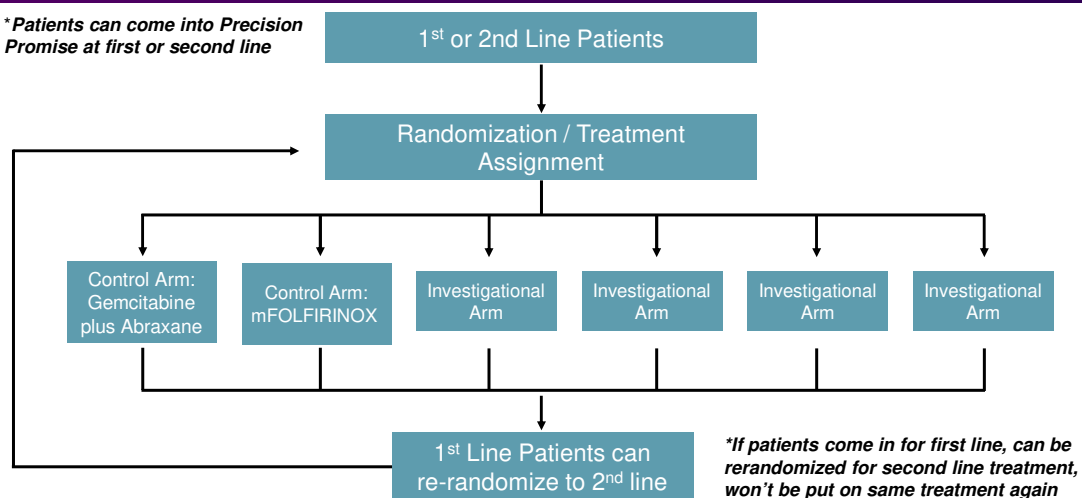
We learn every step of the way



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## PRECISION PROMISE: BREAKING DOWN THE DESIGN!

*\*Patients can come into Precision Promise at first or second line*



Supportive care and testing for all patients

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# PATIENT STORY ON A CLINICAL TRIAL

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## AN ENCOURAGING EXAMPLE

- 60 y/o woman
- Diagnosed in Sept 2015, pancreatic cancer with liver metastasis. Was told to have 1-1.5 years to live
- Received chemotherapy locally: FOLFIRINOX, Gem/Abraxane
- June 2017: Disease progression (enlarging liver lesions)
- Local oncologist recommended hospice or **clinical trials**
- Came to Siteman Cancer Center  
**Clinical trial:** Gemcitabine + defactinib + pembrolizumab



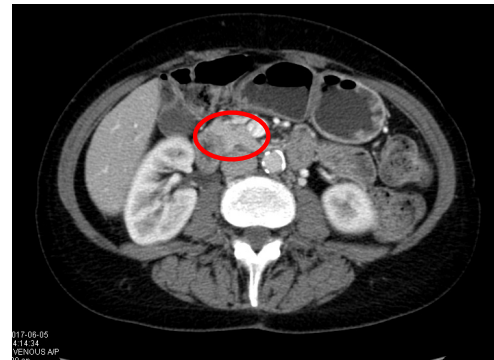
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## AFTER 9 WEEKS, PRIMARY PANCREATIC CANCER BECAME SMALLER

Before



After 3 cycles



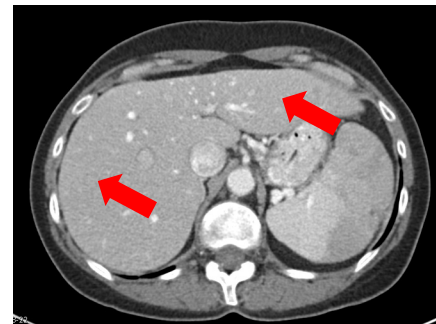
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## ...SEVERAL LIVER METASTASES DISAPPEARED !!

Before



After 3 cycles

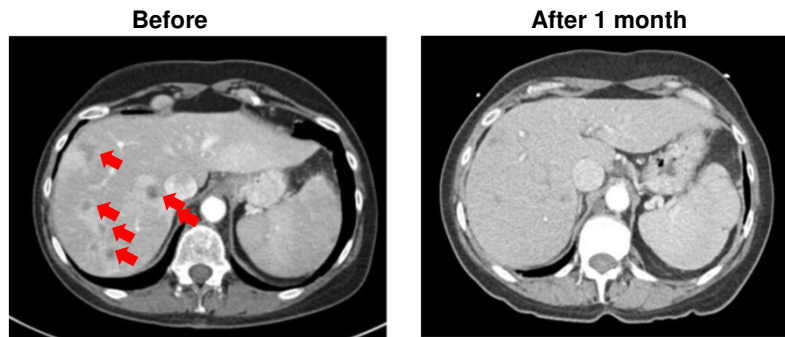


She stayed on treatment for 1 year

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## SHE LATER HAD DISEASE PROGRESSION AND WENT ON ANOTHER CLINICAL TRIAL...

TYME study: now available on PanCAN's Precision Promise



She stayed on treatment for close to 1 year

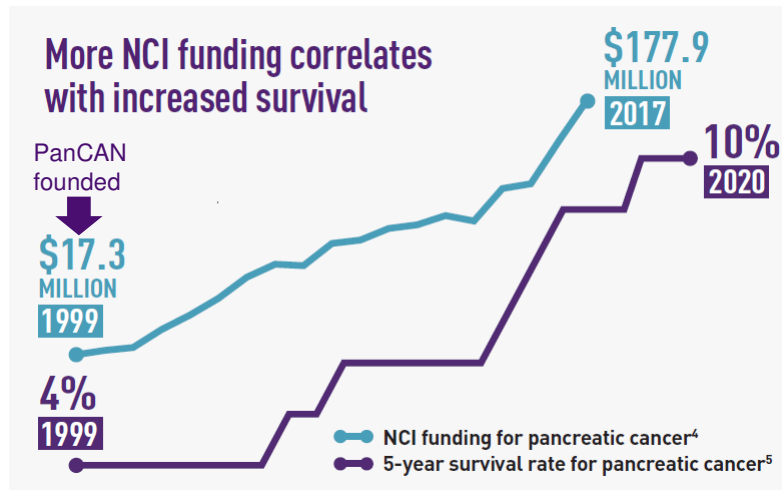


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## CONCLUSIONS

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## INCREASED RESEARCH INVESTMENT AND CLINICAL TRIAL PARTICIPATION IMPROVE SURVIVAL



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## TAKE HOME MESSAGES

- Pancreatic cancer is very challenging, but with more research and clinical trial enrollment, we are seeing improvement
- Your support and participation in clinical trials is key to success
- Clinical trials may not always work, but we learn new lessons from every patient that participates, which is critical to improving treatments.
- Researchers, clinicians, patients, families, advocates from all over the country need to team up and work together → **PanCAN**
- We TRULY appreciate your participation!



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## HOW TO PARTICIPATE



**Please enter questions in the Q&A box.**

Our panelists will take your questions and comments at the end of the discussion.



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## WE WELCOME YOUR QUESTIONS



Julie Fleshman, JD, MBA  
PanCAN, President and CEO



Kian-Huat Lim, MD, PhD  
Siteman Cancer Center  
Washington University  
Precision Promise Principal Investigator



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## JOIN US IN NOVEMBER FOR PANCREATIC CANCER AWARENESS MONTH

**Save the Date** November 19 at 11AM PT / 2PM ET (World Pancreatic Cancer Day!) for our one-hour live Q&A with PanCAN CEO Julie Fleshman and leading experts to learn more about recent advancements in pancreatic cancer research and PanCAN's investment in research.



**Julie Fleshman, JD, MBA**  
PanCAN  
President and CEO



**Lynn Matrisian, PhD, MBA**  
PanCAN  
Chief Science Officer



**Andrew Hendifar, MD, MPH**  
Medical Director of Pancreatic Cancer  
at Cedars-Sinai Medical Center  
Precision Promise Steering  
Committee and Principal Investigator



**Thomas George, MD, FACP**  
Director of the GI Oncology  
Program at the University of Florida  
Health Cancer Center  
Precision Promise Principal  
Investigator



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## CONTACT PanCAN'S PATIENT SERVICES

**If you or a loved one has pancreatic cancer, contact PanCAN's Patient Services at 877-2-PANCAN or [patientcentral@pancan.org](mailto:patientcentral@pancan.org)**

### **877-2-PANCAN**

Monday – Friday, 7 a.m. – 5 p.m. PT

[patientcentral@pancan.org](mailto:patientcentral@pancan.org)



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# THANK YOU FOR YOUR PARTICIPATION

*If you have questions, please contact Patient Central: 877-2-PANCAN or e-mail [patientcentral@pancan.org](mailto:patientcentral@pancan.org)*

[pancan.org](http://pancan.org)

