Pancreatic Cancer: A Challenge to us all

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Pancreatic Cancer Action Network
The Challenge
Pancreatic cancer is the hardest cancer of all to treat
Pancreatic cancer: The problem

- ~45,000 cases diagnosed in US in 2013
- 4th highest cancer death rate in the US population
- Worst survival statistics of any major cancer
- Median survival by stage:
  - Resected: 18 Months
  - Locally advanced: 9 Months
  - Metastatic: 6 Months
- 6 mo survival 50%; 1- year survival ~25%, 5- year survival ~5%
Double 5-year overall survival by 2020
Dr. Lynn Matrisian
Patient and Liaison Services (PALS)

- PALS Associate

  - disease & treatment information
  - clinical trials search
  - specialized info search
  - support resources

  matched back with original PALS Associate

  pancreatic cancer education packet (mailed within 24 hours)
Clinical Trial Database

- All Phase I, II, III pancreatic cancer-specific clinical trials in U.S.
  - Does not include solid tumor trials

- Verified and updated on an ongoing basis (monthly)
  - Clinicaltrials.gov & institutional websites
  - Direct interaction with trial investigators
  - Membership on national cancer committees

- >2000 clinical trial searches in 2012
Patient and Liaison Services (PALS)

- Provide customized evidence-based information to pancreatic cancer patients and caregivers
  - >7000 phone, e-mail, or web site contacts in 2012
  - 6 full-time trained PALS Associates

- Encourage all patients to consider clinical trials as part of their treatment options
  - Customized searches for patient to discuss with their health care provider
    - Type and stage of pancreatic cancer
    - Treatment history
    - Location and ability to travel
Clinical Trial Analysis

128 trials open 2011
163 trials open 2012

Ph I/II considered Ph I, Ph II/III considered Ph III

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Increased awareness of clinical trial searches

total enrollment required per stage

Pancreatic Cancer Action Network

# PALS contacts

1.5-fold increase

<table>
<thead>
<tr>
<th>Year</th>
<th># PALS contacts</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>5091</td>
</tr>
<tr>
<td>2012</td>
<td>7771</td>
</tr>
</tbody>
</table>

# Clinical Trial Searches

2.5-fold increase

<table>
<thead>
<tr>
<th>Year</th>
<th># Clinical Trial Searches</th>
</tr>
</thead>
<tbody>
<tr>
<td>2011</td>
<td>874</td>
</tr>
<tr>
<td>2012</td>
<td>2183</td>
</tr>
</tbody>
</table>
PALS contact profile: treatment status

90% of trials and 95% of anticipated accrual requires treatment-naïve patients

How many patients seek clinical trial information before they make a treatment decision?

# PALS contacts

- 2011: 5091
  - Known treatment status: 2687
  - 33.3% untreated
  - 66.7% treated
- 2012: 7771
  - 66.7% treated
  - 33.3% untreated

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Number of trials by stage within 50 mile radius

Uncertain ability to find trials for advanced disease stages

Small city
Medium-sized city
Large city
Northeast
Southeast
Central
West

(Resectable)
[neo]Adjuvant
Locally Advanced
Metastatic
2nd line Metastatic
## 2011 Pancreatic Cancer Clinical Trial Accrual

<table>
<thead>
<tr>
<th></th>
<th>TOTALS</th>
</tr>
</thead>
<tbody>
<tr>
<td># of patients participating in phase I-III pancreatic cancer-specific trials</td>
<td>1794</td>
</tr>
<tr>
<td>Trial participation rate (% of 2011 estimated prevalence)</td>
<td>4.54%</td>
</tr>
<tr>
<td>% data collected</td>
<td>96.9%</td>
</tr>
</tbody>
</table>
## 2011 Pancreatic Cancer Clinical Trial total enrollment required per stage

<table>
<thead>
<tr>
<th>Stage at Diagnosis</th>
<th>Distribution (%)</th>
<th>Est # Patients 2011</th>
<th>Est # eligible Patients</th>
<th># 2011 Trials</th>
<th>2011 Potential Enrollment</th>
<th>Enrollment Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Localized ([Neo]Adjuvant)</td>
<td>8%</td>
<td>3,451</td>
<td>690</td>
<td>24</td>
<td>2,645</td>
<td>383%</td>
</tr>
<tr>
<td>Regional (Locally Advanced)</td>
<td>29%</td>
<td>12,511</td>
<td>2,505</td>
<td>16</td>
<td>756</td>
<td>30%</td>
</tr>
<tr>
<td>Distant (Metastatic) (Recurrent)</td>
<td>58%</td>
<td>25,021</td>
<td>5,004</td>
<td>62</td>
<td>6,394</td>
<td>128%</td>
</tr>
<tr>
<td>PNET</td>
<td>5%</td>
<td>2,157</td>
<td>431</td>
<td>13</td>
<td>1,238</td>
<td>287%</td>
</tr>
</tbody>
</table>

* estimate 20% eligible patients
Clinical Trials by Disease Stage

<table>
<thead>
<tr>
<th>Disease Stage</th>
<th>Number of Trials</th>
<th>Ph I</th>
<th>Ph II</th>
<th>Ph III</th>
</tr>
</thead>
<tbody>
<tr>
<td>Premalignant</td>
<td>1</td>
<td>2</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Neoadjuvant</td>
<td>8</td>
<td>5</td>
<td>6</td>
<td>2</td>
</tr>
<tr>
<td>Adjuvant</td>
<td>6</td>
<td>9</td>
<td>9</td>
<td>2</td>
</tr>
<tr>
<td>Locally advanced</td>
<td>7</td>
<td>10</td>
<td>9</td>
<td>1</td>
</tr>
<tr>
<td>Metastatic</td>
<td>30</td>
<td>28</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Recurrent</td>
<td>9</td>
<td>12</td>
<td>3</td>
<td></td>
</tr>
<tr>
<td>pNET</td>
<td>3</td>
<td>9</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

Multiple stages coded as more advanced stage

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Clinical Trials by Treatment Type

- **Immunotherapy (Imuno)**: 11% - 11% - 9%
- **Targeted Therapy (Targeted)**: 18% - 25% - 18%
- **Stroma (Stroma)**: 2% - 43% - 37%
- **Metabolism (Metabolism)**: 6% - 9% - 3%
- **Radiation (Radiation)**: 6% - 11% - 11%
- **Delivery (Delivery)**: 11% - 12% - 12%
- **Optimization (Optimization)**: 2% - 21%
- **Miscellaneous (Misc)**: 5% - 7%

Percent of PDAC trials open

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On average, it will require 6.7 years to accrue patients to a pancreatic cancer clinical trial.
Pancreatic cancer clinical trials: What we have

• Institution or trial-based outcomes

• A clinical trial structure that is misconfigured with respect to goal
  – Inadequate patient enrollment (4.5%)
  – Patients interested in clinical trials, but seeking information after treatment is initiated, not before
  – A misallocation of clinical trials by potentially available patients, geography, stage, and phase
  – A very long accrual period
What we need to do to achieve 2020 goal

- Measure population-based outcomes
- Focus on localized disease
- Employ therapies that exist NOW
We can and need to do better, but how ???
Dr. Margaret Mandelson
Key elements of a new strategy for Pancreatic cancer clinical research

1) Population-based outcomes

2) Standardized method for assessing overall survival across institutions

3) Focus on localized disease

4) Percent all localized patients undergoing R0 resection as surrogate marker for improved outcomes
Key elements of a new strategy for Pancreatic cancer clinical research (con’t)

5) Greater referral to high-volume surgical centers

6) New research mechanisms/stratagems that better unite community/center of excellence practitioners

7) Clinical research in localized to focus on:
   A. Increasing fraction of patients with localized disease (early detection)
   B. Increasing fraction of localized patients undergoing R0 resection (downstaging)
   C. Increasing fraction of localized patients with local disease control (novel CRT, other novel local therapy)
   D. Decreasing fraction of localized patients with systemic disease control (? novel approaches such as immunotherapy)
Key elements of a new strategy for pancreatic cancer clinical research (con’t)

8) Greater emphasis on optimization currently available therapies, supportive care

9) Look for “early signals” of success at pancreatic cancer centers of excellence with high surgical volumes that can then be duplicated in other regions
Resected Pancreas cancer at Virginia Mason: 2007-2012

Overall Survival

Time (mo)

N= 86
Resectable Pancreatic Cancer

SMV

SMA

T

Evans/Varadhachary
Borderline resectable pancreatic cancer
Pancreas cancer: “downstaging” borderline resectable disease
VM phase II trial

Laparoscopic staging

Drug therapy
Gemcitabine / Docetaxel

Follow-up

Surgery

Novel CRT
Borderline Resectable Pancreatic Cancer: Initial VM results

(Picozzi et.al. GI Cancer Symposium 2013)

- 70 pts/ 58 pts fully evaluable; median f/u 16 mo
- 51/58 pts (88%) completed 24 weeks chemoRx
- 44/58 pts (76%) received local Rx
- 29/58 pts (50%) or 29/34 pts (85%) undergoing surgery achieved R0 resection
- 25/58 pts (43%) disease-free on an intent-to-treat basis
- Median OS 27 mo all pts, > 20 mo pts undergoing R0 resection
Locally Advanced Pancreatic Cancer

Evans/Varadhachary
Thank you very much!
We’d really like your feedback/questions