Medical Physics: Is there value and if so how do we convince people?

Stuart H. Burri, M.D.
Chairman: Radiation Oncology – Levine Cancer Institute
President: Southeast Radiation Oncology Group

It's all about safety…
Everyone says it's about safety and patient care.

How is Medical Physics Different?

People really are (appropriately?) scared of Radiation
### Causes of Death in the US

<table>
<thead>
<tr>
<th>Cause of Death</th>
<th>Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Automobile accidents</td>
<td>~36,000</td>
</tr>
<tr>
<td>Falls</td>
<td>13,332</td>
</tr>
<tr>
<td>Bathtub Drowning</td>
<td>341</td>
</tr>
<tr>
<td>Electric Transmission lines</td>
<td>99</td>
</tr>
<tr>
<td>Bitten or crushed by Reptiles</td>
<td>31</td>
</tr>
<tr>
<td>Fireworks Discharge</td>
<td>5</td>
</tr>
<tr>
<td>Contact with venomous spiders</td>
<td>5</td>
</tr>
<tr>
<td>Radiation Accidents</td>
<td>0</td>
</tr>
</tbody>
</table>

### Is the worry outsized?

<table>
<thead>
<tr>
<th>Radiation Accident</th>
<th>Direct Deaths</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chernobyl</td>
<td>31</td>
</tr>
<tr>
<td>Fukushima</td>
<td>0</td>
</tr>
</tbody>
</table>
Those are some interesting facts, but that doesn’t seem like it helps our cause…

New York Times

- **HEALTH | THE RADIATION BOOM**
- Radiation Offers New Cures, and Ways to Do Harm
- By WALT BOGDANICH JAN. 23, 2010
It **REALLY** is about safety

How do we get hospital administrators, doctors, or our families to listen to how important we are?
The core arguments

- Patient Care
  - Doing the right thing
- Protection of Market share
  - Accident avoidance
- Grow the hospital reputation
  - Patients referred in, our loss of leakage to more specialized centers

Strategy Today

- Must be willing to say no.
  - We can't do XYZ because it's not safe.
- ALL revenue in the radiation oncology department ultimately rests upon the physics team.
- Negotiate for additional manpower/support when the hospital wants to expand offerings.
  - We can't safely do SBRT well unless we have ____________.
- Be PRESENT in the clinic
  - Don't be a "ghost" physicist who doesn't interact with the team

2007  2016
Future shock

- Future shock is the shattering stress and disorientation that we induce in individuals by subjecting them to too much change in too short a time.
- “If you don’t have a strategy, you’re part of someone else’s strategy.”
  — Alvin Toffler

What the HELL do we do now?

- Changing reimbursement models
  - Payment per diagnosis rather than per item.
  - Allows an opportunity to reconsider payment structure
  - All the more important for it to be well understood now.

- Are we actually in this together?