Communicating the Benefits/Risks of Radiation Therapy: Maintaining Context, Perspective and Reassurance

Lawrence B. Marks, M.D.
Professor and Chairman
University of North Carolina at Chapel Hill, NC
Summary

• Communicating risks of RT challenging
• RT: Bad Press
• Tailoring the message (?)
  • Patients and family, medical community, hospital administration, general public
• Key points
  • Acknowledge the risks
  • Context: Cancer risks > RT risks
  • Reassure: minimizing risks
  • Build trust and confidence
Uphill Battle: Bad Press!
Scores of Americans have met horrible deaths due to medical blunders and overdoses of radiation.

- Co-60 Decay error
- 243 dead

Courtesy of Eric Klein
Misuse of software made here caused radiation overdoses, agency finds

The problem first came to light about two weeks ago when Panamanian Health Minister Fernando Garcia released a report that said health officials at Panama City’s National Oncology Institute had given 28 patients radiation overdoses between August and December last year. In addi-
Accidental Overexposure of Radiotherapy Patients in San José, Costa Rica
DETROIT -- A patient undergoing treatment at the Karmanos Cancer Institute in Detroit received a dose of radiation on the wrong side of the brain, according to a report filed with the United States Nuclear Regulatory Commission.

According to the report, a crucial piece of information was misread prior to treatment with a gamma knife which delivers a targeted form of radiation therapy that zeros in on specific locations in the brain.

The patient went through a routine magnetic resonance imaging (MRI) scan of the brain just before the procedure, but went into the scanner “feet first,” rather than the standard practice of head first, the document said.
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Nevertheless: Radiation Therapy Works

- **Main curative therapy**
  - Head and neck cancers, gynecologic, prostate...

- **Adjunct to surgery**
  - Breast, rectum, sarcomas, prostate....

- **Good palliative therapy**
  - Bone pain, metastases to any area,...
T3N1 Right True Vocal Cord
7440 cGy RT in 6 weeks

14 Months Post-RT
Brain tumor
Patient with cancer and their family

• Scared. Likely not absorbing much.
• Imagine
  • Day 0: thinking about football and fishing
  • Day 1 am: headache and first-ever seizure
  • Day 1 pm: hospital, head scan
  • Day 2: seen by a neurosurgeon
  • Day 3: surgery (anesthesia, intensive care..)
  • Day 5: radiation therapy consultation

Digesting risks/benefits in this scenario?
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Delivering the message to patients/family

• Sit down, speak clearly, in English (avoid jargon)
• Look the patient in the eye
  • Do not look at the (damn) computer
• Physical contact +/-
• Acknowledge: “Yes, there are risks..”
• Context: “…but there are the benefits”
• Reassure: “this is what we do to minimize risks..”
• Repeat. “What questions do you have for me?”

• Give written materials, your phone number for questions (rarely call, but appreciate the offer)
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Introduction

Breast cancer is a complex disease. This information sheet will:

• Explain how radiation therapy is used to treat breast cancer

• Review the possible side effects from therapy

Possible side effects include…
• Speak clearly. Avoid this!!

• Parent asks: “Will the radiation to my child’s head hurt their brain?”

• MD replies: “One would hope that in the modern era the texture of the tissues post-radiation will be of acceptable quality”
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Ongoing process with patients

• RT given daily for many weeks

• During week
  • Show patient their radiation plan
  • “This is the amount of your heart in the field… this is what I did to minimize it."

• Acknowledging their ongoing concerns

• Reassure by
  • Explaining what is going on
  • Addressing ACUTE toxicities
QuickTime™ and a decompressor are needed to see this picture.
“This picture shows the shape of the radiation beam.

The beam is close to the heart (acknowledge)....

It needs to be close since the breast is also close to the heart (context)

See how we shape the beam to reduce the amount of the heart in the beam (reassure)
“Here it is again on another image... See the beam path, just missing the heart.”
“The marks on your skin are the outline of the radiation beam. This part is angled to avoid the heart.”
What is the goal?

- Acknowledge
- Context
- Reassure
- Educate, and inform the patient
What is the goal?

- Acknowledge
- Context
- Reassure

Educate, and inform the patient

Build trust and confidence
“Sign paper! ..... 

When I treat you, I will take care of you like you are one of my family”

Dr CC Wang, MGH
Involve/empower the patient

“The machine takes pictures of you to assure correct positioning… The pictures take time. That’s one reason why the treatment takes so long. It’s important you lie still during treatment to minimize risks. The head cast helps to increase accuracy. It’s uncomfortable, but is helpful.”
Time horizon is key!

• Risks: short-term & long-term
  • What is patient’s prognosis?
• Time course of radiation-induced benefits??
  • Can be years!!

• Risk/benefit discussion = f (prognosis)
  • Hard part: “you do not need to worry about this risk since you are unlikely to live long enough to experience the toxicity”
In our Information Sheets

• “Short-term risks that are common”

• “Long-term risks that are very uncommon”
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Administrators, Health Care Workers, and General Public

• Acknowledge

• Context
  • more abstract, based on population estimates vs. individual patient-specific risks

• Reassure
  • “We need to have that new device as it will allow us to reduce the risks to our patients”

• Uphill battle: Consent for chemotherapy?
Left Sided Breast RT

Intact Breast

Mastectomy

Tumor Location

Superior

Inferior

Heart Block

Adjust Gantry

Electron patch if thin

Breath hold

Tangents with heart block

electron patch?

electrons to medial chest

breath hold
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