Communicating Risk

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Where to start?

- Let patient guide the discussion
  - What are their concerns?
  - What do they know?
  - What do they want to know?

Where to start?

Keep in mind…

The purpose of the consult is to educate the patient!

Not to…

- Preach
- Tell them what is “right” for them
- Seem smarter than they are
When risk values are discussed…

- Note challenges of determining risk
  - Atomic bomb survivor data
  - Circumstances and difficulty comparing doses to medical exposures
  - Large uncertainties
  - Risk is immeasurably small, if existent
- Probabilities can be a worm-hole

*Risk values are almost ALWAYS discussed!

Risk Reality

BEIR VII Report

“At doses of 100 mSv or less, statistical limitations make it difficult to evaluate cancer risk in humans.”

AAPM Statement

“Risks of medical imaging at effective doses below 50 mSv for single procedures or 100 mSv for multiple procedures over short time periods are too low to be detectable and may be nonexistent. Predictions of hypothetical cancer incidence and deaths in patient populations exposed to such low doses are highly speculative and should be discouraged.”

Focus on BENEFIT

- Consequences of having the exam
  - Importance of getting answers
  - Negative & positive results are answers
- Consequences of NOT having the exam
  - Stress of not knowing
  - Potentially more serious medical problems
Case 1

- RSO gets call from physician
- 49 yo need an L-spine x-ray
- Patient concerned because of many x-ray exams in past years
- RSO calls me to check our records

2014 AAPM Annual Meeting: Professional Symposium on Communicating Risk

- 02-Oct-2013 PX NA (Single full mouth x-ray)
- 25-Feb-2013 V&IRAD Vascular & Intervention (Ultrasound guidance, fluoroscopy)
- 29-Jan-2013 NM BMD Spine and/or Hip(s) (Bone mineral density, Lower spine + both hips)
- 25-Jan-2013 CT Ent Abd w/Pelvis w (CT scan of the Abdomen and Pelvis with oral and IV contrast using the enterography protocol—single pass)
- 24-Jan-2013 V&IRAD Vascular & Intervention (Uterine artery embolization, fluoroscopy)
- 29-Jan-2013 CT Ent Abd w/Pelvis w (CT scan of the Abdomen and Pelvis with oral and IV contrast using the enterography protocol—single pass)
- 27-Dec-2012 Hand x-ray (both hands 2 view PA/Obli)
- 22-Dec-2012 V&IRAD Ultrasound Guidance (Placement of a 4F single lumen left arm SOLO PICC)
- 19-Nov-2012 V&IRAD Ultrasound Guidance (Single lumen PICC line placed via the left arm without complications. Postprocedure chest x-ray shows it is in good position and can be used immediately)
- 12-Jul-2012 B Foot 3vw/STDG AP/LAT/Obl (x-ray both feet together, 3 views)
- 12-Mar-2012 BILATERAL DIGITAL DIAGNOSTIC MAMMOGRAM WITH CAD
- 28-Feb-2012 NM BMD Spine and/or Hip(s) (Bone mineral density)
- 26-Sept-2011 XC Bitewings
- 11-Aug-2011 B Foot 3vw/STDG & Ankle 3vw/STDG (Both Foot 3vw/STDG & Ankle 3vw/STDG)
- 06-Apr-2011 NM BMD Spine and/or Hip(s) (Bone mineral density)
- 06-Jan-2011 R CT EXT UPPER w (CT arthrogram of the right shoulder with intra-articular contrast)
- 03-Jan-2011 R Shoulder 2 or 3vw w/Articular (x-ray, right shoulder)
- 11-Nov-2010 Bilateral digital screening mammogram
- 22-Oct-2010 CT CT Chest (Chest CT, not done at Mayo)
- 22-Oct-2010 CT CT Sinuses (Sinus CT, not done at Mayo)
- 21-Oct-2010 CR DX L-spine, L-spine, hand (x-ray, not done at Mayo)
- 21-Oct-2010 CR DX Hands Bilateral (hands x-ray, not done at Mayo)
- 21-Oct-2010 CR DX Feet Bilateral (Foot x-ray, not done at Mayo)
- 21-Oct-2010 CR DX Spine Lumbosacral (spine x-ray, not done at Mayo)
- 01-Aug-2010 L Femur 2vw AP/Lat (Femur x-ray, 2 views)
- 04-Jan-2010 CT CHEST w
- 28-Jul-2009 B Great 1 ve Serodiopy 1 ve Serodiopy x-rays, localized view of sternoclavicle vs (wts)
- 29-May-2009 B Foot 3 vw/STDG & Ankle 3vw/STDG (x-ray)
- 27-Jan-2009 Sp Thor 2vw & LS 3w
73 radiological exams
(over 14 years)

Should we be concerned?
Case 1: Points

- List intimidating & misleading at first glance
- Rough estimates sufficient
  - Would take long time to detail, no value
- Communication with physician
- Offer to speak with patient, if needed

Case 2

- 2 y.o. falls off high-chair, develops fever
- Gets head CT at ER (“just a bump”)  
- Months later grandfather calls Mayo  
  - Cold call, trying to reach anyone with information  
  - Worried about his son (boy’s father)  
  - Boy’s father in distress over CT “death sentence”  
  - Weight loss, sleep issues, work issues

“Our house used to be all singing and dancing and now it is just all sadness”
Case 2: Points

“Worry and stress affects the circulation, the heart, the glands, the whole nervous system, and profoundly affects heart action.”

Dr. Charles H. Mayo, 1898

• Fear & stress very real
• Listen, relate, show compassion, build trust
• Share information (educate)

Case 3

• Elderly woman, CT few months prior
• Wants dose and cancer risk increase
• Discuss, she seems fine
• Calls days later, same questions (ok now)
• Calls repeatedly, same conversation
• Finally had to stop

“You are causing more harm to yourself by obsessing than the radiation could have possibly done”

Case 3: Points

“While there are several chronic diseases more destructive to life than cancer none is more feared.”

Dr. Charles H. Mayo, 1926

• Some people just need to talk to someone
• Some need to feel in control of their situation
  – I encourage this!
• Some may never understand risk “reality”
  – Need to recognize and act accordingly and professionally
Case 4

- 20 yo male need a pre-surgical hip CT
- Few recent scans, mostly to shoulder
- Concerned about cancer (and more?)
- Briefly covered the background on risk
- Then asked him

  "What is the benefit from the surgery?"

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"I could walk again"

- What about radiation “down there”?
- Dr. told him no more radiation “down there” for at least 6 months
- Clearly alarmed

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Case 4: Points

- Very obvious benefit/risk
- Real concern most likely testicular dose
- Misinformation from authority (doctor) tipped risk scale
- Can be difficult to “undo”
  - Correct, but don’t insult
Case 5

- Patient: after CT has nausea, dizziness, stomach problems and poor cell phone reception
- Very sincere, rational
- Nothing else out of the ordinary
- Discussed possible causes (non-radiation) for non-phone related symptoms
- Everything went smoothly

Case 5: Points

- Patients may have a different perspective on radiation and technology
  - But their concerns are real
- Expect nearly anything
  - Patients may get upset, show emotions, challenge your motives, etc.
  - Be prepared, be respectful, be professional