



Professional Council Symposium: Alternative Career Opportunities for Medical Physicists

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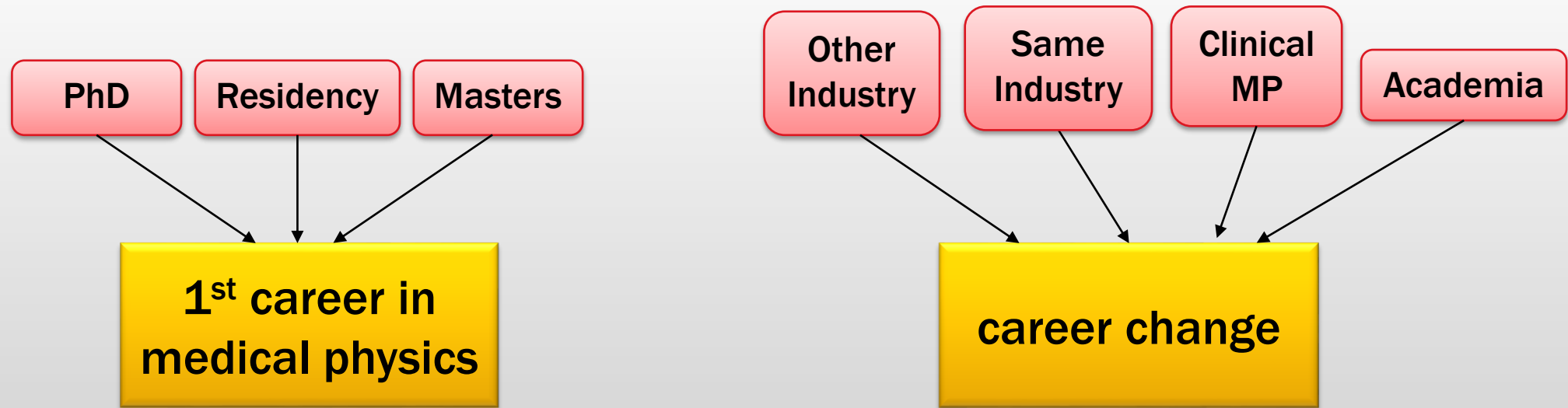
Disclosures

- Employee, Toshiba America Medical Systems, Inc.

Industry

- Imaging vendors
 - Imaging technology itself
 - Related technologies (phantoms, dosimeters, dose tracking, etc.)
- Therapy vendors
 - Therapy technology itself
 - Related technologies
- Device companies
 - Class 2 (no blood contact devices)
 - Class 3 (implantable devices)
- Other

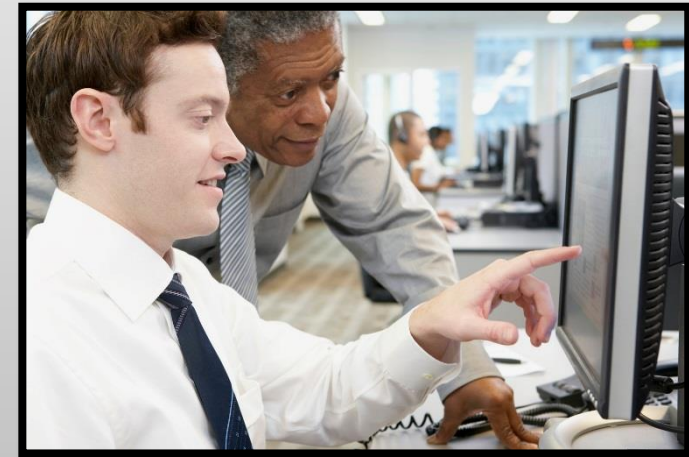
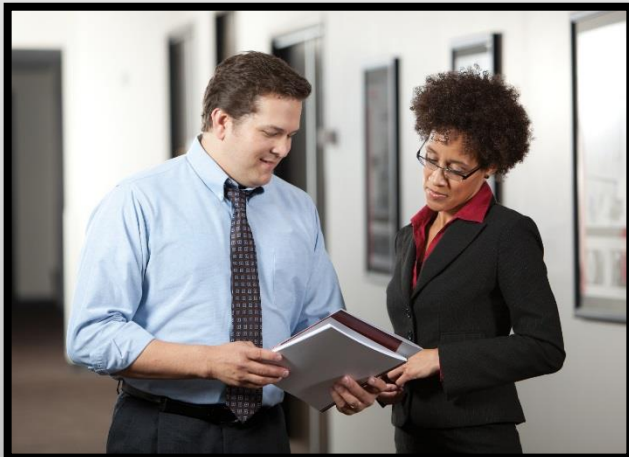
Which Medical Physicists may be considering a career in industry?



Hint: In industry, for the most part, they hear "PhD" or "not PhD".

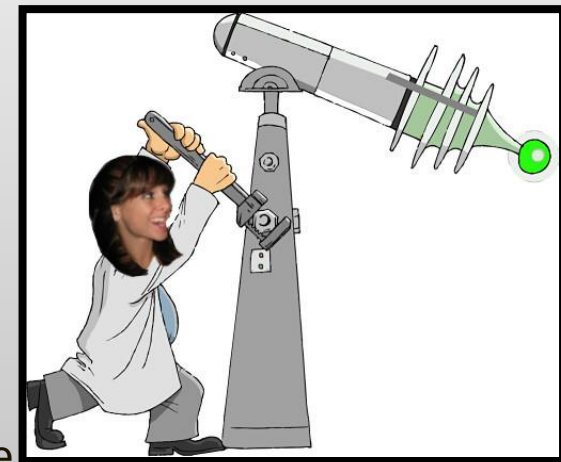
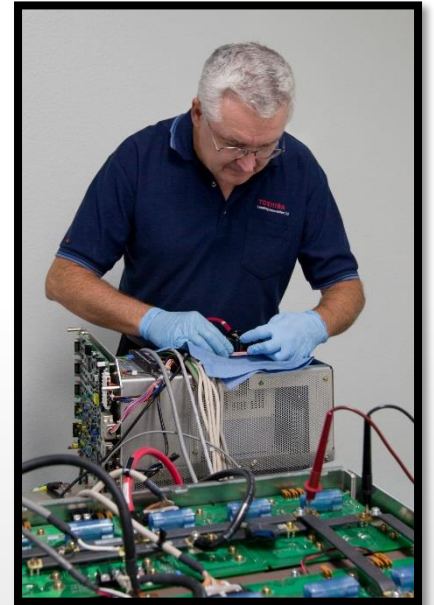
Industry Medical Physics Career Opportunities

- R&D scientist
- Clinical Validation Scientist
- Business Support Scientist
- Clinical Medical Physicist
- Business (non-science role)



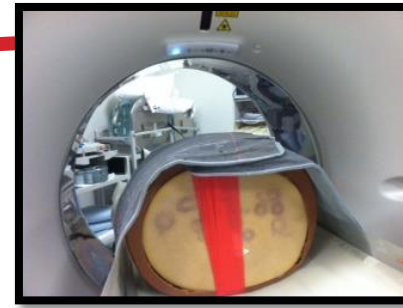
R&D Scientist

- Create/innovate
- Similar to academic role
 - Work in lab
- **Day-to-day**
 - Review publications
 - Design studies, code, collect data, code, analyze results, develop products (i.e., code)
 - Prepare presentations and write manuscripts
- **Qualifications:** PhD or engineering degree
- **Pros/Cons:**
 - May avoid grant writing 👍
 - Limited flexibility in choosing projects (company sets goals)
 - Work with a small group of scientists
 - At the leading edge of the science – make direct impact on patient care
 - In-depth focus on one component of the science
 - Minimal travel



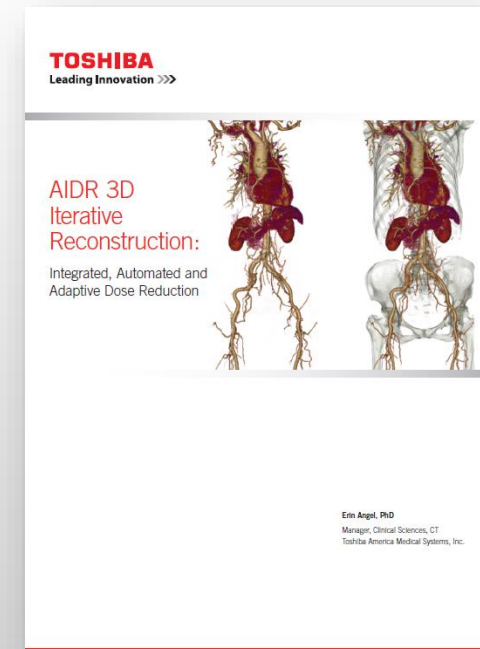
Clinical Validation Scientist

- Manage research projects (typically not developing technology just validating it clinically)
 - Collaborate with radiologists, medical physicists, cardiologists, neurologists, etc.
- **Day-to-day**
 - Review publications
 - Review/develop research proposals
 - Research project management – work with engineers to make the technology work for the study, provide medical physics expertise to PI (calculations, etc.), support testing of the technology
 - Prepare presentations and write/edit manuscripts
 - Present results (internally and at conferences)
 - Prepare research contracts (work with legal)
 - Support Medical Advisory Boards (MAB)
- **Qualifications** : PhD + good communication skills
- **Pros/Cons:**
 - Flexibility in choosing projects (company sets goals)
 - Direct clinical impact
 - Interact with many people from all specialties
 - More hands/on with the equipment than R&D
 - Substantial travel



Business Support Scientist

- Company spokesperson and teacher
- **Day-to-day**
 - Review publications (competitive analysis)
 - Teach and present technology (customers, applications, service, sales, business, etc.)
 - Write white papers and support
 - Provide marketing collateral content (testing results, technical explanations, etc.)
 - Meet with customers
 - Market projections (i.e., what future technology holds most promise)
 - Sales support
 - Manage Medical Advisory Boards (MAB)?
- **Qualifications:** scientific training (PhD preferred), good communication skills
- **Pros/Cons:**
 - May work for a business person (non-scientist)
 - Interact with many people from all specialties
 - Substantial travel

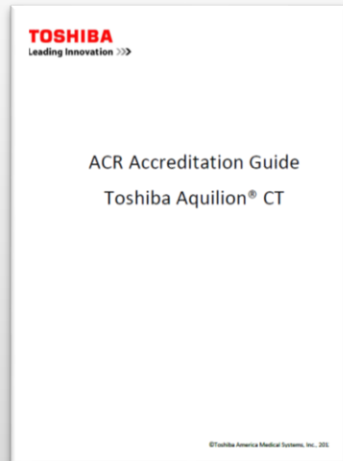
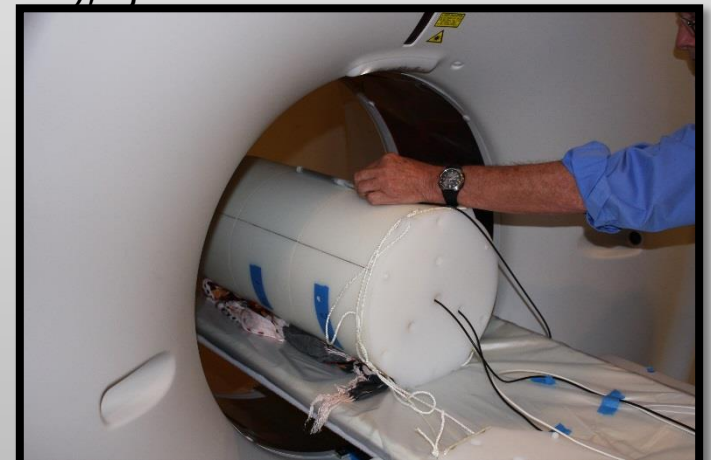


Clinical Medical Physics Support

- Vendor support for Medical Physicists
- **Day-to-day**
 - New technology pre-testing
 - Develop education and support materials for testing on equipment
 - Provide internal training on test methods
 - Trouble-shoot results provided by medical physicists (why not meeting spec?)
 - Develop new test methods and work with engineering to develop new specifications to meet market needs (i.e., new ACR QC manual).
 - Clinical IQ trouble shooting

Qualifications: medical physics training (Board Cert. preferred), good communication/mediation skills

- **Pros/Cons:**
 - May work for a business person (non-scientist)
 - Interact with many people
 - Monotonous?
 - Minimal travel and good hours



Business (non-science role)

- Marketing
- Sales
- Product Management
- Legal
- **Day-to-day**
 - Too much for one slide
- **Qualifications:** good business management skills, MBA?
- **Pros/Cons:**
 - Not much science (depending on the role)
 - Interact with many people
 - A lot of job opportunities
 - Faster turn-over
 - More job growth potential (more ladder to climb)?



Business Culture

- Does it suit your work style?
 - Is there lots of social interaction or very little? What is your preference?
 - Are communication channels between divisions open?
 - How do you feel about wearing a suit to work every day?
 - Strong politics?
 - To what position do you aspire? What do those people have in common within the organization? Do you have (or could you reasonably develop) those qualities?
- Ask current employees
- US organization vs. international vs. global organization
 - Local versus global focus
 - Report to US organization or international org?
- Size of company
- Do employees seem to like each other?



Personal Considerations (work-life balance)

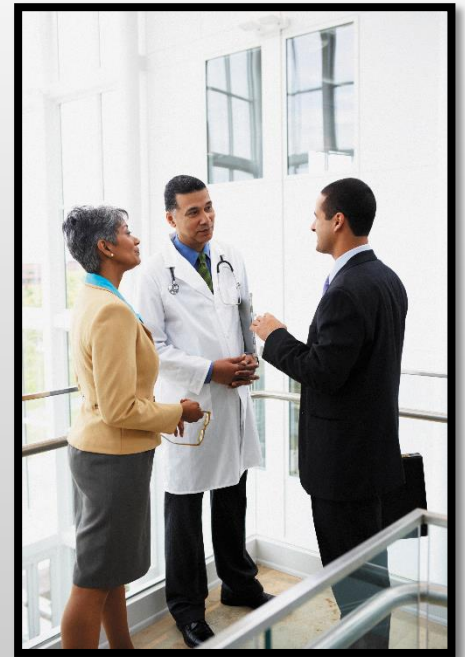
- Vacation days (international usually more)
- Family/disability leave
- US organization vs. international organization
- Size of company
- Travel requirements ("30%" means 40%)
- Home office versus company office
- Flexibility of hours/days
- If it doesn't work out, will you need to move?

Applying for industry job? – what to consider

- Know the company!
- Know the products and brand names
- Know the top executive staff (CEO, President, VP, and your potential future manager).
- Know interviewer's expertise ahead of time (business or science)
- Stay positive
- Share your knowledge and how it applies to the role
- Talk about what you offer the company (not what the company can offer you)
- If you don't know the answer, show them what you do know
- Confident but not arrogant
- Never bring up salary or benefits on the first conversation. When it does come up, make sure you have some negotiation training. In big companies, you are up against professional negotiators (keep this in mind).
- Relax and enjoy the interview, it is just a conversation.

Got the job? – what to consider

- Observe for 6 months – learn
- Wear a suit on the first day unless told otherwise (or just ask what to wear)
- Try to figure out answer first, then ask
- Introduce yourself
- Find a wingman or wingwoman – often this is admin/office manager
- Smile and be nice



Summary:

Pros and cons of working in industry

- Rewarding
- Make a direct difference in patient care
- Fast paced, never boring
- Flexibility in career opportunities (ability to change job types)
- Get high level view of whole industry
- Travel
- Sales support
- Growth opportunities depend on role
- Politics constantly changing
- Competitive salary
- Not many bridges to burn



Thank You!