



Developing Medical technologies

Role for Scientists within the
Medical Device Industry



General Observations

- You are in a special spot:
 - Unique field
 - Unique University
 - Unique Geography
- No matter what you decide, make yourself part of the “ecosystem”
- Finding the intersection of what you are uniquely good at and what internally drives you takes time, trial and error and listening to your gut
- “Hire a mentor” then “Hire a boss”
- Your success depends on your success through people

Overview of Medical Technology Industry

Imaging
Medical Equipment
Large scale Instrumentation



Diagnostics
Implanted devices
Surgical Products





Medical Technology: Key Sectors

Medical Technology

Cardiovascular

Surgical Products

Orthopedics

Diagnostics

Interventional Neurology

Spine

Dental

Neuro-modulation

Peripheral Vascular

Ophthalmology

Urology

Ear/Nose/Throat

Simple devices -> Big Impact : Case Study 1

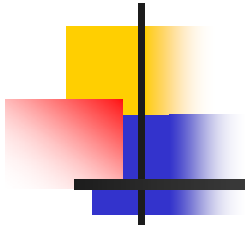
Clinical problem : 250,000 vertebral compression fractures that do not respond to non-operative care

Pre-existing solution : Vertebroplasty



Problems : high pressure injection could lead to cement leakage, inability to correct the kyphosis

Simple devices -> Big Impact : Case Study 1



The solution : Use a balloon to expand the fracture prior to injection



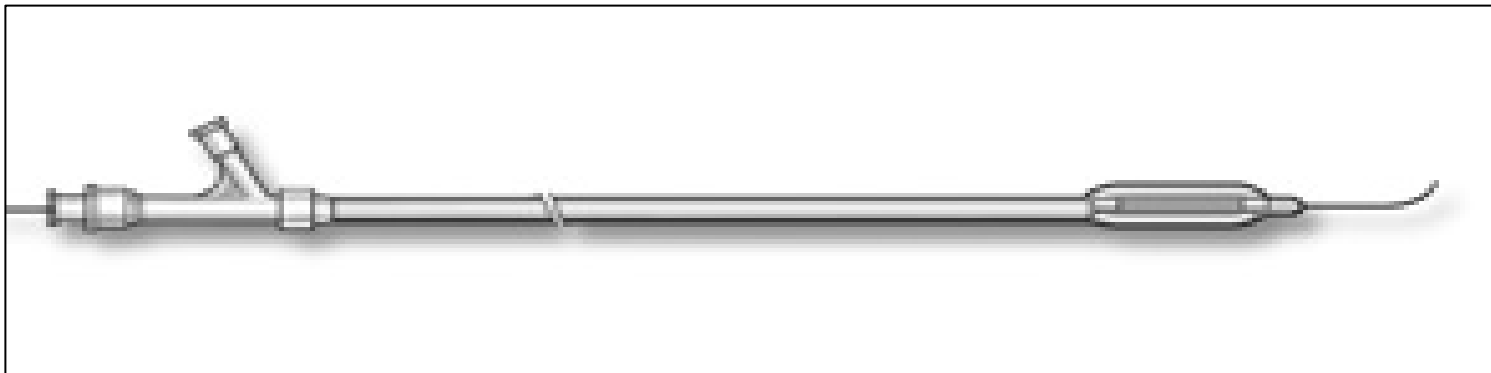
The result : >50% market share, ASPs 4X vertebroplasty, remarkable financial success

Simple devices -> Big Impact : Case Study 2

Rapid Exchange

Clinical problem : Exchange of catheters was a cumbersome two-person process

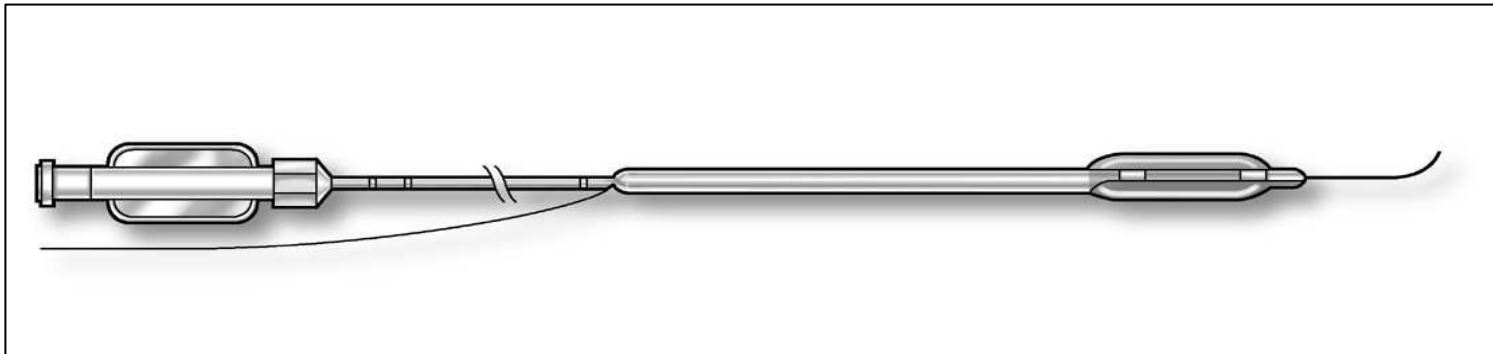
Pre-existing device : over the wire coaxial catheter design



Simple devices -> Big Impact : Case Study 2

Rapid Exchange

Solution: Rapid exchange catheter design : single operator, less contamination risk, better steering, reduced fluoro time



Outcome: ~60% market share in the US market



Careers



Scientists in action

- CEO
- Founder of Medtech Incubator
- Manager in CMO Office
- Clinical Research
- Clinical and Regulatory Manager
- Venture Capitalist
- Business Development manager
- Director of New Product Development
- Engineering Design
- Board member



What you should be aware of

- You have resources & contacts...use them
- Be clear as to why you would like to join a business
- Hire a mentor(s)
- This is a process...it takes time
- After you get in:
 - Business is about getting results through people
 - Observe before you act
 - Hire a boss

Q & A

