What I find Useful in Teaching and How my SDEP Has Been Helpful

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What do we (teachers) want to teach?

• Basic theory – principles
• Update on new technologies
• Learning through collaboration
• Problem Based Learning
• Information Technology tools
• Feedback from the student
Basic theory - principles

• Radiation – matter interaction,
• X-ray imaging, fluoroscopy, acquisition detectors,
• US principles,
• MR principles,
• DVH,
• IMRT, etc.
Update on new technologies

- Multidetector CT,
- Hybrid imaging,
- Flat panel detectors,
- Molecular imaging,
- IGRT, etc.
Learning through collaboration

• Interdisciplinary collaboration:
  – Win – win process
  – Teach physics
  – Learn aspects of radiology, etc.
  – Participate together in problem solving trying to use a common language
Problem Based Learning (PBL)

• Learn through solving problems
• Simulate interesting situations
• Provide the basic principles that solve the problem
• Help students develop flexible knowledge – critical thinking? (strange situations)
Information Technology (IT) tools

• PowerPoint
• Asynchronous eLearning Platforms (i.e. http://eclass.upatras.gr):
  – Web based educational modules (AAPM-RSNA)
  – Video streaming (CE courses)
  – Variety of educational information available on the net
  – e-handouts
• Synchronous eLearning Platforms
Feedback from the student

- Makes us (teachers) better
- Corrects errors
- Makes our presentations more comprehensive
What do students want to be taught?

- Depending on their background different things
- Material directly connected to board certification
- Are we going to comply with this?
Self Directed Educational Project (SDEP)

- ‘Improve my knowledge in Molecular Imaging, conduct research in the area of tumor angiogenesis imaging (VX2 sarcoma) and teach post graduate students’ Research / Education (AAPM SS 2008)
Molecular Imaging (MI)

• MI: “in vivo characterization and measurement of biologic processes at the cellular and molecular level”
• Growing research discipline
• Small animal imaging: intermediate step between bench and clinic
How my SDEP has been helpful

- Agents that concentrate on specific areas
- Tracers used in different imaging modalities
- Collaborated with a variety of clinicians
- Perform research in the field [1, 2]
- Submitted grant proposals
- Lecture on MI
- Supervise a PhD student
References

1. Kagadis GC et al. ‘Application of Molecular Imaging in the Monitoring of Angiogenesis of a Hindlimb Ischemia Model’ presented at AAPM 2010

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