Anatomy for Physician Assistants: How we tackle this beast!

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“Who is doing the tackling?”: PA students

- **Physician Assistants (PA):**
  - “Dependent” medical practitioners
  - Requisite knowledge base:
    - Sufficient breadth & depth to function as a generalist, primary care provider
“What is the Beast?”: Anatomy

- What is the minimum factual knowledge required for:
  - effective examination of patients?
  - performing common technical skills?
  - interpreting common imaging studies?
  - safe medical practice?
Anatomy: Course Content

• No uniform source or consensus document available for PA education
• A few “standard-setting” documents are available for medical students

Anatomy: Course Objectives

- Our objectives were derived from:
  - an integration of several published sources
  - the course director’s own clinical & academic experience
“How We Tackle This Beast”

- **Basic Medical Sciences (BMS) course**
  - 90 hours lecture (6 units)
  - 33% regional anatomy
  - 52% systems physiology
  - 15% other “-ologies”
  - 8 hours of cadaver laboratory → primarily prosection

- **Longitudinal ‘revisitation’ of anatomy content throughout didactic curriculum**
# USC Primary Care PA Program

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<tr>
<th>Schedule</th>
<th>Fall Semester</th>
<th>Spring Semester</th>
<th>Summer</th>
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<tr>
<td>Year I</td>
<td>Basic Medical Sciences</td>
<td>Behavioral Sciences II</td>
<td>Summer Vacation</td>
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<td>(2012-13)</td>
<td>Behavioral Sciences I</td>
<td>Clinical Skills II</td>
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<td>Clinical Skills I</td>
<td>Topics in Medicine II</td>
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<td>Year II</td>
<td>Behavioral Sciences III</td>
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<td>(2013-14)</td>
<td>Clinical Skills III</td>
<td>18-Weeks of Clinical Assignments*</td>
<td>12-Weeks of Clinical</td>
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<td>Topics in Medicine III</td>
<td>with post-clinical activities:</td>
<td>Assignments* with</td>
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<td>Year III</td>
<td>18-Weeks of Clinical Assignments*</td>
<td>Advanced Topics</td>
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<td>(2013-15)</td>
<td>with post-clinical activities;</td>
<td>Seminars (4 courses): Research;</td>
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<td>students return to campus for testing and</td>
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<td>Graduation!</td>
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<td>*Total clinical assignments = 48 wks</td>
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- **Technical Skills:** Procedural anatomy
- **Physical Examination:** Living anatomy

*Total program length = 33 months (6 semesters)*
BMS Course

• Focuses on:
  - Clinically important content
  - Content that emphasizes:
    - “common things are common”
    - i.e. ‘bread & butter’ type items
    - minimizing “just in case” items
    - i.e. ‘zebras’
BMS Course Breakdown

• **Anatomy**: regional & radiographic anatomy; basic introductory histology

• **Physiology**: cellular physiology, host defense, nervous, cardiovascular, respiratory, GI, GU, endocrine & reproductive systems

• **Other “-ologies”**: biomolecules; introductory genetics, pathology & pathophysiology
Learning Strategies

• **Lecture:**
  - 2-D drawings, diagrams & photos
  - Radiographic anatomy
  - ‘Routine’ plain films, limited CT scans

• **Lab:**
  - 4, 2-hour cadaver lab sessions during the semester
  - Plastic models – available 24/7
Learning Strategies

• **Assignments:**
  
  - **Readings:**
    - Gray’s Anatomy for Students
    - Learning Radiology: Recognizing The Basics
  
  - **Dissection & atlas videos:**
    - University of Wisconsin, Madison
      (http://www.anatomy.wisc.edu/courses/gross/)
    - Acland’s Human Anatomy
Course Instructors

- **BMS course director (John Mabee)**
  - 20 years of clinical practice as a PA
  - MS – Biology (Physiology)
  - PhD – Biomedical Sciences
  - Blends academic & clinical perspective on breadth & depth of course content
  - Teaches entire BMS course (except lab)
  & instructs in Clinical Skills courses
Course Instructors

- Cadaver lab instructor (Susan Sigward)
  - Asst Prof Clinical Physical Therapy
  - Certified Athletic Trainer (ATC)
  - BS – Physical Therapy
  - MS – Anatomy
  - PhD – Biokinesiology
  - Provides a clinically oriented survey experience of the human cadaver
Learner Feedback

• Student evaluations of course:
  - BMS course ranked highest of all courses within didactic curriculum
  - Selected items (x of past 3 yrs):
    - Course objectives achieved: 3.7/4
    - Cadaver lab content: 3.7/4
    - Cadaver lab sufficient for student’s needs: 3.5/4

◊ Thank You! ◊