Master Diagnosticians:
A Mini-Elective in Clinical Reasoning
Mini-Elective
Spring 2015

Course Dates: January 9, 16, 30, February 6, 13, 27
Fridays, 1:00—3:00 PM

Maximum Students: 25

Class Year: MS2

Course Director: Thuy Bui, MD
Melissa McNeil, MD

Contact Information: Thuy Bui, MD
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Description:
The ability to diagnose effectively and accurately requires integrating
knowledge base with clinical reasoning skills to solve medical problems. This
six-session mini-elective will introduce students to principles that underlie the
clinical thinking of physicians and allow each student to develop the skills to
becoming expert diagnosticians through problem- and case-based techniques
using clinical vignettes. Students will learn to describe case concisely and to
use medical terms to show that they understand how the patient’s words
translate into accepted medical equivalents thereby linking the case to their
formal knowledge. Each session will be composed of a brief formal lecture fol-
lowed by individual and collaborative clinical reasoning exercises and presen-
tation of unknown cases to seasoned clinicians. The theater-style think-aloud
and reflective role play by faculty will model the complexity of the clinical rea-
soning process which requires both formal and experiential knowledge.

Objectives:
• Examine modalities of logic and inference used by physicians
• Describes the types of errors in clinical reasoning that contribute to poor
diagnostic performance
• Define the stage of the clinical reasoning process from data acquisition,
problem recognition to interpretation or hypothesis generation
• Integrate information from a clinical encounter to achieve a working diag-
nosis and differential diagnoses
• Employ a highly efficient search for additional data to rule in or out alter-
native diagnoses
• Recognize that there is a variety of reasoning strategies and pathways to
tailor to the complexity of each clinical problem
• Interpret physical exam findings using likelihood ratios
• Apply a Bayesian approach to diagnosis and probabilistic reasoning in clini-
cal decision making
Utilize information from self-directed learning to select cost-effective diagnostic tests to identify common diagnoses.

Requirements:
- Active participation in all sessions.
- Reading assignments

Course Outline

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Faculty:
Melissa McNeil, MD, MPH
Thuy Bui, MD

Location:
All sessions
Scaife Hall, Rooms 464 A&B

Session one: January 9, 2015
Introduction to Diagnostic Clinical Reasoning

READING: Bowen J. Educational Strategies to Promote Clinical Diagnostic Reasoning. NEJM 2006;355:2217-25


Session two: January 16, 2015
Identify Key Clinical Features and Summary Statements

Session three: January 30, 2015
Problem List and Prioritizing It


Session four: February 6, 2015—session time change 12:00-2:00 this day only
Differential Diagnosis Formulation

Session five: February 13, 2015
Integrate Communication and Clinical Reasoning

Session six: February 27, 2015
Cognitive Errors—Heuristics


RESOURCES: