Master Diagnosticians:
A Mini-Elective in Clinical Reasoning
Mini-Elective
Spring 2017

Course Dates: January 9, 23, 30, February 6, 13, 20
Mondays, 5:00-7:00 PM

Maximum Students: 25

Class Year: MS2

Course Director: Thuy Bui, MD
Melissa McNeil, MD

Contact Information: Thuy Bui, MD
412-692-4840
buit@upmc.edu

Melissa McNeil, MD
mcneilma@upmc.edu
412-692-4814

Registration: Betsy Nero, Office of Medical Education
betsy@medschool.pitt.edu

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 422 A&B

**Session one: January 9, 2017**
*Introduction to Diagnostic Clinical Reasoning*

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


**Session two: January 23, 2017**
*Identify Key Clinical Features and Summary Statements*

**Session three: January 30, 2017**
*Problem List and Prioritizing It*


**Session four: February 6, 2017**
*Differential Diagnosis Formulation*

**Session five: February 13, 2017**
*Integrate Communication and Clinical Reasoning*

**Session six: February 20, 2017**
*Cognitive Errors—Heuristics*


**RESOURCES:**