Master Diagnosticians: Clinical Reasoning

Enrollment Period:	Spring 2022
Course Dates:	Mondays 1/24, 1/31, 2/7, 2/14, 2/21 (5:30 to 7:30PM)
Student Max:	21
Class Year:	MS2
Course Director:	Thuy Bui, MD Melissa McNeil, MD
Course Contact:	Thuy Bui, MD buit@upmc.edu 412-692-4840
Location:	Remote via ZOOM https://pitt.zoom.us/j/99533034598
Registration:	Via Amp Up – You will receive an email with enrollment info
Course Description:	The ability to diagnose effectively and accurately requires integrating knowledge base with clinical reasoning skills to solve medical problems. This six-session professional enrichment course 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 followed by individual and collaborative clinical reasoning exercises and presentation of unknown cases to seasoned clinicians. The theater-style think-aloud and reflective role-play by faculty will model the complexity of the clinical reasoning 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 diagnosis and differential diagnoses • Employ a highly efficient search for additional data to rule in or out alternative 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 clinical decision making • Utilize information from self-directed learning to select cost-effective diagnostic tests to identify common diagnoses
Pre-Requisites:	None
Requirements:	Active participation in all sessions. Reading assignments.

COURSE OUTLINE

Session One:
Introduction to Diagnostic Clinical Reasoning
READING:
Bowen J. Educational Strategies to P romote Clinical Diagnostic Reasoning. NEJM 2006;355:2217-25
Elstein AS, Schwarz A. Clinical problem solving and diagnostic decision making: selective review of the cognitive literature. BMJ 2002;324:729-32

Session Two:
Identify Key Clinical Features and Summary Statements

Session Three:
Problem List and Prioritizing It
READING: Mandin H. et al. Helping Students Learn to Think Like Experts When Solving Clinical Problems. Academic Medicine 1997;72:173-179.

Session Four:
Differential Diagnosis Formulation

Session Five:
Integrate Communication and Clinical Reasoning

Session Six:
Cognitive Errors—Heuristics
READING: Redelmeier DA. The Cognitive Psychology of Missed Diagnosis. Ann Intern Med 2005;142:115-120

RESOURCES:

- Kassirer J, Wong J, Kopelman R. *Learning Clinical Reasoning*. 2nd ed. Baltimore: Lippincott Williams & Wilkins, 2001
- Groopman J. *How Doctors Think.* New York: Houghton Mifflin Company, 2007
- Facione N, Facione P. *Critical Thinking and Clinical Reasoning in the Health Sciences.* The California Academic Press, 2008