Sam is a 4-year-old who fell backwards while climbing up on a slide at daycare. He was on the 3rd step of the slide. He hit the back of his head and briefly lost consciousness. He vomited once. His parents brought him to his primary care doctor within an hour of the injury. In the clinic, he had a normal neurological exam. The doctor opted not to do a CT, but clearly explained to the family that they should watch him carefully over the next 48 hours. That evening, Sam seemed irritable and had an unsteady gait. The parents called the primary care doctor on call, who advised them to immediately take him to the local children’s hospital. The primary care doctor called the ER to inform them of the child’s situation. The CT showed a subdural hematoma. He was taken to the OR for evacuation and was discharged home a few days later.

1) How do physicians decide when to order an imaging test? What options does a primary care doctor have if they are unsure of what imaging to order?
2) Should there be algorithms for when to order imaging tests?
3) Discuss the evidence base for the effectiveness/cost-effectiveness of technologies.
4) What are the incentives/disincentives for ordering an imaging test? What do we know about the impact of self-referrals?
5) What are some reasons for increase in testing?
6) Dr. Michael Laurer of National Heart, Lung and Blood Institute, New England J. of Medicine 2009: “Most physicians who order imaging tests experience no consequences for incurring costs for procedures of unproven value. On the contrary, they or their colleagues are paid for their services, and their patients don’t complain because the costs are covered by third parties. Patients are pleased to receive thorough evaluation that involves the best cutting-edge technologies.”
7) What are the other “costs” to the patient for doing a test...not doing a test?