Prediction rules are tools designed to help estimate the likelihood of a diagnosis, calculate a patient's risk for disease, estimate a prognosis, based on the results of valid and relevant studies. Using these tools for decision support, physicians, can accurately assess risk and probability assessments supporting the EBM process and make better clinical decisions.

CASE A:

A 63 year old woman with Chronic Lymphocytic Leukemia (CLL) dx 6 years ago, history of CHF NYH class I, hypertension and diabetes, presents complaining of bilateral leg swelling. She thinks the right > left. She had a cholecystectomy 2 weeks ago. She has a little orthopnea and PND but it only affects her with activity. She is on an ACE-I and a low dose diuretic. On Physical Exam she is in no distress, she has a HR of 92, BP of 138/82 respirations of 16. Lungs are clear with some bilateral basilar crackles. Her extremity exam shows trace to 1+ edema of the left leg with 2+ edema of the right which is pitting. Her calf measures 3 cm larger in diameter on the right and has some collateral superficial veins.

You are in the office/ER. You will not be able to get doppler imaging this evening without calling in the U/S tech so there will be a several hour delay.

1. What is the best next step?

   a. Admit and start anticoagulation for DVT and get the U/S in AM

   b. Order a d-dimer, r/o DVT if negative

   c. Suspect mild CHF exacerbation and just increase her Lasix

Use a calculator app to calculate her risk of DVT to answer the above question.

2. Go back to Epocrates Dx or DynaMed and look up DVT section on "Tests" and view section on Wells clinical probability score and D-Dimer.

Use Post Test Probability calculator in Mediquations. Based on the pretest probability from the Well's Calculator and assuming the Sensitivity of 89% and Specificity of 62%, (+LR 2.3  -LR 0.2), how likely does this pt have DVT if the test is negative? How will that affect your decision to start anticoagulation?
CASE B:

On your medicine rotation you are called to the ER to admit a 57 year old woman with pancreatitis. She has a history of diabetes, hypertension and heavy alcohol use. She states that her last drink was two days ago and is alert and answers all your questions appropriately. She relates that she has some mild nausea but no vomiting, and only a mild headache. She denies any visual, tactile or auditory hallucinations. On physical exam, she has no sweating, and seems not to be anxious or agitated. When you ask her to extend her arms, she does have a moderate tremor.

1. Before doing the calculation, do you think she needs prophylaxis to prevent alcohol withdrawal with benzodiazepines? Why or why not?

2. What is her score on the CIWA-Ar alcohol (alcohol withdrawal scale)?

3. Based on the result, does she need benzodiazepine treatment?

Two days into the admission, things go down hill. Her nausea worsens, and she has frequent vomiting. She becomes disoriented to person and place, and begins to see cats walking around the room. Her headache and other symptoms are unchanged.

1. What is her CIWA score now?

2. What treatment would you recommend now?

3. Extra credit!!! – Using DynaMed, what would be one possible regimen including drug names, doses, routes, and frequencies? How would you treat symptoms (eg hallucinations) when they arise?