Goals of model based skills simulation

**Tumor Resection**

Relax  
Rest arms and hands  
Surgery done with the fingers  
Use two hands  
Traction and counter traction  
Smooth motion  
No sudden motions  
Cusa is a paintbrush, not a shovel  
Don’t dig holes  
Hemostasis

**Endoscopy**

Indications  
Positioning  
Burr hole location  
Dural opening  
Advancing to the ventricle  
Identify landmarks  
Identify all relevant anatomy  
Enter 3rd ventricle  
Identify landmarks  
Perform 3rd ventriculostomy  
Post procedure management

**Endovascular Simulation**

Indications  
Positioning  
Equipment  
Personnel in the room  
Radiation safety  
Vascular access  
Guidewire advance  
Catheter advance  
Coiling  
Stent placement  
Managing procedural complications  
Closure  
Post procedure management
**Stereotactic Frame Placement**

Learn the parts of the stereotactic frame
Choose the correct screws
Choose pin sites
Infiltrate with local
Place frame to proper tension
Considerations: Pt comfort, no bar pressure,
all components tight, pins perpendicular to skull,
lesion within the frame volume
Removing the frame

**Frameless Navigation**

Learn the parts of the image guidance system
Fiducials or tracing
Considerations of fiducial placement
Imaging considerations
Check the quality of the images well in advance
T1 with gad vs T2
Mayfield placement
Fixing the localizer to the Mayfield
Location of the camera
Location of the screens
Registration
Mistakes in registration
Troubleshooting registration
Using image guidance in surgery
Marking borders before brain shift
Adjusting for brain shift
Stereotactic biopsy options

**Mentored Leadership**

Open discussion of the various aspects of leadership of a medical team in the operating room, the clinic and the hospital. Expectations of the “Captain of the Ship”.