Starting with COPD, I learned that this condition is the fourth leading cause of death in the US. I was surprised by that statistic since the prominent risk factors are preventable. We are very familiar with a plethora of lung irritants that can be directly linked to COPD. Genetic disposition is a little more unpredictable, but even so, “problem genes" can be identified. I know lung damage is irreversible, but early diagnosis is key in ensuring optimal treatment and management of the condition. I hadn’t realized the main damage from emphysema is within the alveolar walls. The loss of shape in the alveoli results in a loss of surface area, thus limiting gas exchange. I had never had this disease explained to me physiologically and I’m very interested in the workings of the respiratory system, so this was very beneficial for me. I also hadn’t realized chronic bronchitis is mostly a mucus issue due to the vast amounts of inflammation. I firmly believe understanding the pathophysiology behind disease processes helps me critically think about nursing interventions.

I find tuberculosis so interesting. I come from a medical anthropology family, so my siblings and I grew up studying old diseases. My sister loved the Black Death, I love tuberculosis. I think the antibiotic resistance even with the availability of different TB vaccines is so intriguing. This bacteria has the unique ability to even evolve into a state of resistance to medication if the patient stops treatment early and/or skips doses. I also think latent tuberculosis is a one of a kind beast. To think that this disease is just laying dormant in a completely unaware population and could become active at any time of a weakened immune system. I just find the power of this bacterium to be so fascinating.

I’ve also always been interested in sleep studies. I’m really just in love with the human body and how it functions as a whole. I’ve always deeply romanticized the idea of sleep and the power our brains possess to create whole unconscious worlds and experiences. REM is particularly interesting because this is where the creation of dreams takes place. I developed sleep paralysis in high school as a trauma response and it has stuck with me ever since, so I’m familiar with the state of paralysis the brain sends the body into. I was never aware of this mechanism with obstructive sleep apnea, though. Physiologically, it makes perfect sense, so connecting those dots was a fun moment for me.

I had not realized there were so many classifications of pneumonia. I knew the classifications by how the disease manifested, but I didn’t know it could be bacterial, fungal, or viral. Each one calls for a different treatment of medication, whether that means antibiotics or antivirals. Even then, the type of antibiotic must be chosen carefully to make sure the bacterium will respond to the treatment. If you haven’t noticed, I’m very interested in the microbiology behind antibiotics/drug resistant bacteria.

As for chest tubes, I’m still grasping the mechanics of them. The wet system makes more sense to me because it creates that water sealed chamber. This mimics the natural function of the lung, meaning a negative pressure system. I can see how it works and why. Dry systems I think I will have to work with before understanding them.