

Hi, I'm a fourth-year MD/PhD student at the University of Queensland in Australia. I sat the USMLE Step1 on the 14th of December, 2012, and I would like to share my experience with those whom may find it helpful.

My initial goal was 270+ for this exam. I write this review on behalf of students at the University of Queensland, Australia.

I had not planned on nor had I ever considered sitting the USMLE until I had almost finished MS2, so my focus became that of taking the exam at the end of my third-year (first PhD year). I thought the prep would be relatively simple. It wasn't. The Australian curriculum places very little emphasis on the basic sciences, and I had to learn the vast majority of the material from scratch. This is mostly with respect to embryology, microbiology, immunology and pharmacology, as well as biostatistics. Biochemistry was also not covered at UQ, but fortunately my undergrad major was in the subject, so it never became an issue for me.

For the sake of clarity, the Australian academic year is the same as the calendar year, so classes run January-November, not August-June.

Pre-preparation phase:

During my MS2 (2011), I spent the first semester (Jan-May) reading big Robbin's. This is practically all that I did. I spent probably 4-6 hours per day going through this book. Once again, this is before I had ever planned on sitting the exam, and truthfully, I wouldn't recommend going through this book either. It contains a ton of information and is unquestionably one of the gold standard resources out there for path, but it's not presented in a way that is even remotely concise enough for effective USMLE prep. That is let alone the fact that the majority of the text is low-yield. Use this tome as a mere reference.

In June of my MS2, I had come in contact with a student at my school whom had played a transformational role in my learning. He began to mention some of the resources he had found to be helpful. I purchased BRS Pathology, and after having read a chapter of it, immediately jettisoned the Robbin's method. BRS Path is super well-consolidated and presents the major ideas as high-yield bullet points. I found this organization to be better catered to my learning-style because I was able to simply memorize the chapters with alacrity as opposed to having to filter through much of the low-yield info in Robbin's. Per the same number of hours spent studying thereafter, my efficiency with regard to learning high-yield information had been improved significantly.

During semester-two, I would review a chapter in BRS Pathology on the Sunday or Monday *before* that corresponding topic was discussed in PBL on Tuesday. This way, I entered the week already having had a pretty good summary of the major ideas as opposed to having merely seen them for the first time in PBL. This helped me facilitate the class discussions. On Wednesdays, I would continue reading BRS Path and memorizing it the best that I could. It took me a very long time to go through the chapters because I generally made sure I could reproduce them by memory repeatedly before moving on.

On Thursdays, I had pathology prac at the hospital, so I would spend the preceding 1-1.5 hours in the specimen lounge reading DejaReview USMLE Step1. This was a great top-up to BRS. This book has a Q&A-type format. I would go through the corresponding topic that we were covering that week, so I would enter prac already having read BRS and DejaReview. This once again helped me to participate. The active involvement served as positive-reinforcement, so this BRS-DejaReview method during the early-mid-week worked quite well for me.

The catch is that the pathologists lecturing the pracs almost always developed their Powerpoints directly from Robbin's. So the fact that I was no longer perusing big Robbin's was beneficial because instead of having to go through the text myself to extract the main ideas, I let the prac tutors do the dirty work for me. In other words, their Powerpoints essentially became my Robbin's summaries, thereby further obviating the need for me to reference that text. So by late-Thursday, I had also "covered" Robbin's.

I then spent Fridays and Saturdays going through topic-specific questions on University of Utah Webpath and in Robbin's Review of Pathology. Whichever questions I had not managed to complete at the end of a given week I always made sure to finish before SoM exams. These questions, particularly the Webpath ones, in combination with my change in resource-use, improved my grades dramatically. I even recall a frenetic post-exam debate people had had on our SoM forum about an ambiguous question, but I had seen an almost identical question on Webpath while studying just days earlier. I cannot advocate more the value of Webpath. Use this resource.

Once Saturday passed and Sunday arrived, I did not touch material from the previous week. Sundays always equated to getting a jump start on the next week. If I had felt at any point that I had needed to continue looking at stuff from the previous week – too late. Sundays were strictly for preparing for the next week. Period. Staying one step ahead is extremely important during MS2. It's never harmful to review previous weeks' material from time to time, but going into each new week with foundation will not only positively reinforce your comfort with and command over MS2 material, but it will also give you the ability to be a more helpful, influential and impactful colleague.

During the neuro weeks of MS2, I had also gone through HY Neuroanatomy SECOND edition. I emphasize that I used the second edition because, several months later, I had coincidentally looked at the 5th edition that one of my friends had for comparison, and I found that although the latter was much more presentable and overall more informing, it was also much less concise. My impression was that the 5th edition would be great for someone in MS1 who wants to learn a broader foundation in neuro, but that the 2nd edition was still better for USMLE prep. Resources may become more affable with time, but that doesn't mean they always better serve their purpose.

When I approached the end of MS2, I decided that it wouldn't be unwise to keep my options open for the future, so I began preparing for the USMLE.

Preparation phase:

In late-2011, although I had several friends whom had been preparing for the USMLE during MS1/2 and were sitting it in a few weeks' time, I was still yet to have seen First Aid. I knew I was in no position to

take the exam any time soon. I began by purchasing the Sanjiv Microcards and Underground Clinical Vignettes – Anatomy. I went through both of these resources haphazardly during December 2011 and January 2012, but had finished both by the end of January 2012. I also started listening to the Goljan audios. I only went through about two-thirds of them because I was impatient and only found them to be moderately helpful (I should make note, however, that this was only because my pathology was already pretty good by the time I finished MS2; had I started listening to Goljan a year earlier, I definitely would have found him to be phenomenal. I highly recommend the Goljan audios during MS2.). In addition, I bought the Lange pharm cards. I only went through about 20 or so of these at this point in time, then put them aside.

Mid-January 2012, my sister had purchased for me a “till you pass” subscription to USMLE Rx QBank. I did 100 questions in tutor-mode and got 67 correct. I noticed that alongside the explanations there were also PrntScr images of pages from FA, and that the vast majority of the questions I was getting wrong had answers straight from the text. I realized that I was better off first reading FA and then tackling the QBank for reinforcement, as opposed to blindly doing questions first. So I purchased FA2012. In retrospect, I believe I was probably sitting around a 190-200 had I sat the USMLE at this point. Although 65% is about the average in Rx (which means one could arguably say a 220 was possible for me), this figure is left-shifted because most people who utilize Rx do so early, rather than late, in their prep (so this is an average among less prepared test-takers).

I spent three weeks during February at 8-12 hrs/day reading First Aid cover-to-cover. There was such a large volume of info that I swore I was forgetting most of it, but I continued on. The day after I finished FA (in late-February), I recommenced USMLE Rx. I noticed immediately a dramatic difference and was averaging around 85-90% on blocks, in contrast to the 67% I had mustered before having touched FA. I spent 8-10 hrs/day during March and April laboring through Rx at a mere 48 questions/day in random, tutor-mode. I annotated everything I found important into FA. This snail pace was due to the fact that I had not seen most of the material before. But on the other hand, I was inadvertently learning a lot.

By the time I finished Rx (85% cum), I could tell that my grasp of the material had changed drastically. I believe at this point I was probably sitting around a high-230, or just nicking 240, if I was lucky. I spent the month of May going through BRS Behavioral Science at a chapter per day. I read each one in the morning before starting my “real” studying. This method made the read very manageable. I had started this book because behavioral was my worst subject in Rx, so I had had to remediate somehow. During the day-time, I went through FA Q&A (94%) and Kaplan QBook (84%). I did not annotate my FA from these resources, and I read only the explanations from Kaplan QBook. This was mostly because FA Q&A was very easy, but Kaplan QBook still assessed quite a few details I had not encountered before. I then took a solid ten days toward the end of the month as a vacation roadtripping/backpacking up to Cairns and the Great Barrier Reef for scubadiving (highly recommend this if you ever trek down under). Because I had been traveling with my good friend, who is also a med student, he happened to have had a copy of Underground Clinical Vignettes – Behavioral Science lying on the floor of his car. So during down-time, I blasted through this book.

I should also mention that for the first half of the year, whenever I had gone anywhere via public transportation, I would randomly read either First Aid CASES or Step1 SECRETS. I finished CASES but only read about one-tenth of SECRETS (see my reviews at the end of this post).

June and July were more turbulent and desultory study months because I was travelling a lot and had had family obligations. I spent the first ten days or so of June initiating my second cover-to-cover pass of FA. I then curtailed this effort and looked into Gunner Training because some people had raved about it. I did not like the flashcard system (personal preference, although some people love it), so I instead just did their QBank. I went through it at around 150-200 questions per day, annotating into my FA here and there, but not religiously. By the first week of July, I had finished GT QBank (85%). I then went through HY Cell & Molecular Bio, and then recommenced my second cover-to-cover pass of FA from where I had left off previously. I finished FA again by late-July. My second pass of FA took about the same amount of time as my first pass had. The difference was that the second pass included the need to review annotations, so I was probably covering ~20% more text in the same amount of time. Even still, it was quite a slow pace. I also blasted through the Lange pharm cards and Brenner cards. In January, it had taken me several hours to go through just 20-25 cards. However now, I went through all of the Lange + Brenner cards in just two days. The Brenner had some lower-yield drugs, so I wrote the ones I hadn't heard of before on post-it notes and put them on my desk. I would Wiki a random drug every other day or so. By the time I sat the exam, I knew the drugs in FA + Lange cold + a handful of the lower-yield ones in the Brenner stack.

I then sat NBME-3 online late-July (they retired this exam on July 30th, 2012) and scored 250. I spent two days flipping through random questions from the behavioral and pharm Kaplan lecture notes and then started Kaplan QBank the first day of August. I went through Kaplan QBank at 6-8 hrs / 100 questions / day in random timed-mode. The 150-question diagnostic + 2200 QBank + two full-length exams = ~3000 questions. I got through everything in just one month (81% cum). I annotated Kaplan into my FA in orange ink. So at this point, blue/black annotations were mostly USMLE Rx and GT QBank, and orange was Kaplan.

The first day of September I started UWorld. I thought because I had been able to go through Kaplan so quickly that my UWorld pacing would be comparable. Wrong. I found UWorld to be incredibly info-dense, and I progressed at a similar speed as I had with USMLE Rx: 6-8 hrs / 50 questions / day. Whereas with Rx I had done one 48-question block per day, since UWorld only allowed a maximum of 46 questions per block, I did two 25-question blocks per day. I went through my first two blocks of UWorld in tutor-mode to get accustomed to the interface, but then did the rest of the QBank in random timed-mode. I finished UWorld (85% cum) by mid-October and had made all of my annotations into FA in green ink.

I went on to do all of the offline NBME exams (1, 2, 4 [please don't ask me for these because I don't have them; if you want them, make a thread asking where to find them and someone will PM you]) and some other random question sources, such as Microcards QBank (~75 questions) and UWorld biostats PDF (~75 questions). I then sat NBME-5 online late-October and scored 257. I was surprised that I had done a significant amount of work since late-July and had only increased seven points on the NBME. I began

to realize that my progress, if graphed, likely resembled the Hb-O₂ dissociation curve. I was aware that prepping beyond this point wasn't necessarily going to buy me additional points as much as it was just building my confidence and comfort in being able to achieve a *minimum* score. In other words, I knew putting in additional months of study ultimately wasn't going to guarantee me a super-high score as much as it was merely safe-guarding me from a low outcome if the random allotment of questions on my real USMLE turned out to be unfavorable. I would say once you realize you're entering your plateau phase, you're building potential, rather than kinetic, energy. It will make you slightly dubious as to your methods, but it's completely normal. You just need to continue pushing onward.

After I sat that NBME in late-October, I went through the USMLE Rx for the second time. I did about 5-600 questions before realizing that they were far too easy compared to the ones in UWorld. While they were great during my early prep, this late in the game, I knew it was better to focus on other things (however, if you are late in your prep and haven't done Rx, I would still recommend it; one pass was good, but not two. Regardless as to how easy the questions are, there was still some stuff that showed up on my real USMLE that I had only encountered through Rx's explanations).

So after those 5-600 questions, I began my third cover-to-cover pass of FA. This time, I had needed to read not only the text itself, but also all of my annotations from the past half-year. I had (with no exaggeration) probably doubled the length of my FA. I *still* went through at roughly the same pace as I had the first two passes. But because the length of text had been augmented considerably, I was actually reading pretty fast. In contrast to the first two passes, however, for the third one, anything that was not already 100% engrained in my memory I wrote down in a separate notebook. I filled up about half a small notebook with my tiny handwriting. I dated each day's notes and, before beginning my reading for that particular day, reviewed for about 30 minutes what I had written the previous day. This was an incredibly fastidious and menacing process, but I just dealt with it. I finished the third cover-to-cover pass by mid-late-November.

Because I had covered so much information during November, I thought there was no way I was retaining most of it. On the real exam though, certain words in the questions/answers will jump out at you and everything will come rushing to the surface full-speed. The info sits in your preconscious, not conscious, state. Don't ever get discouraged or think that you're not remembering things. Trust it. You are remembering a ton.

I then began going through UWorld for the second time at 322 questions per day. I did this in tutor-mode but, for the most part, breezed through it and only superficially reviewed tidbits of info when needed. Anything I had gotten incorrect or had marked this second time around I made sure I reinforced doubly. The benefit of having gone through UWorld in its entirety for the second time was for helping to build rapid recall skills.

I finished the second pass of UWorld by the start of December (two weeks-out). I then flew from Australia to New York. I was extremely jetlagged, but decided to sit NBMEs 6+7 anyway as an experiment to see how I could manage testing conditions while tired. Well, all I have to say is: get your sleep. It makes a huge difference.

NBME6: 252 (12 days-out)

NBME7: 254 (11 days-out)

I freaked out after these results. I didn't know why they were worse than my NBME5 result, and I questioned whether I had been doing something critically wrong. Either way, I was too close to the exam to ruminate over technicalities, so I just tried to maintain my composure the best that I could.

I spent the next day going through FA at random and looking through old NBME questions (I should mention that I had made a Powerpoint file with PrntScr images of all of my incorrect NBME questions). I then sat free-150 (10 days-out) and got 95%. MedFriends predicted this to be 270 +/- 11. I had said in a previous post that I got 268 +/- 11 on Free-150, but it was actually the former that was correct (not that this matters or is even remotely important, but I thought I'd clarify for the sake of anyone who types "95" on the MedFriends website and notes the inconsistency).

I spent the 9th day-out reviewing just biochemistry from FA.

NBME13: 264 (8 days-out)

I spent the 7th day-out reviewing just embryology from FA (and other random things).

NBME12: 266 (6 days-out)

I spent the 5th day-out reviewing just microbiology from FA.

NBME11: 264 (4 days-out)

The third to last day was just pharmacology from FA (end of each chapter and the pharm chapter itself).

The last two days I did practically nothing. In actuality, I spent probably a total of two hours on the second to last day looking at my Powerpoint of incorrect NBME questions, and the final day I quickly touched up on neuroanatomy using the neuro only sections of the Kaplan anatomy lecture notes. I didn't read them. I just looked at the images. I didn't do anything else those last two days. To that effect, I believe I had spent more time during the final days watching Alex Honnold rockclimbing videos and writing poetry than I had actually studying.

All of my study days during the final two weeks were at ~50% effort relative to those throughout the year. I felt fairly prepared, and by having done the NBMEs, I knew that trying to get a score mid-260s+ was primarily bound to getting lucky with minutiae. What separated my NBME6+7 performances from NBMEs11-13 in just a matter of days had absolutely nothing to do with reading FA and everything to do with sleeping more (i.e. not making stupid errors) and getting minutiae questions that I coincidentally knew. There was nothing else to it. That was it. If there had been some arcane secret to the success-equation other than that, I would have assiduously appropriated 12-15 hours/day during those final two weeks optimizing to ensure that 270. However, the best thing I could do was just to stay rested and not feel beleaguered.

Backtracking, I did recognize, however, that my reduced study effort during the final weeks was largely incongruous with my drive to do well on the exam. I had encountered some form of impasse. I felt bemused, dissonant, burned out. That was it: I had burned out.

This started roughly 5-6 weeks from my test date at the beginning of November. In a panic, I had sent several PMs to my friends on SDN asking for advice. They all told me to take a little time off. Take time off? This close to the exam? Are you crazy? But I did. Reluctantly. I spent an entire day up at the beach with some mates. It was exactly what I had needed.

Everyone who encounters a burnout manages and experiences it differently. You reach this point when your rate of growth of learning, although always positive, has begun to decline to the point that studying the material no longer produces identifiable gains. This is not to be confused with apathy or mere lack of motivation. This is an honest realization. It means that you've genuinely learned the material sufficiently such that there's no longer any drive to reinforce it. It means you've finished all of the resources that you had been striving to grow from. Early in my prep, I had envisioned that I would be sprinting toward the finish line doing 15-hr days in the weeks leading up to the exam. In contrast, I surprisingly felt a temporary perturbation and lack of motivation starting about 5-6 weeks-out.

I sat back and thought hard about what was going on. This was no time to lose motivation, so I needed to objectify the scenario and come to a solution. I realized that my motivation hadn't ebbed. It was merely that my growth rate had declined and I was no longer stimulated. This was the defining moment of my USMLE preparation. It meant that I had in fact been studying for intrinsic reasons all along. As much as I may have felt inclined to abnegate my freedom on the basis that I wanted a strong score, I knew that if the score itself had been the only impetus, then I wouldn't have experienced any perturbation. I hadn't suddenly lost motivation. I had merely become subconsciously aware that I was no longer able to reinforce the material more than I already had.

Therefore, one's false perception of a decline in self-motivation late in prep is reflective of having mastered the material, and is in turn an integral and necessary stage of study-optimization.

One should always remain impassioned up until the actual exam, but if he or she is still driven and ignited by the material itself through to the very last day, then he or she has not yet peaked, and therefore has not yet reached his or her fullest potential. The very definition of peaking is manifested by a loss of interest – not one of premature apathy or as a form of repression, but instead one as a byproduct of honest progress and sense of completion. Tapering your studies when approaching the exam shouldn't be a conscious decision. It just should happen.

The real solution I developed to avert the burnout, apart from merely taking that beach day, was more importantly through action, not just thought. I made it an obligation to have a mere physical presence in the library for at least eight hours per day. During the month of November, I was nocturnal. I slept from 2-10pm, went to the gym from 10:30-11:30pm and then went to the library from about midnight till 8 or 9am. I would then skate to one of the local cafes, grab a quick breakfast, take care of errands/emails and then head off to bed. Had I not held myself to going to the library inveterately

during this month, it would have been extremely difficult for me to have finished that final pass of FA. It was grueling. But this is where it all culminated.

The night before the exam, I stomached a meager dinner of two protein bars and a slice of pizza. I watched Shawshank Redemption on DVD, drank two cups of chamomile tea with milk and honey, read a little from a new novel I was starting, reflected on the past year and then went to bed. I got 8.5 hours of sleep. And then I finally sat the US medical licensing exam on the 14th of December.

Exam experience:

I purposely scheduled my test for a 12:30 – 8:30pm timeslot. I am not a morning person nor have I ever been. I was glad I had been able to sleep well the night before. I started the day with the normal routine, and I had a bowl of SmartStart cereal with skim milk and three-quarters of a banana. To get my mind functioning, I made sure to carry a conversation with my dad while he was driving me to the testing centre. I would not recommend reviewing any material or doing “warm-up questions” the morning of. It will only add to any latent anxiety. You’ve prepared well for this exam, remember? Trust what you know. Be confident in yourself.

I was the first to arrive at the testing centre. I recommend getting there a full hour early. There will be a maelstrom of people waiting to check in, so the earlier you get there, the less you need to dither. I made perfunctory chat with other students before the test, but once everything got underway, I entered my own zone and didn’t talk to nor look at anyone for the rest of the day.

Before you start the exam, the proctors will take your picture, fingerprint you, perform a signature test alongside your passport, search your pockets and send you through a metal detector. Every time you take a break and walk into or out of the testing room, these security procedures are repeated in front of a camera. There was greater security at my exam than there was each time I’ve vacationed to and from Israel. You will also receive two laminated sheets of paper and two fine-tip markers. Crossing out is allowed, but erasing is not. If you run out of space (you won’t), they will give you additional materials.

Bring your own foam earplugs. Your testing centre should supply them, but bring them just in case. At my computer console, there was a pair of those orange helicopter attendant-type noise-cancelling earmuffs as well as a pair of black headphones that were plugged into the computer. During the exam, I had my foam earplugs in and the orange earmuffs on. I had only encountered two heart sound questions on my exam, so for these, I removed the foam earplugs and orange earmuffs, switched to the black headphones momentarily, then upon finishing the questions, put the former back on. The earplugs + black headphone combination didn’t block out as much sound, which is why I clumsily dealt with the switch mid-exam.

At the start of the test, they had assigned me a cubical location toward the front of the testing room. I didn’t like this spot because the computer screen was in everyone’s plain view, so I asked to be moved to a more private space in the back. They acquiesced. This is yet another reason why I recommend getting to the testing centre early. You never know what inconveniences might arise.

Upon registration, you will receive an examinee ID#. You must write this on each laminated sheet of paper as well as enter it into the computer to commence each block. In other words, you will enter this number into the computer seven times on test day. A picture of your face will appear on the monitor in front of you, and you'll enter the number in the space below the photo. I mention this because some people have asked whether one could accidentally resume someone else's exam or if a timer magically starts once you enter the testing room. The process is tightly regulated, so no accidents will happen. Don't worry.

When I first sat down at the console to start the exam, the intensity of the moment *was profound*. The first question loaded, and it was surreal that after all of those thousands of practice questions I had done – after all of those thousands of pages I had read – after all of those long hours and sunrises through the library windows – I was now actually engaged in the real deal. My heart was pounding vehemently in my chest for the first seven questions or so. My stroke volume was off the charts. I was thankful that the exam started off easy because I was able to build momentum quickly. Had I needed to deal with some recondite ethics or graphing question right off the bat, I may have gone into cardiac arrest. But as the ball got rolling, I actually got excited. Never had I worked so hard for something before. I was pumped.

I did the first two blocks back-to-back with no break (took 60 seconds sitting at my desk without leaving the testing room). After the second and third blocks, I had half a protein bar and a few sips of water. After the fourth and fifth blocks, I had a diet Redbull and half a PBJ sandwich. After the sixth block, I chugged the third diet Redbull but consumed no calories. I also made sure to micturate each break.

I used almost all of my break time on exam day. Although I had finished each block with 10-25 minutes to spare (this time is added onto your break time if you end a block early), I used every examination minute I had to review both marked AND unmarked questions. I had had a habit of making careless errors on the NBME exams, so I tried my hardest to minimize these. That being said, if you have any extra time at the end of your breaks, I exhort double-checking your work. This doesn't mean you should start psychoanalyzing or overthinking questions. If you've done lots of practice questions, you'll know how to use your time to your advantage. But regardless, definitely use it, and at the very least, just to make sure you didn't accidentally click "transformation" on a question when you meant to click "transposition." This stuff happens, no matter how composed you think you'll be on exam day.

For a bit more clarity, I'll give general breakdowns for each subject as far as what showed up on my exam. But be aware that everyone's form is different. Whereas some people might have lots of micro and very little anatomy, for instance, others might have it the other way around. So the following isn't what would necessarily appear on your exam. It's just an example of what is possible.

Anatomy (10-15 Qs): several questions on upper limb nerves; one question that relied on you knowing the image of the brachial plexus very well; a question on the vagina; a question on urinary incontinence; one abstruse abdominal X-ray with frontal and lateral views; one question involving a muscle insertion point; a very strange question involving a thoracic stab wound, where they wanted to know which structure was compressed, but the structure (as inferred from the patient's presentation) wasn't

immediately in the region of the penetration; simple lymph drainage question; question on histology of respiratory tract mucosa in a specific location.

Embryology (5): aortic arch derivative; some questions on pharyngeal clefts/arches/pouches.

Biochemistry (20-25): this is where some of the trickier questions were on my exam. They weren't necessarily difficult at the core of what they were asking, but they required that you knew your metabolic pathways very well and then were able to manipulate them. Know anabolic/catabolic enzymes and how they relate to cAMP and phosphate group shuttling. Know your terminology (e.g. difference between phosphatase, phosphorylase, etc.). In turn, know how substrate concentrations will change upstream or downstream depending on alterations in a metabolic pathway. Understand your G-protein pathways and lac operon and be attuned to how mutations (whether inactivating or constitutive) would produce a deviation; or conversely, be able to infer where a mutation would have occurred based on any information they give you. I had a question late in my exam that involved two different types of mutations in a single common pathway; pathways on their own are easily memorized, but you've got to study them well enough so that you're able to flip things around, even when you're tired. I also had a one-liner question asking something very specific about an intracellular protein; another tricky question on glycogen enzyme regulation; an easy question on a glycogen storage disease; another one-liner minutia question asking about ion channel regulation in a specific tissue; question on gluconeogenesis where you needed to know what happens in the mitochondria vs cytosol; another specific question on what would occur in a pathway based on a particular change in diet; two questions on intracellular signaling molecules (know how proteins are shuttled around and modified); easy question on insulin and C-peptide; ultra-specific question making sure you could identify and differentiate between the familial dyslipidaemias; two questions on collagen; couple of pedigree questions; some questions on CF and AIDS mechanisms; tough question on a vitamin in a patient with an atypical presentation. I also had a ridiculous question on ELISA that was by far the most WTF question I have ever seen. I encountered it in the 6th block, read it for 60 seconds, didn't click an answer, then went back to it and spent an additional 7-8 minutes answering it. I had read on the scores thread from 2012 where a couple people had mentioned having encountered a WTF ELISA question. Well, I'm not sure if what comes around goes around, but this one did come for sure. The 6th block was the only one that I didn't have enough time to double-check of all of my unmarked questions. And it was strictly because of that one ELISA question.

Biostats (10): a few simple questions on sensitivity/specificity; a question about understanding what alpha, beta and power mean; a question on population data interpretable from a graph. I also had a WTF question that involved a simple graph. It should have been incredibly easy, but I had no idea what they were asking because the grammar didn't make any sense. I spent a solid three minutes at the end of the block just trying to figure out how the meaning of the graph changed based on where the commas should have been in the question. This was in the first block too, so I was preter-awake. There was no catch. It was just a poorly written question. I still have no idea whether I got it right.

Behavioral science (15): a couple of questions on developmental milestones. One asked about a reflex; the other wanted you to interpret, based on the vignette, whether the motor, cognitive and social

milestones had been met by an infant. One question on sleep. Know what happens during each stage of the sleep cycle. They tried to be tricky with this question, so also know how to differentiate between the different sleep disorders. A question about mental retardation in a developmental disorder. Several (probably 6 or 7) ethics questions. Two were tricky. One asked about a situation I never could have prepared for. It involved working with the parents to develop a management plan for a child with a particular disorder.

Microbiology (15-20): a couple questions asking the structural characteristics of viruses; a couple easy ones giving classic presentations and then asking for the organism; a very difficult one on tropical disease; three very hard image questions, two of which asked about organisms that aren't even in FA, and on top of that, one of these asked about the treatment, where the correct answer was a drug I had never heard of before. Another very tricky question on bacterial toxins (know how these relate to immunology); three questions on vaccines; question on pneumonia; question on meningitis. Overall, micro was my best subject going into the exam, and I walked out having felt like it was the hardest topic I had encountered.

Immunology (15): question on bacterial toxin and three on vaccines (same as those mentioned in micro up above); at least 6 or 7 questions on immune responses in tissue reactions (know the cells involved for all of the major immunological reactions and hypersensitivities); I even remember thinking during the exam that if I had been shaky on which cells were involved when/where, I would have been screwed; a question on viral propagation/proliferation; couple of questions on congenital disorders listed in FA; question on immunoglobulins.

Pharmacology (15): about half were simple pharmacokinetics questions; hard one on drug toxicity; tricky one on a low-yield side-effect of a drug; very difficult question regarding the identification of an ultra-low-yield organism via an image and then knowing the Tx was the obscure drug listed (as mentioned in micro above); a couple neuro-related; a couple on anti-psychotics and anti-depressants; one low-yield anti-cancer agent MOA.

Pathology: tough to give a number here because path overlaps with pretty much everything, but it was the majority of my test. I had many gross images, illustrations, several MRIs and X-rays, and even some on organism identification. Overall, I had neuro-heavy exam and relatively little respiratory or repro. The USMLE is primarily an examination of pathology. This requires an integrated understanding of a broad scope of it in conjunction with patient presentations. You can be a rare guru at a subject like anatomy or micro, for instance, and still only do okay on the USMLE. However, if you know your path inside and out, you're going to do very well. Just think: Goljan would rock the USMLE and he wouldn't even need to refresh his basic sciences.

Physiology (20): mostly arrow questions; two of them were extremely difficult, where one was with regard to a disease that was low-yield and not even in FA. Basically, the first one took a rare disease and then wanted to know very specific things about it in arrow-form. I couldn't believe they were so pedantic about something so rare. I've always been one to obsess over small details, but even I found this question pedantic. For hypothetical purposes (i.e. this is NOT what actually showed up), it would be

like them asking about changes in biotin and succinyl-CoA utilization in hypokalaemic periodic paralysis. Yes, it was that retarded. The other question wasn't about a too uncommon disease, but one of the variables was just exceedingly odd. Once again, for hypothetical purposes, it would be like them mentioning fructose intolerance (so far so good), but then, as the fifth arrow-variable, they want to know about the change in cytidine concentration in the kidney. Just odd. These weren't things I believe any of us could prepare for. I also had one question on ion channel regulation; one very tricky question on cardiac function represented in a strangely graphed form, where you had to infer, based on the graph, the mechanism of the drug used; one renal calculation question; one tricky question on pressure vs resistance in graph form, where they were comparing different vascular locations, and you had to keep a lot in your short-term memory to answer it correctly. I'd say a few of the pure "IQ" questions that appeared on my exam relied on you knowing your physical sciences really well and then being able to visualize information in a recondite way. Physio was definitely one of the more challenging subject areas I had encountered.

Molecular biology (6): had six pure mo bio questions that I can think of off the top of my head (i.e. not integrated with biochem or path, just pure lab technique-type questions). Had two tied into bacterial nucleic acid acquisition; question on modification of viral phenotype in vitro; question on gene transfer techniques; two questions related to plasmid construction, where one was pretty hard and I narrowed it down to two choices. I answered this one via trying to integrate my external knowledge, but I couldn't have ever prepared for it. What made it difficult was that you needed to know very specific functions of each individual plasmid component within the context of an experimental model. I believe Kaplan QBank helped me most for the mo bio questions because they were fairly OCD about this subject.

During the 6th and 7th blocks (particularly the 7th) of the exam, my mentality and strategy had changed. As rested as I had been going in, and despite having had three diet Redbulls, my sensorium began to feel increasingly clouded. It felt like I had been awake two nights in a row and was still forcing myself to operate at 110% capacity. Whereas at the beginning of the exam, I worked through each question meticulously and judiciously, by the end of the exam, my subconscious mind had taken over and I pretty much answered everything on rapid recall. Some of the questions would load, I would look at them for 4-5 seconds as though they were some sort of wordless collage, instantly click an answer, then go back and spend another half-minute reading, only to keep the same answer. I had felt most "tired" on this last block, but I had finished it faster than the previous six, with almost half an hour left. The whole thing was a blur.

When I walked out of the testing centre, I was certain that I had done very well on the exam. I was aware that I had broken 260, but I wasn't sure if I had been able to drive above my latest NBMEs. However, as the days rolled by, I became cognizant of at least five absolutely careless errors I had made, and I had to come to terms with the reality that a 270 had evanesced as a possibility. It's like submitting a cover letter for a job you really want, only to realize after the fact that you spelled something wrong. It was just too late. Based on the NBME exams, a few questions translate into a dramatic difference in score once in the 260+ range. On the real USMLE, a 260 vs 270 is distinguished by a margin no greater than 7 or 8 questions out of 322. If you want that 270, being well-prepared isn't enough. You need to

get lucky on the handful of minutiae questions, you can't make errors and you need to be exceedingly brilliant. All three are prerequisites. I was able to achieve a 262 on the USMLE Step1.

I'm generally content with this outcome. Not ecstatic. Not disconsolate. Generally content.

If the exam had been a chess game, I feel it ended in a draw. I read all of the books. I knew all of the openers. I had sufficient end-strategy. But the game still ended in a draw. I'll accept the handshake.

Now let me just make something clear about the resources I've mentioned above: those were the heart of my prep. I am a book buff, and purchased pretty much every resource out there for USMLE Step1 prep, and I had looked at over 50 different texts throughout 2012, but most of them did not ultimately help me in any way. If they didn't help me get additional questions correct in UWorld, the NBMEs or on the real deal, I didn't list them above.

Resources I do NOT recommend:

Brenner pharmacology cards – contain more drugs than even the Lange cards, but unlike the latter, they are not vignette-style and extremely monotonous and boring to learn. More importantly though, the information given on the description side of the cards is either too vague or specific for USMLE prep. For the USMLE, you need to know key words/phrases (e.g. macrolides inhibit the translocation step; chloramphenicol inhibits peptide bond formation); the Brenner cards don't make these differentiations, so you could have gone through all of the cards, then get to a practice question but still not be entirely sure which answer choices are referring to which drug. I would only recommend this resource if you've already gone through FA, the Lange cards, and all of the QBank Qs out there but merely want to learn more drug names out of curiosity. Just be aware that the remaining drugs in the Brenner cards (i.e. the ones you had not encountered through other resources) are extremely unlikely to show up on the exam. Don't waste your time with this resource.

BRS Physiology – I purchased this because people raved about it and read the whole thing. It is a very good text for MS1 to gain a broad foundation in the subject, but it simply didn't assist me answering USMLE questions correctly. This is what I'd like to call a "fluff book." Many people like and/or love it for learning physio, but what I found with this book was that it was either too general or too specific. It also has lots of practice questions, but they, once again, weren't USMLE-style and were overly pedantic, particularly with regard to some of the calculations, which are the type that have never been known to have been tested on the USMLE. The vast majority of the physio questions on the exam are going to be arrow-questions that you can answer based on having done QBank questions alone.

HY Biostats – overkill; like using LAH instead of NaBH_4 on a simple ketone. Read a few chapters and did some of the questions. Concepts remain important, but too specific for Step1. Deceitful book: It's very short, but also takes a very long time to read because of the magnitude of the concepts involved. Stick to practice questions for biostats. That's it.

HY Behavioral – too general for Step1; I wouldn't recommend this text to anyone. FA rates it as a top resource. Bogus. It's a total flunk. Read BRS Behavioral.

HY Embryo – too detailed for Step1; stick to FA and practice questions, which are more than sufficient.

HY USMLE Step1 – nice cover, but pretty much a low-quality spin-off of FA that doesn't seem to go anywhere; basically the author just took ~1/3 of FA, summarized it too generally to be worth anything, and then published it to make money. This was likely the most worthless text I had purchased at any point during my entire USMLE preparation.

HY Biochem, Histopathology, Kidney, GI tract, Heart, Lung: all unnecessary. The worst was probably the histopathology. It was a malfeasance that they even advertised it as prep for the USMLE. Worthless. The latter four organ system books were good for referencing at times. They also have some nice radiographic images, but they are beyond overkill for USMLE prep. Don't purchase any of these.

DejaReview Neuro, Pharm, Biochem, Microbiology & Immunology, and various others: all unnecessary. I flipped through these on occasion, but they didn't provide me with anything special; some of the info was also incorrect at times or just too general. Learn to consolidate resources. I purchased all of these because I was OCD, but within the final 6-8 months of my prep, they generally just collected dust on my shelves.

Step1 SECRETS: SECRETS was a very good book, but it's extremely long and is not to be used within three months of the USMLE. This is a fantastic resource if you are in MS1 or early in MS2, but there are many more important resources out there to check off on your list before you should even consider SECRETS a priority. I knew a girl who was in love with SECRETS because she thought it was the greatest book ever, and she was spending more time on it in the months leading up to the exam than she was on First Aid or QBank questions. Although I agreed with its utility, be aware that it's actually baneful to get pulled into other attractive resources close to your exam. If you're within three months of the real USMLE, First Aid and thousands of practice questions should be your upmost priority, not SECRETS.

CASES for USMLE Step1: a great book early in prep. If you are within three months of your exam, don't buy this book, but if you are early in MS2, it's worth your time when you don't feel like doing real studying or are traveling by bus/train somewhere. Don't religiously read this text. Just quickly absorb the vignettes, relate to the information in the subsequent questions then move on. Don't spend too much time analyzing this book.

Lange USMLE question books: I have three Lange question books. The questions aren't USMLE-style, but instead similar to the one-liner ambiguous ones that I'd frequently see on my SoM exams.

BoardBuster for the USMLE: another large-ish question book. Questions are either too specific or unrelated to USMLE material. Some doc wanted to just make money.

Previous relevant review posts I've made:

Uworld: <http://forums.studentdoctor.net/showthread.php?t=958502>

Kaplan QBank: <http://forums.studentdoctor.net/showthread.php?t=943957>

Kaplan QBook: <http://forums.studentdoctor.net/showthread.php?t=917952>

HY / BRS Behavioral Science: <http://forums.studentdoctor.net/showthread.php?t=920502>

GT QBank: <http://forums.studentdoctor.net/showthread.php?t=929668>

Lange + Brenner pharm cards: <http://forums.studentdoctor.net/showthread.php?t=915419>

FA Q&A: <http://forums.studentdoctor.net/showthread.php?t=912135>

I've also received many post-exam PMs and questions that I'll post below:

Q: Good to hear you did well, hey phloston I know your exhausted and all but if you could just answer a few questions I would be grateful... exam in a week

1. Having given the exam now what would you recommend is the best routine to follow in the final week to do to get the most out the last few days?

2. How was the exam compared to NBME? Uworld? Uworld assessment exams?

3. Can 90% of it be done from FA as many have stated before?

4. Anatomy was it from FA or should we supplement another source and go through pictures/ diagrams etc.?

any other advice which is key to doing well would be appreciated

thanks

A: Hey, man, I am pretty beat right now. I only got 3 hours of sleep last night (the night after my exam) because I had difficult questions flying into my head that I wasn't sure whether I had gotten wrong. I even woke up with my heart beating to a renal calculation question that I thought I may have messed up on. I'm hoping everything went okay.

As far as the final days are concerned, I had been asking people that question for a long time as well. I pretty much spent the last couple weeks, believe it or not, at ~50% the workload / # of hours that I normally put in throughout the year. The final week for me was literally alternating days of just doing an NBME and then going through a chapter of FA. In the final week, don't study physio. You know that stuff. Make sure you learn the biochem, micro, pharm and embryo that's in FA. I had one day where I just did biochem. One day was just embryo. One was just micro. And the last was just going through the drugs at the end of each chapter and in the pharm chapter itself. Know your side-effects. I had a low-

yield side-effect show up in a very tricky question, where they wanted you to think it was a different drug they were asking about.

I would rate the exam much closer to UWorld in terms of question-style and difficulty than the NBMEs. I found the NBME questions to be either joke-easy or WTF-hard, no real in-between. The real deal was mostly middle-ground difficulty, with a handful of gimmies and a handful of hard ones. I found the UWSAs to be much much harder than the real deal. That being said, I had thought the UWSAs were harder than UWorld QBank as well.

I would say that FA alone is not nearly enough. I think about 60% +/- 10% of my exam was straight from FA. The rest was literally all QBank material. When you get to the real deal, you'll know what I'm talking about. You can read FA, but if you haven't done a lot of practice questions, you're toast. Do a ****load of questions. I've read posts in the past where people say FA was >90% of the exam. Those people either got very easy exams or are just oblivious.

Love that you ask about anatomy. I was worried most about this going in, but I may have gotten lucky I think. I didn't have too much, but the ones I had were WTF questions, and for some ridiculous reason, I knew them. There was one obscure anatomy identification question (go figure) that literally popped up like the 3rd to last question of the whole exam. It kind of sank my mood ever so slightly, but I tried not to let it bother me. But yeah, I had no idea wtf it was asking. Abdominal x-ray, both frontal and lateral views, pointing to different things. Hopefully I got it right.

If I were you (and listen to me square), know your neuroanatomy. This was exceedingly high-yield on my exam. I had pretty much everything you could have imagined, and would have been royally ****ed had I been weak in this area. I would say I'm above average, not excellent, with neuro, and I was still able to get by for the most part.

Q: Could you also comment on pathology, if FA + pathoma is good coverage? I own Goljan but it seems low yield.

A: I didn't use Pathoma. I listened to about 2/3 of the Goljan audios but didn't use the rest of them because I was impatient. I think the audios are great if you're learning that material for the first time, but if you're approaching crunch-time, there's other things that are higher priority. The FA% on my exam I mentioned above.

Q: By "QBank material", do you mean just UWorld?

Because as far as I can gather from the forum posts about the other two banks, USMLERx is basically just FA and 95% of Kaplan QBank is FA including reference to the page numbers in FA.

The other argument which I hope someone can answer is, if FA authors have been clever enough to put all the facts needed to solve all the 10x322+150 NBME questions in their book, how do the NBMEs still correlate so well with the score from the actual test that has only 50% of necessary facts from FA?

A: Each QBank contributed something unique. USMLE Rx seemed to draw heavily from FA with its actual questions, but the explanations sometimes provided a lot of low-yield factual info. A few drug names popped up on my exam that I had only seen because USMLE Rx had mentioned them. They weren't the answers to the actual questions, but I at least knew they weren't right.

USMLE Rx's questions are much more simple than the real exam's. When I had gone through the QBank in March/April, I thought the difficulty was normal, but I had gone back through ~5-600 questions within 3 weeks of the real deal (7 months later, so no, I didn't remember any questions), and they were so easy that I felt it wasn't the best use of time to tackle the QBank a second time. Once was fantastic. Twice was a no no.

In short, if I am as objective as I can possibly be, I think FA alone can get you most of the straightforward questions, just as reading that text would help you with Rx, but the harder questions require that you know a mechanism really well and then be able to manipulate it. FA alone can't give you practice with that, and Rx is only the first step in developing your thought processes.

Kaplan QBank is definitely not 95% FA. KQB was the hardest of any resource I had used while prepping for this exam, and it had a ton of low-yield info. It definitely helped with my molecular biology, which interestingly was very high-yield on my exam.

As far as the NBMEs are concerned, as I've said before, 90% of the questions on those exams are cake-easy, so it's not a surprise that FA can be generally adequate. But the curves are extremely extremely steep. When you do those exams, it will become apparent to you how much bearing the low-yield info has on your score.

Q: No what I meant to say about the NBMEs is that the FA authors certainly would have seen every single one of those questions and they would have incorporated the factoids into FA somehow. I haven't taken a single NBME yet but I can bet every question in them would have the factoids needed to solve mentioned in FA. [B]If 50% of the questions on the actual test needed minutiae outside of FA[/B] to even solve, I am not sure how NBME tests still correlate that well with the actual scores, steep curves or not.

If you are saying Kaplan QBank is not 95% FA, I think I should really try it, though I have no freakin' idea where I would find the time for it! However, I have read at least ten posts on this very forum by ten different people saying that 95% of the questions in Kaplan QBank can be solved using factoids from FA and those 95% even give the page numbers in FA where the answer may be found. That is the confusing point.

A: The bold is not what I've said. FA may have covered ~60% +/- 10% of my exam, but that doesn't mean the remainder was minutiae. There are quite a few questions that require your external knowledge integrated with strong problem-solving skills.

FA does not build your pathology. You need BRS Path, Webpath and many QBank Qs to cover this area. FA's coverage of path is mere cursory.

I say I had a lot of minutiae on my exam. Probably about 20 questions fell into this category. They either required you know some small factoid, or you had to know what you were looking at without the help of the vignette. I'd say two of the hardest questions on my entire exam included images. Other difficult questions had patients with presentations I had never seen before. In fact, one of the most challenging questions on my exam had to do with a vitamin.

If I mention anything related to difficulty and this exam, it's completely objective, not subjective.

When I said that, for me, "the real deal was mostly middle-ground difficulty, with a handful of gimmies and a handful of hard ones," that is how I see it in relation to what I think the % of people answering each question correctly was.

Some QBank questions you do literally have 85+% answering correctly (e.g. here's a drug causing orange tears/sweat, which one is it?); I just don't feel these were a humongous portion of my test. I'd say the bulk of the questions fell into what felt like the "50-65% answered correctly" category.

I probably encountered ~25 questions that were thoughtlessly easy (>80% answering correctly), but there were also ~25 that were in the <25-30% answering correctly category. I think I may have seen ~5 that were for sure <20%-type questions.

Q: Phloston, in retrospect, would you still say UsmleRx over Kaplan Qbank?

For all recent test takers, assuming you have tried both because I don't know how you can know otherwise (unless you do with a reason .. then that's fair), UsmleRx or Kaplan Qbank?

Also - I'm doing GT, not sure if that changes anything but perhaps GT is similar enough to UsmleRx....

A: As I've said before, each QBank has different strengths. Rx was better for reinforcing FA. Kaplan is good for building your micro and molecular biology. Here's a post I made about Kaplan a while ago. I mention a bit about it in comparison to Rx as well:

<http://forums.studentdoctor.net/show...php?p=12986874>

Q: I was going to ask how BRS path compares to patjoma and if one is more dense or better. I'm trying to avoid goljan.

A: I never touched Pathoma. I thought BRS was perfect for learning stuff during MS2. It's basically the FA of path. It's a skeleton to get you started and isn't too overwhelming (like big Robbins).

I own Goljan RR, but had only used it to look at p.57 (I think that's the p.#) on occasion, which has really good volume vs osmolarity boxes. None of this stuff ended up showing up on my exam, but the topic was high-yield in the QBanks.

I had spent no more than 10 minutes at different times flipping through random sections of the Goljan RR, but I could tell that it would have been a great text during MS2, not something to use approaching the exam. I would recommend BRS Path + Webpath + tons of QBank Qs as top priority.

Q: Phloston), if you had only a few days to spare for Kaplan, which sections would do from the QBank given you have already completed UWorld?

A: I recommend the whole QBank, but if you absolutely need to crunch, get through the biostats and molecular bio. I would also suggest doing neuro if you can. Neuroanatomy was one of the highest-yield topics on my exam.

Q: would you say that uworld covers most >85% of the pathology on the exam not seen in FA, since everyone claims it to be hi-yield

A: UWorld asks questions well within the context of the topics that it does cover, but overall, it does not nearly cover the breadth of path that could show up on your exam. Path is one of the most extensive subjects. They can show you any picture in a patient with any type of presentation. UWorld covers the highest-yield topics well (e.g. Marfan's, phakomatoses), but the lower-yield stuff can come out of nowhere. Make sure you know BRS Path, and try to do Rx and Kaplan QBank in addition to just UWorld; if you don't have time, just try and fly through BRS Path so you at least know everything in there.

Q: Phloston, would you say that understanding and knowing ALL the info in the UW explanations w a good thorough understanding of FA would be enough for 220?

A: If you spend the time to learn all of UWorld, you'll do very well. FA is your foundation, then from there, your score is somewhat directly tied into the # of practice questions you do. This begins to plateau around 6-7000 questions, but from there, you are more so just developing rapid recall skills and the ability to manipulate experimental models than actual raw score augmentation.

Q: Phloston, congrats homie on taking the exam. Was Neuroanatomy really that high yield? How many questions would you say were on your exam?

A: I had a ventral brainstem pic (identify the nerve based on the vignette), gross haematoma pic, several MRIs, brainstem transverse cross-section, spinal cord cross-section, and at least 30 vignettes (without images) that relied on you making a diagnosis or being able to identify the location of a lesion based on the information given. I'd say ~40 questions on my exam were neuro.

Two of the hardest questions on my exam were neuro. And a third question was of the pure factoid, esoteria-type; you either knew it or you didn't, and FA didn't cover it.

One of them had a very abstruse image with a relatively simple vignette. I had never seen an image like that before. Of the conclusion that I was able to draw, the vignette just didn't seem to relate whatsoever to the image. I believe they were trying to pull some sort of trick. Based on what I've encountered through practice questions in this type of situation, it's important to go with your conclusion of the image more so than getting pulled into the vignette. So in the end, I answered this question based on the image alone. I have no idea whether I got it right.

Q: Phloston, why do you recommend BRS path? I don't think I've heard of anyone recommending it.

A: During MS2, I would read the chapter in BRS Path over the weekend *before* that corresponding topic was covered in PBL. That way, I went into class with a good foundation, versus just seeing the material for the first time. This helped me lead the class discussions. I thought BRS Path was absolutely platinum for building my path. It's mainly bullet points and is super well-consolidated.

Q: many suggest BRS Physiology. Goljian audio is great too but only if you do it earlier in the year.

A: I read BRS Physio about 5-months-out. I only purchased it because everyone raved about it, but it was way overkill for Step1. This text earned me zero questions correct on both the NBMEs and on my real deal. I would recommend this text for someone in MS1 who wants to build his or her foundation in physiology. However if you're within 6 months of the exam, this book should be essentially nill on the priority list. Practice questions and reading the explanations is pretty much all you have to do for physio. And don't touch physio in the last two weeks. Just focus on biochem, micro, embryo and pharm.

Q: Now that you are done with the test, what do you think is the highest value for time in last two weeks? Do you still think FA, UW and NBME or would you include anything else as well?

A: The highest valued thing you can do during the last two weeks is to sleep as much as you can at night. If that means getting 9.5 hrs every single night leading up to the exam, do that. I wore ear plugs and a blindfold and didn't let anyone wake me. You'll need all of your energy when you enter the real deal. But don't nap during the day. Just push through your study days and sleep long at night. You need max REM for your memory.

In terms of resources, the last two weeks should be making sure you've finished UWorld, doing all of the NBMEs and touching up on the HY subjects in FA. That's it. I finished my second pass of UWorld right around the two-week-mark from my exam, then spent the final days on the NBMEs and FA at 50% effort.

Q: What do you suggest for images CT , MRI

Q: Phloston, you say neuroanatomy was heavy on the exam. What is on your opinion the best resource to study neuroanatomy from for someone with not the best background? Thanks

A: To both of you: practice questions. That's it.

I had been most worried about anatomy going in because it's not my strong area and it has been known to be highly variable on people's exams, but practice questions turned out to be sufficient for me.

Interestingly, as much as I hate Kaplan's question-style, the QBank developed my ability to read CTs really well. By the time I sat the real deal, I felt very comfortable with CTs of the thorax and abdomen. This comfort came strictly through practice questions.

I also recommend the **neuro sections only** of the Kaplan anatomy lecture notes. These saved me on the exam. I wasn't a fan of the lecture notes overall because I feel they're generally too long and overkill,

but the neuroanatomy section of the anatomy book is spot-on. I didn't read the notes in this section; I just looked at the images. This helped big-time.

Q: I heard you say micro cards were good and I did go through them once. Do you think they are useful to keep using in the final few months of prep or did you just use FA?

A: Going into the exam, I made sure I had the images of the tree-diagram cards in my head. I had several questions that required you knew the structural characteristics of the organisms. The Microcards were ultra-clutch and pretty much got me all of my Micro points on the exam.

Surprisingly, I only had one question on bacterial toxins on the exam, despite these being very high-yield. It also happened to be one of the trickiest questions on my form because the vignette was nothing I had ever encountered before. I almost got it wrong, but when I went back to think more about it, I was very impressed that they had managed to make such a twisted question out of otherwise very straightforward material. Know your toxins and how they relate to immunology. They know people can memorize toxins, but be sure you understand how the cytokines and receptor pathways factor in.

Q: how much biochemistry/molecular biology should I study?

I have been reading conflicting reports. FA is really short on pathways, with little to no coverage outside krebs, glycolysis, urea and even those were short. I plan on doing FA, Kaplan QBank, USMLE World, Lippincott q&a. Is that good enough? Or should I go to the big lippincott review book and go over all of the pathways?

A: FA covers the metabolic cycles sufficiently. However, the QBanks will clue you in on how they can be tested.

This means good and "bad" news:

Good news: the only text you need for biochem is FA (and just in case you are curious, I own DejaReview Biochem and HY Biochem; both were preter-unnecessary. I also spent about an hour one day flying through a copy of Underground Clinical Vignettes - Biochem that I had seen laying around in my SoM's bookstore. This was actually pretty good, but not necessary.).

"Bad" news: you have to do a lot of practice questions to see how biochem's tested. The USMLE likes to mesh the biochemical pathways in with enzymatic phosphorylation/dephosphorylation, cAMP and pathoendocrinology (e.g. hormones, congenital disorders). Biochem is also a prime target for minutiae questions. The QBanks will fill you in on the details you need to know.

Kaplan QBank is the best QBank for building your molecular bio.

Q: Similar question for anatomy. FA is very, very short on anatomy. Again is FA + Kaplan QBank + USMLE World good enough for the score I am aiming?

FA + the QBanks + neuro-only sections of KLN + Underground Clinical Vignettes (anatomy) is sufficient. The latter isn't necessary, but is only a 10-15-hr read, so I still recommend it.

A: Now let me just make a point clear: anatomy stands as the one subject where your external knowledge is most critical. You can't get this through USMLE resources. This comes only with having been an anatomy tutor or a lab aficionado during the first two years of med school. When I say that those above resources are all you need for anatomy, they're in actuality just all you should be using during your study period.

I own BRS Anatomy, HY Anatomy, USMLE RoadMap Anatomy and KLN anatomy - all were a waste of time. QBank Qs will make you aware as to how anatomy is tested. These latter texts are consonant with lab-based anatomy-learning during MS1/2, but they are too generalized for helping you answer USMLE questions. Just do tons of practice questions and quickly review the **neuro sections** of the anatomy book of the KLN.

Q: Phloston, Is it worth getting kaplan Qbank only for the mole bio section if I'll also be doing Rx and UWorld?

A: It's worth getting Kaplan QBank not just for the molecular bio, but for everything it has to offer. There are quite a few lab techniques as well as analyses of plasmid construction / gene transfer that are assessed in KQB that are simply just not covered to the same extent in Rx or UWorld.

This also refers to testing you on conjugation, transduction, homologous recombination, site-specific recombination, phenotype masking/mixing, complementation and antibiotic resistance mechanisms.

This is not to say that you would necessarily be lost on these types of questions on your actual exam if you didn't do KQB, but what I can say, in relation to my exam, is that I had 4-5 questions with regard to the mechanisms above, where I tackled them based off of my external knowledge for the most part. One or two were basically rapid recall. But another two were questions I had marked on my form (i.e. I wasn't 100% sure). For these, the background knowledge that I used to narrow down the answers likely came from KQB more than any other resource.

When I went through UWorld after KQB, I noticed that they very briefly touched upon some of the molecular bio topics, but not nearly as comprehensively as Kaplan. That's also for a reason. Molecular bio isn't the highest-yield topic ever, but Kaplan for some reason likes it.

On my exam, I feel 4-5 questions is actually a lot to ask on pure molecular bio (i.e. mo bio not integrated with pathology or biochem; just pure mo bio). I think I may have expected perhaps one or two questions on plasmid construction or gene transfer, but I had double that number.

The question I had on transfer of genetic material was quite nebulous. It fell into the category of one of those reasoning questions that you just can't prepare for, but if you understand how the process works, you're in a better position to think your way through what would or would not be reasonable.

Q: What about the Neuroanatomy section of Webpath?

Some folks who had taken the test had recommended it. For those of you who have done it, can someone point out what precisely needs to be done.

There are whole set of Anatomy Images and some quizzes, so it seems a bit overwhelming.

A: Just do the examination questions. Don't worry about the slides or tutorials.

Do the questions in topic-specific blocks as you move through MS2. These are great to end your week or to prepare for exams.

I never looked at the pathology slides/tutorials. I just did the questions.

For anatomy, on a few occasions when it would be late at night and I couldn't do any form of reading because I was too tired, I would listen to music and run through their head-to-toe cross-sections. These aren't necessary, but once again, they're good if you're too tired to read but still want to study.

But in short, when I recommend Webpath, I'm referring to all of the examination questions. In terms of slides/tutorials, use those at your leisure, but they are not a must.

Q: What do you think about doing a radiology elective during this month off versus trying to blow through a Q-bank potentially? am I overdoing it by taking a radiology elective with the sole purpose of nailing every radiograph/CT on my test?

A: Absolutely do not opt out of doing a QBank in order to do a radiology elective. QBank questions are your best friends. Always.

The imaging that shows up on the exam will be completely random. You will not be able to directly prepare for it in a reasonable amount of time. It would be like studying all of the insertions/origins of the muscles hoping that one could possibly show up on the exam, when meanwhile having spent all of that time doing more questions or reading FA would have been 20x as beneficial.

So yeah, know your basic radiology well. Kaplan QBank has some good CTs in it. Just be able to read CTs of the thorax and abdomen, and be familiar with MRIs of the knee. Those three things are the highest yield.

Q: when do you think is a good time to start doing uworld? I've been preparing for the test for about 4 weeks now, haven't done Uworld b/c I haven't gone over everything in FA yet. Should I just get it now before going over all of FA or wait until I've at least finished it once?

Thank you so much!

A: BRS Path, Webpath (examination questions only) and QBank questions are top priority for path. Don't worry about Goljan RR or Robbin's.

Start your first pass of UWorld ~2.5-3 months-out. Be sure to give yourself a solid 6 weeks to get through it because it will take a lot of time.

The first thing you should do with regard to USMLE prep is to read FA and go through USMLE Rx QBank. Those two are collectively one resource because they're both by the FA authors. Once you get through your first pass of FA + Rx, you'll already be at the high-230 or low-240 range. Do UWorld last.

Q: I know you highly recommended physio and molecular bio section from the Kaplan qbank... Any other subject?

A: I would also recommend going through the biostats. Biostats is one of those subjects that you can never get enough practice, so be sure at least to go through those questions too.

Q: pholston some stuff just seems so lowyield. we cant possibly need to know stuff like ependymomas having their rod shaped blepharoplasts.

A: I will just point out that that detail is mentioned in FA. Anything in FA, regardless as to how pedantic it may seem, is fair game.

Q: When you and others who have taken the test say the exam is different from NBMEs and UWorld in that the questions there put you in places where you have not gone before and makes you think hypothetical situations, what exactly do you mean?

Could you give me examples of such questions? Is it something like this is this pathway, what will happen if this gene is missing or if we add this miraculous drug that only blocks this enzyme, etc? If so, that's alright for biochem where most stuff is pathways and already follows a logical progression but how can that work for other subjects like micro, systems, etc?

A: I'm not entirely sure what you mean, but it seems like you're already aware that you need to know various mechanisms well enough to be able to manipulate or extrapolate from them. I would say this applies best to your cell signaling pathways (e.g. G-protein, MAP kinase) and the lac operon.

Q: Yeah I meant about just that. I remember you posting something about the questions on the real thing are a lot harder than the NBME because it required a lot of manipulation. I was just wondering where all this applies, apart from the biochem pathways.

A: The harder questions will integrate many concepts, particularly endocrine. For instance, they might ask you about a gene knockout that affects calcium-sensing on bone but not on enterocytes, and then they might also tell you that the patient has a long Hx of uncontrolled diabetes (so you'd need to infer secondary hyperparathyroidism); then they'd possibly show you some table asking you, with arrows, about how calcidiol, cholecalciferol, (24R)-hydroxycalcidiol, phosphate, and ALP would all be expected to change based on the mutation. Now it's not that this question would necessarily be exceedingly difficult as much as it is that you just need to know vitamin-D and Ca-PO₄-PTH mechanisms really really well, and then be able to understand how the arrows would change based on the knockout they give.

Most often, you'll actually get a much more simple question than the above one, where they'll merely just ask you for Ca, PO₄ and ALP levels (with arrows) in secondary hyperparathyroidism (which you'd have to infer based on the pt's presentation), but the caveat is that they'd then throw in an additional variable that most people likely haven't heard of before (e.g. osteocalcin, osteonectin, DMP-1), and it will come down to you literally having to know that variable, and there's no way out. You either know it or you don't, and it's not in FA. This is an example of where low-yield info can come rushing up out of nowhere.

Q: Pardon my manners, happy new years. What do you recommend for sleeping the night before? How was workout schedule like?

A: Two cups of chamomile tea with milk and honey, one hour apart, but not within one hour of bed (if you take them too close to bed, you'll have to wake up in the middle of the night to micturate). Don't use any medications, etc. I averaged probably ~4 days/wk at the gym during my final two weeks. Definitely work out if you can.

Q: Did you go over the all of NBME wrong answers a day before the real exam?

A: I made a Powerpoint with all of all incorrect questions (or ones I had answered correctly but thought were strange). I went through most of them a few days before the exam. The day before, I actually did very little studying. I went through the remaining incorrects from the Powerpoint, but there weren't many at all.

Q: Should I keep the online NBME towards the end of my dedicated study period?

A: Yeah. Take one or two online ones outside of the 6-week mark. But take the remaining online ones within the last ten days.

Q: In one of your posts you mentioned that you used offline nbmes after taking the real/bought ones to learn from. Do you know how I can get them? Also, do you know where we can find the answers?

I tried searching and asking around but had no luck. If you can point me in the right direction I'd really appreciate it. (I plan on buying them too but I like the idea of being able to look through the questions and answers afterwards)

Thanks a lot!!!

A: I had made a thread about where I could find the offline NBMEs a while ago, and someone PMed me, granting me access to his/her Google account, where I was able to temporarily access them. I suggest you just make a thread asking where you can find them. You'll likely get PMed.

Q: Also, did you memorize all the cards or just the cards pertaining to the microbes in first aid?

A: Know all of the organisms. I've seen each and every one show up some way some how during my prep / on the exam.

Q: Does it matter what edition of microcards you use? I ordered 3rd edition but instead they sent the 2nd edition and I'm wondering if it's worth the S+H back to get the 3rd edition. thank you!

A: I used the 2nd edition. They were more than amazing.

Q: Hey phloston did you start first with firsaid then reading som books?And at wich stage you become able to know all information before doing quest? Thanks

A: Do a pass of FA before you start any questions. This way, you're reinforcing, not just blindly learning for the first time through questions.

Q: Hey Phloston,

i asked you earlier in the fall about how to approach micro, and you suggested to properly go through it you should use the microcards. I have them and plan to do so.

After reading your write up and reflections on the board exam, I was wondering if your views towards micro prep are the same or do you suggest anything more?

A: The most unequivocally important thing regarding micro for your exam is to know the images of those tree-algorithm cards within the Microcards COLD. I had quite a few organism structural identification questions. For instance, they asked about a couple viruses, and it came down to knowing whether they were enveloped or non-enveloped, or circular vs linear. I wouldn't have been able to answer those had I not memorized those algorithms.

Go through the vignette cards too. Quite honestly, it might seem like a lot, but once you approach the real deal, you'll realize much of the info in the Microcards is fairly basic and not a big deal. The QBanks will fill you in on the vignette card info if you don't get to those cards, but at the very least, make sure you do the tree-algorithms, and know those images cold.

Know the chapter in FA really well, especially all of the toxins and MOAs.

Know vaccine types very well. I had a few questions asking about what kind of vaccine (e.g. toxoid, polysaccharide) for a few different pathogens.
