

APPENDIX III

COMMENTS FROM CURRICULUM COMMITTEE MEETINGS

1. Neoplasia and Blood Sections
2. Micro section
3. Endocrine/Bone/Rheum/Immunology/Skin
4. Heart/Renal

Missing (I have only hard copies - If you need these I can get copies)

5. Lung/Neuro
6. GI/Liver

A. The many positive aspects of the second year curriculum.

1. **The course directors:** You are responsive, are willing to change and adapt to our class, interact with us, are sensitive to issues out of your control (e.g., timeliness of notes), are visible in class, have provided the schedule for the whole year...
2. **The material:** Our work, although a lot of information, is clinical – and we love that. This is an improvement over some of our first year classes.
3. **The lecturers:** Some of the best lecturers spoke of clinical issues and the things that we should know to prepare for our clinical rotations. It makes us feel like medical students.

B. General comments and concerns applicable to each of the sections. There is consensus on the curriculum committee that we want to know the following: (1) what's clinically relevant, (2) what's going to be on the test, and (3) what's interesting. At times it seems that there are deviations from these learning objectives or obstacles to achieving them:

1. **Organization:** We benefit from summaries and integration of the material. This is difficult to achieve when each lecture focuses on a discrete topic. Structured reviews in the beginning and the end of sections might address this concern (the blood review was excellent).
2. **Communication:** Where possible, interrelate concepts more between courses and avoid overlap. Several things were taught to us multiple times, e.g. the definition of neoplasia and the progression of metastasis. [There were questions on the Path and Pathophys about transfusion-related Hep C.] Perhaps lecturers should be *given* objectives to cover instead of coming up with them on their own and an outline of what each lecture should cover from the course or block director who is familiar with the Path, Pharm, and Pathophys components of the block. It would be nice to have where possible a focus on more concept-based issues, and we could interrelate the topics more by learning about drugs and drug families relevant to the processes that we are learning about in Pathophys and Path. Pathophys lectures could provide complementary information on the pharm.
3. **Lectures and lecture notes:**
 - For each lecture, listing lecture objectives is the best way to guide us on what's important to know. The objectives should be manageable, specific, and measurable. The goals should also encompass material that we are responsible for knowing on tests.
 - It is easiest for us to follow a lecturer when he/she follows his/her notes, but it would also be nice to disrupt the tendency of lecturers to read from their notes to us. Perhaps we should have more pictures of clinical presentations of diseases.
 - In appreciation of varied learning styles of students, please make an effort to have both narrative notes and PowerPoint slides available to us. Just providing slides can be ok, but there has to be sufficient detail to stand alone as notes.
 - PowerPoint slides and notes should be posted on blackboard and lecturers should follow the narrative notes in their presentation.
 - Some of the lecture notes were difficult to read and understand (especially PowerPoint slides reduced to 1/6 their normal size).
 - Important and tested information should be in the notes, and should not be only mentioned in lecture.
4. **Lab:**
 - Our biggest concern for lab was that there is too much variability in the delivery of product to each group. Clear, measurable objectives provided by a course/lab director should be distributed to faculty and students. This will help us know what we are supposed to get out of lab that day and what will be expected of us to know for the exams. [Consider a 30-minute lab lecture for the whole group.]
 - Whereas no one group was dissatisfied with their presenters, there were certainly some that had lecturers who did more than review slides. Some lab instructors effectively summarized

lecture material by making a chart with the class (instead of just asking if there are questions). This was an important review and integration of lecture material.

- There was a Path slide review for one group attended only by a few students that was very good. We should consider a Path review for the entire class before exams.

- Kodachrome slides of normal tissue, at least at the beginning, will help us to remember histology.

- Reconsider the sign-in sheet. In some groups, it's not required and attendance has not suffered. [We recognize that attendance is important and perhaps if it suffers, sign in should be reinstated.]

5. **Evaluations:** The evaluations are very cumbersome, and it is hard to keep track of whether we completed them. Could you designate in blackboard that they show up under grades (which will help us keep track of whether we took them). Path was comprehensive, but a little overwhelming. Pathophys and Pharm were a little better.
6. **Exam:** The exam was a demoralizing experience for most of us. Preparation was difficult for many reasons. Our exam appeared more difficult and longer than all the practice tests available online – please post answer keys and more recent exams. Many of us were truly frustrated and exhausted by the end. We felt unable to determine why so many of the questions were on material that was not emphasized or reinforced in the course (e.g., questions on molecular imaging, gene therapy, clinical presentation of lymphomas). [There was no clear indication of why Path should be such a different style of test.] Some of the questions were poorly written and grammatically incorrect. Whereas we recognize the need for assessment, it seemed that the exam had no clear, unified voice.

C. **Some specific examples: praise and criticisms.**

1. Dr. Fine's email before the test was very helpful! This was an excellent example of quality control and damage control by a course director. He gave us examples of details that we may not have thought were important but were going to be on the test – without giving us the answer to any of the questions. This seems a great role for the course directors: to filter the content of the lectures and filter the material that we are tested on.
2. Blood Pathophys course director's (Dr. Moliterno) review of that section was instructive and provided a welcome integration of the material. It put things into perspective and provided a great structure to study for the exam and to understand hematology.
3. Ideal lecture award: Radiation oncology Pathophys lecture (Dr. DeWeese) was ideal in many ways: it had great notes, it was conceptual, and it highlighted applications and illustrative, constructive historical perspective.
4. Ideal lecture award (#2): Dr. Hendrix was sensitive to the amount of information that we can acquire in the time period and an appreciation of how we should prepare to enter the wards. Dr. Hendrix lecture goals for Pharm Infectious Disease also has that focus: relevant and manageable.
5. Path intro lecture (Dr. Hruban): Fun and interesting.
6. Breast symposium (also excellent): A great way to learn about breast cancer.
7. Poor lectures: The molecular imaging lecture was way too detailed and of questionable clinical relevance (at least at that level of detail). The gene therapy lecture was poorly organized. For both gene therapy and molecular imaging, there was no follow-up by anyone who said what was important to know. Dr. Pasternak's notes are excessive. Others as indicated in the evaluations...
8. We like lecturers who bold important information, but be careful about bolding too much.
9. Summary and integration is helpful. The lab could be a good place for this. The integration of course material into a chart that differentiates and organizes the subject matter might help us get a clearer picture of the material. Lecture notes with summaries like Borowitz's "Fast Facts" are also helpful.
10. Pharm - bleomycin was on the exam but not in our notes.

D. **Points for the future (esp. the near future and infectious disease).**

1. Clear learning objectives: we need a consistent approach to learning pathogens (i.e., do we focus on diseases (if so, common disease presentations or all diseases); do we study the pharm presented in Pathophys or do we focus on the pharm presented in Pharm; etc.)
2. Build in time for integration, summary, and reinforcing important details and concepts: structured reviews, charts, diagrams, a template, etc.

I. General Comments from the Curriculum Committee

A. We are thoroughly pleased with your recognition of and response to the concerns we raised after the blood and neoplasia units. Most notable were the structured help sessions scheduled for the entire class and the format of the exams. Unofficial polling of our classmates found the following feedback: although many found the exam challenging, most all responded with positive feedback in regards to the relevance and fairness of the questions. The results of these changes are manifested in our self-perceived knowledge of subject matter and overall quality of life issues (willingness to resume studying within two weeks of the exam and reluctance to change careers). We would like to thank you for the added time and effort these late adaptations required and your willingness to address our concerns.

B. Our Favorite Lectures:

****Dr. Hruban's Mycobacteria lecture was the best organized, delivered, and appreciated lecture of the year**** Drs. Hendrix, Flexner, Clark, Walsh performed terrific lectures. We particularly profited from review sessions conducted by Dr. Powell (phenomenal slide review), Dr. Mertz, and Dr. Griffin.

C. General Recommendations

Continuity was our main concern for this course, and one that could be easily addressed for next year's curriculum. We were stymied by the variability between lectures in terms of content and delivery. Some speakers focused on disease and pathophysiology, while others highlighted diagnostics and transmission. A standardized approach may be more student-friendly. We are not suggesting a rote format, but implementation of a set of required speaking points including (for example): modes of transmission, pathogenesis, virulence factors, specific diseases attributed, diagnostics, treatment, and prevention. We have heard that last year's course directors distributed BLANK charts at the outset of the course that could be completed by students as the course progressed. This could be a valuable, active learning tool and has many advantages over being handed completed charts at the end of the course.

A second general recommendation would be to review the text, *Clinical Microbiology Made Ridiculously Simple*. The majority of students studied from this text, and often found it clearer than the distributed lectures. Although it may not play a major role in the course curriculum or organization, it may be valuable for the directors to be familiar with it and aware that students use it as a major resource.

Whenever possible, please post the answers to old exams on Blackboard. The posted Pathology exam was a useful assessment tool.

II. Small Group and Laboratory Sessions

A. Case Studies

We found the case studies to be a rewarding and engaging learning experience, both as mediators and listeners. Our only complaint is that there were not enough of them. We are in favor of eliminating other laboratory lectures to be replaced by these, especially if it gives each of us an opportunity to present additional cases. By contrast, some of the more esoteric laboratory

exercises (Gram – K/A tests, first two viral diagnostic lab sessions) are examples of laboratory activities that we considered low yield.

B. Lecture Reinforcement

Another recommendation is to use the laboratory as a source of lecture reinforcement. One idea included presenting microbe-specific information in lecture (e.g. Staphylococcus, Herpes Virus), and disease-specific information in laboratory (e.g. meningitis, pneumonia)

C. Course Documentation/Consistency

There are continuing concerns about variation between laboratory sections. A love/hate relationship has developed between students and their lab depending most often on the small group directors. The easiest way to increase parity is to ensure that all students receive the same information from the leaders. Examples include posting Case Study answers after the sessions, and distributing any paperwork that is meted out in each group.

III. Pathology/Pathophysiology Comments

A. Course Differentiation

We were not able to differentiate between subject matter of the courses (Staph was Pathophys, while Strep was Path). If the course information does overlap significantly, a single exam for both sections may be more pertinent, and would facilitate student preparation.

B. Repeated use of Lecturers

A significant strong point of these courses was the use of one professor for multiple lectures (Griffin, Murphy, Walsh, et al). Because lecturers standardize the organization of lectures, the information is easier to integrate. We realize that most lecturers do not have the schedule flexibility required to perform multiple lectures, but we appreciated the instances in which they did.

C. Treatment information/Pharmacology Integration

Without repeating earlier considerations about continuity, it would be helpful to learn about various treatments in lecture for each of the microbes. This may involve more communication with the pharmacology directors and would be a valuable source of repetition for us. Instances where your lecture information differs from pharmacology lectures are particularly confusing.

C. Parasite Section

We felt that the parasite section was crammed into an impossibly short period of time. Unconfirmed rumors tell us that last year this section was conducted in one day, so this may be an ongoing issue. However, we have recommendations that may further ameliorate the problem. Dr. Fine's lifesaver emails informed us of specific points on which to focus. It may be advisable to set up lectures in a format that focuses on parasites that are more relevant to clinicians in this country (e.g. Strongyloides, Malaria), and then discuss the remaining ones without the same emphasis (perhaps with an addendum that allows interested students to pursue them more in depth at their own discretion). An unfortunate reality is the placement of this section at the end of an overwhelming month.

D. Course Surveys

Thank you for instituting the grading system on the Pathology Blackboard website. Merging the surveys into single links by week (a la Pathophysiology) and reducing the essay questions to a

single comments box are additional alterations that would drastically facilitate student completion.

E. Dr. Fine's Emails

Thank you.

IV. Pharmacology

A. Bug/Drug Grid

Although a helpful tool, we have two chief recommendations for future use. A more expansive list of bacteria covered in each section (Group 1, Group 2 Gram –) will help us realize which drug is used when. Furthermore, the use of two boxes for each drug/bug intersection, while adding a significant level of complexity to the chart, may extend beyond our level of comprehension.

B. Review of Organisms

We all agreed that conducting a pharmacology review session that was microbe specific would be very useful.

V. Closing Remarks

We thoroughly enjoyed the course. Moreover, there was an overwhelming consensus that we really learned a great deal of valuable information over the last four weeks. We use these committee meetings to discuss constructive reviews of the course, but would like to reinforce the positives. It was generally a well-organized, productive, and **appreciated** course.

Endocrinology

Pathology: Great endocrine tumor lecture, lab and review session before the exam. The diabetes pathology lecture was fine, though there must be a better way to organize it so that the subtleties of the pathology can be clearer. Maybe divide into macro vs. microvascular changes? It was difficult to figure out what to take away from this presentation.

Pathophysiology: Pituitary lecture was dense, but we appreciated the lecturer focusing on some of the major topics (prolactinomas) and providing detailed notes for us to use in the future. Generally, lectures were well done. The Growth and Puberty lecture was hard to follow and the notes were sparse – they didn't help at all to fill in the missing details. The phrase, "I don't have time to talk about this slide" was used multiple times in the lecture, which is a frustrating presentation to sit through. Pick a few key points and explain them well instead of quickly going through too much information without actually talking about any of it.

The obesity lecture (Dr. Pozefsky) was interesting, though a more public health prospective would be helpful – we learned last year in our basic science courses about the mutations that affect small percentages of obese people, this year it would be more helpful to learn about what to do about the vast majority of people without leptin mutations who are still obese. The dietary lecture (Dr. Golden) was well-presented, some students felt it was lacking in practical information – not just that trans fatty acids are bad, but how we go about recommending how patients can follow these guidelines in the real world.

The discussions for the most part were thought provoking and helpful, though dependent on the facilitators in some groups. We appreciate that printed answers were given to us to help make up for the differences in groups. The cases could use some updating across the board, but especially the growth and development group – clinicians used the phrase, "but we don't really do this anymore" during that discussion, a sure sign that it's time to update.

Pharmacology: Pituitary pharmacology was disorganized and hard to follow. It was also given in too short a time, but that's not the lecturer's fault. Insulin action lecture was also dense and confusing, but we really appreciate the immediate response of Dr. Kohanski in sending out clarification notes. Adrenal pharmacology lecture well done with fabulous notes, but many students felt the exam questions were unfair in terms of testing what was stated that we learn. The steroid synthesis pathway was glossed over in lecture, yet heavily tested. If you want us to know it, don't tell us not to pay much attention to it during lecture. And if you don't want us to know it, don't test it – a curve can still be generated without being unfair.

Bone

Pathology: Dr. McCarthy's lectures were amazing in every way. Fabulous notes, excellent teaching style, and we really loved seeing all the X-rays. His teaching philosophy is clear and refreshing – he picked out really important things to know, he told us what to know about those things, he showed us lots of pictures until he was sure we understood, and then he tested us on exactly those things he told us were important. Because of this, we'll all think mets in bone lesions in people over age 50 and we can certainly tell you about Paget's disease and osteomyelitis. Brilliant. (But there were a few inconsistencies in the last lecture from what we learned in rheumatology.)

Pathophysiology: Dr. Jan de Beur gave us great notes and we really loved the patient presentation. She also ran a great small group. But the lectures were pretty confusing and dense. Maybe if more time is spent just focusing on the relationships between PTH, vit D, calcium, phosphorus, urine cAMP instead of quickly explaining those and moving on to various disorders, we'd be better off. We need more help thinking through the pathways, and then we should be able to figure out what's happening in each disorder – less helpful is just reading in lecture the biochemical profile of each disorder. The exam questions were pretty tough for bone pathophys.

*An interesting point for the future: back pain is one of the most common complaints of patients presenting to a physician, but we don't really have a lecture on how to approach this problem – nor musculoskeletal problems in general. Dr. McCarthy's last lecture on joint diseases was fairly redundant (rheumatology covered much of this material), and maybe it would be educational to replace this with "Approach to the patient with back pain."

Obviously, this can be a complete disaster if the lecture is just a list of the 800,002 possible reasons people have back pain, but it could be a good addition to the course.

Pharmacology: Great lecture, great notes, but it's as if someone else wrote the exam questions. The points that were emphasized in lecture (and that seem important in life and in our future careers) were not tested, where some of the more obscure treatments mentioned in passing in the last 5 minutes of lecture were tested. What happened?

Immunology

Pathology: Great lecture on the pathology of rejection. The first path small group on primary immunodeficiency was low in both content and organization; many students glanced at slides and left after 20 minutes. The second lab

in tissue typing, on the other hand, was excellent. In general, structured cases with path slides are a great high-yield way to spend time in lab – we learn a lot in these groups.

* Can you include a place on the evaluations for small groups? Students would like the opportunity to give feedback about these for pathology.

Autoimmunity Day was comparatively low yield, specifically the later 2 lectures by Dr. Rose. It seems the points he made could have been done in a shorter amount of time (and the points were already made in the first lecture of the day), and this day could be more productively used as a transition to Rheumatology – maybe move Dr. Rosen’s Intro lecture to this day and free up more time for those great CPC-type discussions in Rheumatology.

*Note for all lectures: Generally narrative notes instead of PowerPoint slides alone are well received – we appreciate that this takes extra time to do, but it helps us out a lot.

Pathophysiology: Generally, lectures were well done and well received. The SCID and granulomatous disease lecture (Dr. Winkelstein) is a model for how one can take a complicated topic with many variations and illustrate key points that will help us all figure out in the future how to approach primary immunodeficiency states. The corticosteroids lecture (Dr. Schleimer) was dense and complicated. It’s a complex topic that we revisit later in pharmacology (during Endocrine – Dr. Cole); maybe it would be helpful to pare down the scope of this first lecture and save some of the details for the later pharm lecture.

*This is also another general suggestion we have – many topics come up repeatedly, which is great, repetition is the key to learning, but better communication between individuals giving similar lectures would help cut down on some confusion. This can also approach the point of being excessive – Do we really need a 4th vaccine lecture (or was this #5)?

Pharmacology: Lectures for this section were well done. However, the small group session for pharmacology was low yield and required little thought. The scenarios were set up so that we could just spew back information that is directly typed up in our notes. It would be more helpful to have slightly more complex cases where we actually have to think about different manipulations of the immune system and how different manipulations have effects on other systems.

Rheumatology

Pathology: The complement lecture was very similar (read: almost identical) to last year’s complement lecture in immunology. A more integrated lecture would be nice – emphasize more how complement plays a role in all these diseases we’re learning about. The ANA “lab” was actually just a lecture given in the lab rooms – make that a lecture and bring back pathophys small group #3.

Pathophysiology: Excellent intro lecture – we really liked how we were given a “rheumatology framework” that we could use to make sense of each disease. It was helpful to compare and contrast different disease mechanisms, and really helped us all focus during lectures, for the exam, and for the future. We loved the mini patient presentations, and would actually appreciate one more on Scleroderma – this was one of the more confusing of the lectures with some pretty cryptic diagrams and confusing diagrams of the disease process.

Pharmacology: Dr. Hendrix was fabulous, as usual. We usually ask for narrative notes, but Dr. Hendrix provides great PowerPoint, so these are just fine. The only issue here was the exam question about acetaminophen – we didn’t learn about that at all in the context that it was tested. If we need to know something, please teach it to us. Gout lecture was fine, though too far away in time from the pathophys gout lecture and 30 minutes too long because of this. If it is put right after the pathophys lecture, there’s no need to go into such clinical details before going onto the drugs.

Dermatology

Pathology: There was technically no pathology during derm, but there probably should be some. Dr. Lazarus’ lecture that taught us the language of derm was very pathology-like. There could be a pathology lecture that just goes through appearance of malignant vs. nonmalignant skin lesions. A pathology lab would also be helpful.

Pathophysiology: The philosophy of this section is different than the others, and this philosophy of just giving us a whirlwind tour of dermatology in 3 days is probably what made it so frustrating. The short 20-40 minute lectures with no small groups is probably not the best format.

Rheumatology could be an excellent model for dermatology. Start by teaching us a general framework – what about each disease or lesion is important (location, surface area of skin, appearance, depth, etc, etc.) Don’t even try to mention the vast number of diseases that were mentioned – choose ones that we are likely to see 3rd year and beyond. Explain to us what is going on, don’t just show us pictures and fly through 50 slides in 20 minutes. Realize that much that was taught was already taught in some fashion (drug reactions, dermatitis, GVHD), which frees up time to better cover nevi and psoriasis (or other important dermatology topics). We normally stay in class until 1pm, use the entire time instead of ending each day at noon. Design some small group, case based discussions

to help us solidify our approach to common dermatologic disorders (or dermatologic complications of other diseases) when we get onto the wards.

Another option is to have fewer instructors than there are lectures. Having so many instructors who don't communicate very well about what information is contained in each lecture leads to both information overload and redundancy at the same time. Having instructors lecture more than one time (like in Bone) can really help bring organization and consistency to the course.

* Dr. Tausk's lecture about mental stress and psoriasis was fantastic. An important lecture for medical students to hear and should absolutely be done again in the future.

Pharmacology: Really interesting lectures and well done. Dr. Sauder's material was a really interesting way to tie together immunology, rheumatology and dermatology with some really fascinating new biotherapies. Fantastic, though we'd love narrative notes to supplement the PowerPoint slides for this one. The Retinoids lecture was also very well done.

I. CPR Certification?

II. **CARDIOLOGY**

A. More communication between PP and Path!

1. Often stress different points
2. Lots of repetition (i.e. cardiomyopathies)

B. Pathophysiology – Overall great!

1. Congenital day was very well received, especially integrating the children
2. “Snow Day” lectures were fabulous (EKG, arrhythmia, MI, angina, etc.)
 - a. Consider giving the EKG lecture during first year?
 - b. EKG small group was very clinically interesting
3. Consider Kasper giving the first lecture? Very clear, and practice questions were very helpful
4. P-V loops are very overwhelming. More like fellows material?
5. Neurohormonal lecture also overwhelming. Maybe move it later in the course? (and fix fonts!)
6. Want a more comprehensive and organized cardiology review

C. Pathology – overall very clear and concise

1. Communicate with PP to agree on key points and cut out repetition
2. Valve lecture could be more organized (by major disease, etiology?)
3. Path small group should be later in the course

D. Pharmacology

1. Consistency with Dr. Rogers was appreciated
2. Vignettes were helpful to remember key clinical points
3. THANK YOU for the early morning review!
4. More helpful to organize by drugs, then have a therapeutics lecture at the end to tie everything together
5. If you keep the “therapy” format, give us a day or 2 to digest the PP before giving us the pharm lectures
6. Lipid lecture excellent – conceptually clear with clinical drug examples

III. **RENAL**

A. Pathophysiology

1. Dr. Choi is AWESOME, great overview and review! Key points were very clear.
2. Potassium, alkalosis, and sodium lectures were a little unclear (i.e. need to explain the role of Cl⁻ more in alkalosis)
3. Congenital lecture was overwhelming (too much detail).

B. Pathology – Overall great!

1. Dr. Haas’ summary sheets and flow chart was so helpful. (Think about typing the flow chart out and posting online?)
2. Case presentations after break were great to help remind and consolidate
3. Dr. Racusen’s notes were wonderful (thanks for listening!) and you should share your small group game.
4. Review was very helpful.

C. Pharmacology

1. Diuretics lecture excellent – very conceptually clear with drug examples
2. Paring down which renal toxic drugs are clinically important would be

- helpful.
3. A little confusing as to which were “cardio” drugs and which were “renal” drug

IV. Clinical Skills

- A. Cardiology Session was very good, great review for the exam
 - B. Parking at Hopkins
 - C. More standardized patients!
- V. PAS – PhDs leading small group?