

MEDSAINT



2017-2018 / Issue 1

OURANIA
VARSOU

INTERVIEW WITH
THE PROFESSOR

Features

INTERVIEW WITH PROF DAVID HARRISON

The Dirty Truth About Exams- A Poem

Understanding the Pain of Parkinson's

A Semester in Pictures

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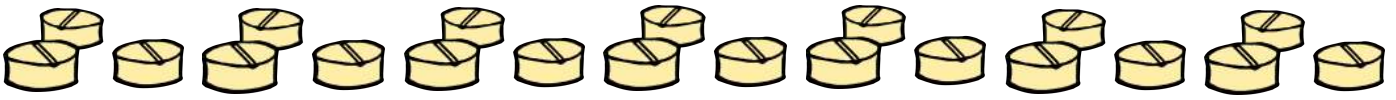
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LETTER FROM



THE PRESIDENT

To all the readers who have stumbled upon this magazine:

Welcome to MedSaint! We've covered a broad range of topics in this issue, and hopefully we've been successful in catching your eye with the several research and advice articles, interviews from professors, and Snapchat interpretations of learning material.

If you've been looking for different ways to procrastinate in the New Year (new year, new you, right?), take some time to flip through our magazine! You get to avoid all that dreaded work, and add a bit of fun knowledge to your bank- it's a win-win.

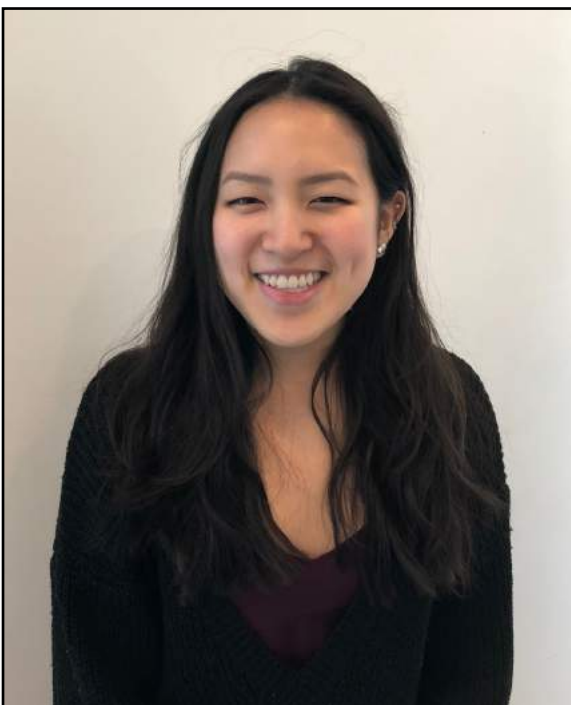
I hope you all enjoy reading this issue of MedSaint as much as we have enjoyed putting this together! If any of the articles sparked your ambitions in writing something for our next issue, please shoot us an email at medsaint1@gmail.com.

Thank you to everyone on the committee, and to our authors for your hard work this semester!

Jodi Chiu



THE VICE PRESIDENT



And here we are at our first publication of 2018! Despite having an entirely new committee this year, as well as having to juggle an incredibly hard semester, MedSaint pushed through with quite an impressive force.

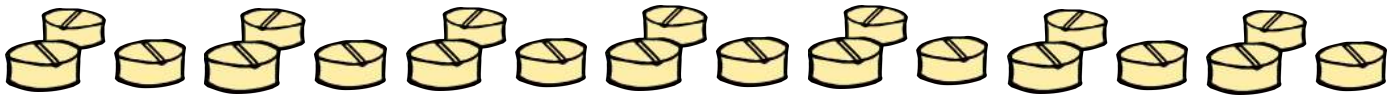
The collaboration of unique talents from each team member was absolutely necessary to create what is now in your hands. For that reason, I am grateful that everyone was so willing to sacrifice time in their busy schedule to work together almost every week, as well as keep in contact online even through to the end of Winter break.

We were a mere group of slightly confused strangers at the beginning of first semester, but I feel that each of us has learned and earned our place on the MedSaint committee.

I also thank you, the reader, for giving us a chance to try to impress you, teach you, and make you laugh.

Adrienne Tang

LETTER FROM



THE EDITOR

This is my first time writing to all of you as MedSaint's new editor. Allow me to briefly introduce myself - 3rd year Canadian medic (salut from the un-French side of Canada!), and lover of old things, Classical music, and collecting cool socks.

For sure, there's a lot of "new" going around - for first years, a new setting and degree; for second years, a new system of the body; and for third years - well, "new" is a rather optimistic spin on being very confused about how 10 000 words will happen in a few short months. Older years will know, too, that there are new faces amongst the staff and medical demonstrators.

The three years studying medicine at St. Andrews happen in a flash; it is terrifying, wonderful, and marked constantly by change and challenge. Hopefully this little magazine can help take the edge off of that (if a Pablo doesn't). We've got interviews with two of our esteemed teachers, some fantastic scientific pieces, and insights about our precarious lives as poor medical students. Many thanks to the amazing MedSaint team, and last but not least, our readers. Enjoy, and good luck this semester!

Chelsea Chan



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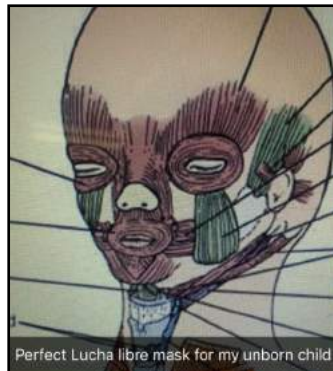


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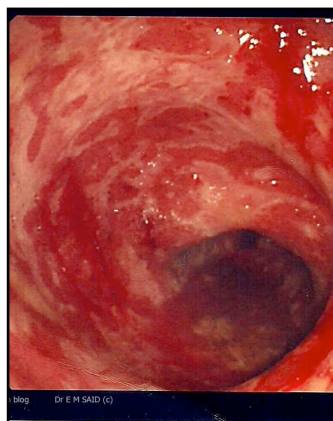


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DR. VARSOU ON HER CAREER, MEDICAL SCHOOL, AND LUCKY MEETINGS

Meet Dr. Varsou. Head of dissection. Anatomy lecturer. Researcher. Science busker and foodie.

By Chelsea Chan



We met Dr. Ourania Varsou in her office in November. I have always ascertained that

you can tell a lot about a person by their work space¹, and Dr. Varsou's office was immaculately clean and orderly, contrasting to her hectic schedule. On her bookshelf, I noted textbooks alongside books of poetry, and on the top shelf, an antique microscope.

Most students know Dr. Varsou as the booming voice guiding the beginning of dissection. A few more know her as the colourful lecturer responsible for the vast anatomy of the head and neck. But how did she have her start at St. Andrews?

Dr. Varsou began her training at the University of Aberdeen, and as a junior doctor, began an honorary clinical research post that ran parallel to a PhD in neuroimaging. Dr. Varsou described working on her PhD as one of the best times of

her life.

"It opened my mind to what you can do outside of medicine. And I loved it – I was still able to see patients, but it was so much more than just medicine."

During this time, she worked with not only medical professionals, but with physicists and mathematicians as well, learning everything from mathematical modelling to becoming a science communicator.

It is hard to imagine our teachers as having turned out any differently from the finished product, but as Dr. Varsou can attest to, landing a career is often not clear cut. Despite earlier aspirations to go into psychiatry, her current job just "kind of happened" in a culmination of experiences researching and teaching. Having had enjoyed being both an anatomy demonstrator at Aberdeen and a researcher, she applied for a teaching job that landed her in St. Andrews² as the dissecting room lead and a lecturer.

Evidently, Dr. Varsou's love for head and neck anatomy won out at the end of the day .

I USED TO STUFF A LOT OF THINGS IN MY POCKETS AND...SAY, 'I LOOK LIKE A PLUMBER, DO I NOT?'

"But, you never know," says Dr. Varsou about how her career turned out. "You never know in life what can happen, that is what I have learned – be prepared for the unexpected."

But how do you know if you've found the right career?

"I go home, even when it's really, really exhausting – you have teaching non-stop, you have meetings, *blurgh* – I go home, and I am very happy. I am finding it very rewarding. I like the idea that there will be future doctors and you're going to pass on the knowledge."

¹ Dr. Dhaliwal's has a lot of beautiful shoes.

² "This region is *amazing*," gushes Dr. Varsou. "I see your face, and it is not really happy." I think my face was justified, having recently been flayed with a week's worth of cranial nerve lectures.

SOMETIMES FOR SANITY, YOU NEED TO DO SOMETHING THAT DOESN'T HAVE ANYTHING TO DO WITH WORK.

And as I found out, Dr. Varsou is very good at passing on the knowledge – not only to students, but as she put it, to five year olds, a fifteen year old, and even to someone eighty years old. In her time at Aberdeen, Dr. Varsou began to give public engagements talks and participate in science busking in malls³. Her most recent engagement was in the Dundee Science Festival 2017, where she introduced Nelly the Neuron and Brian the Brain to a range of audiences with the help of plastacine, stickers, and a cape.

One thing I wanted to ask Dr. Varsou was how her vibrant teaching style had come about; if she had role models. Not surprisingly, she had had her own share of vibrant lecturers when she was in Aberdeen, and yes, one of them was great as well as “a bit crazy,” and not unlike our own Dr. Issberner, would show animal videos to illustrate the sympathetic system. A lecturer’s teaching style, explained Dr. Varsou, is not unlike the lecturer’s personality itself.

And what was Dr. Varsou’s experience of medical school?

“I always used to say silly things. So for example, you know when you’re on clinical placement, and you have a lot of things to put in your pockets?”

Yes, I can attest to that – I have acquired the wisdom of appreciating deep trouser pockets.

“I used to just stuff a lot of things

in my pockets and I used to say, ‘I look like a plumber, do I not?’

I used to be quite ditzzy. We were in Edinburgh, in Boots, and we needed shampoo. I went to ask – ‘do you have some poo?’ And the guy said, ‘some poo? We do not sell some poo.’ I have learned to pronounce that now. So my memories of med school are of me saying something inappropriate, or something really cute that made everyone laugh and I did not realize, up until ten minutes later, when everyone is laughing, and I was like, what just happened?”

Thankfully, Dr. Varsou still makes us laugh.

USE KNOWLEDGE AS A STRENGTH, PERSEVERE, BE YOURSELF; AND ALWAYS BE KIND.

As it was nearing the end of the hour, it was time to turn to the pressing questions I had really wanted to ask from the very beginning. Pressing questions like, how did she meet her husband?⁴

“So when I first met my husband, he walked into the room, he was wearing jeans, very casual, I was sitting on the couch, and I was like, *oh, nice!* I saw him and I was like, *oh yeah, I’m gonna marry him.*”

Yes! That happens to me in the library. All the time.

From what I gather, Dr. Varsou and her husband are alike as self described “ditzzy geeks” and “brain humans.” What kind of geeks, you may ask? Hardcore science geeks. Dr. Varsou and her husband sit down with a paper and discuss it for fun. They met at a weekend conference when both of them were PhD students. The funding body behind the conference,

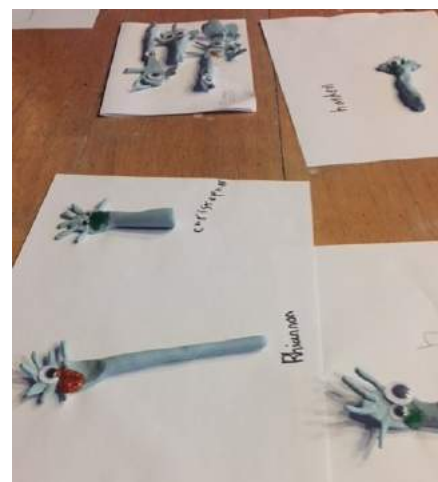
SINAPSE, honoured their wedding – the first amongst the funding recipients – by gifting the couple with a photo of the weekend they first met.

Obviously, something worked out. Any tips for the ladies and gentlemen out there?

“Just be yourself. The stupid things I said then, I say now, and he found them cute. I think, be yourself, and that’s the best way forward, because you need to be with somebody who knows the real you.”

Alongside her other hobbies, which include reading poetry and short stories, Dr. Varsou shares her love of creating and eating food, travelling, and hiking with her husband. Speaking of hobbies, Dr. Varsou believes in their necessity as a professional.

“A healthy mind is a healthy body. You need sanity, and sometimes for sanity, you need to do something that doesn’t have anything to do with work.”



Above: Nelly the Neuron.

³ Science busking? “You just stand around in a shopping mall, carrying your things, and you just talk to strangers.”

⁴ This fellow is infamous amongst third years for featuring in Dr. Varsou's anecdote of her sympathetic response when she met her husband.

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Finally, what does she have to say to the medical students at St. Andrews?

“I really like the students here – they’re very proactive; they’re very hardworking. When I leave in the evening, I still see students in

tutorial rooms studying, which I think is quite impressive. The questions I get from students are very well thought out.”

As we wrapped up the interview, Dr. Varsou left us with her essential advice: to use knowledge as a

strength, to persevere, to be yourself; and always to be kind.

Special thanks to Adrienne Tang, who helped me with the interview and managed to arrive on time in my stead.

Dr. Ourania Varsou graduated with honours in 2010 from the University of Aberdeen with an M.D. as well as an intercalated BSc degree in medical science. Her foundation years were spent with NHS Grampian. She completed a PhD in neuroimaging with the University of Aberdeen. At the same time as the PhD, Dr. Varsou held an honorary clinical research post at the stroke unit at the University of Aberdeen, and served as an anatomy demonstrator. Following this, Dr. Varsou worked a year in oil and gas medicine, and then as a Specialty Doctor with the Scottish National Blood Transfusion Service, in Glasgow. Amongst her many accomplishments, she is also a STEM Ambassador with STEMNET.



UNDERSTAND THE PAIN OF PARKINSON'S

"SO, WITH THE OBJECTIVE OF HELPING HER...I EMBARKED ON RESEARCHING THE NATURE AND TYPES OF PAIN EXPERIENCED BY PEOPLE WITH PD."

By Sarah Gritis

INTRODUCTION

The nursing staff admired Catherine's remarkable resilience. As she listened to the music, she lifted her trembling hands and smiled through what appeared to be a tedious struggle. Since being diagnosed with Parkinson's Disease (PD) this previously energetic lady had slowed quite a bit, but as the violin played, even the doctors were reminded of Oliver Sacks' book *Musicophilia*. Like in the book, the music was truly helping her "dance out of the frame of sickness" (1).

It had been six years since she was first diagnosed with PD, a chronic and progressive neurodegenerative disorder attributed to the gradual loss of striatal dopaminergic neurons in the substantia nigra and the ventral tegmental area of her brain. Her neurologist explained that PD is especially pronounced in adults like her over the age of 65. At the outset of her diagnosis, her family was overcome by a sense of despair, but also quickly recognized that PD is

becoming more common in the elder population, and is currently the second most common neurodegenerative disorder after Alzheimer's with 7 to 10 million people worldwide having been diagnosed with the disease (2). Unfortunately, there currently is no cure, and the incidence is expected to increase dramatically as the world's population continues to age (3).

Catherine had the classic motor symptoms: a 4-Hz to 6-Hz resting tremor, cog-wheel rigidity and bradykinesia, as well as several non-motor symptoms like nausea, constipation, insomnia, and depression (4). Increasingly, it was the pain, a lesser-known non-motor symptom of PD, which was having the greatest negative impact on Catherine's quality-of-life. While her doctors did their best to help her, I felt compelled as a medical student to better understanding everything I could about her PD pain. So, with the objective of helping her, and thousands of people like her, I embarked on researching the nature

and types of pain experienced by people with PD.

A LEADING NON-MOTOR SYMPTOM

Chronic pain is a leading non-motor symptom that is experienced by 60 percent of people with PD (5). I witnessed through my daily interaction with Catherine how her pain was becoming a catalyst for other quality-of-life issues including sleep disturbance, malnutrition, social withdrawal, physical and cognitive decline, depression, and impaired cognition. It is quite common for PD to play a maladaptive role, widely impairing a patient's outlook to everyday experiences. Unfortunately because of the close association of pain with many other medical conditions, PD pain remains misunderstood and undeclared in 41 percent of patients (6). It is well down the list of treated symptoms, and the body of knowledge is limited. Even the practice standards of the American Academy of

Neurology fail to mention treatment guidelines for PD pain (7,8). However, in early stages, patients rate PD pain as the most troublesome non-motor symptom, often affecting the side of the body initially afflicted by the motor symptoms (9).

TYPES OF PD PAIN

PD related pain can be defined as an unpleasant sensory and emotional experience that is associated with actual or potential tissue damage. In older people, the symptoms are compounded further as a result of age, duration of the disease, and complications from other age-related ailments. For example, pain contributors could be rooted in pre-existing conditions such as osteoarthritis, postherpetic neuralgia, and peripheral neuropathy. To better understand PD pain, it is useful to use an etiological classification, which also provides a useful framework for treatment (10,11). On this basis, there are five different types of pain that can appear in



isolation or concurrently at any time during various PD stages.

1. Musculoskeletal pain describes the most common pain that arises from muscular, joint, and postural etiologies. It is typically caused by rigidity and decreased movement, and can be compounded further if arthritis is also present. This pain affects 45 to 75 percent of PD patients, and typically appears in the neck, arm, paraspinal and calf muscles. The most inflicted joints are the shoulder, hip, knee, and ankles. In clinical studies, from a patient's perspective, musculoskeletal pain was complained about the most by both early and advanced PD patients. Also, early pain sensations reflected the structural changes that are taking place in the lower brainstem nuclei and peripheral nervous system, including the autonomic and enteric ganglia (12).

2. A second type of PD pain is **dystonic pain**, which is also common and occurs as dystonic spasms that are usually paroxysmal or triggered by movement or activity. This pain, affecting 8 to 50 percent of PD patients, involves frequent co-contraction of muscles and is described by patients as a pattern of two muscles fighting against each other. It can be spontaneous or triggered by specific movements, and is often observed in the extremities, the face, and the pharyngeal muscles. This pain can be very intense during medication deficiency, typically in the early mornings, but the intensity decreases after medication (13).

3. Radicular-neuropathic pain is another type that manifests in the form of numbness or weakness due to nerve root lesion, but is also experienced as a sharp or tingling pain in 5 to 20 percent of PD patients. It may also be

caused by postural abnormalities, dystonia developments, radiculopathy, or peripheral neuropathy that occurs during the disease (14).

4. Central pain or primary pain is the least prevalent pain type and is typically insistent and disease specific. Often described as a vague pain, it manifests as neuropathic sensory events such as paresthesia or shooting pain, and patients usually experience it as a vague sensation on the side most affected by PD (15).

5. While Catherine often complained about her musculoskeletal and dystonic pain, she also experienced **akathitic discomfort**. Akathisia is the last type of pain and is often described as restlessness. While some patients describe it as uncomfortable, others experience it as more of a painful impulse to move continuously. As PD develops, all pain types

can be experienced simultaneously, however, it has also been observed that male and female patients do not complain of pain in the same locations, as women reported higher prevalence of neck and low back pain than men (16). Unfortunately, as PD progresses, the symptoms across all pain types can become more pronounced.

CONCLUSION

PD has rapidly become the second most common neurodegenerative disorder after Alzheimer's. As the world's population continues to age, the incidence is expected to increase dramatically and will impact thousands of elders and their families. While pain symptoms are often under-recognized and not treated properly, there is hope through the growing understanding of the five basic pain types and their origins, which involve a complex interconnected

series of mechanisms at all levels of the neuroaxis. Early recognition of the type of pain disorder is valuable in order to select the most appropriate treatment strategy, which could translate to significant quality-of-life improvements for people like Catherine.

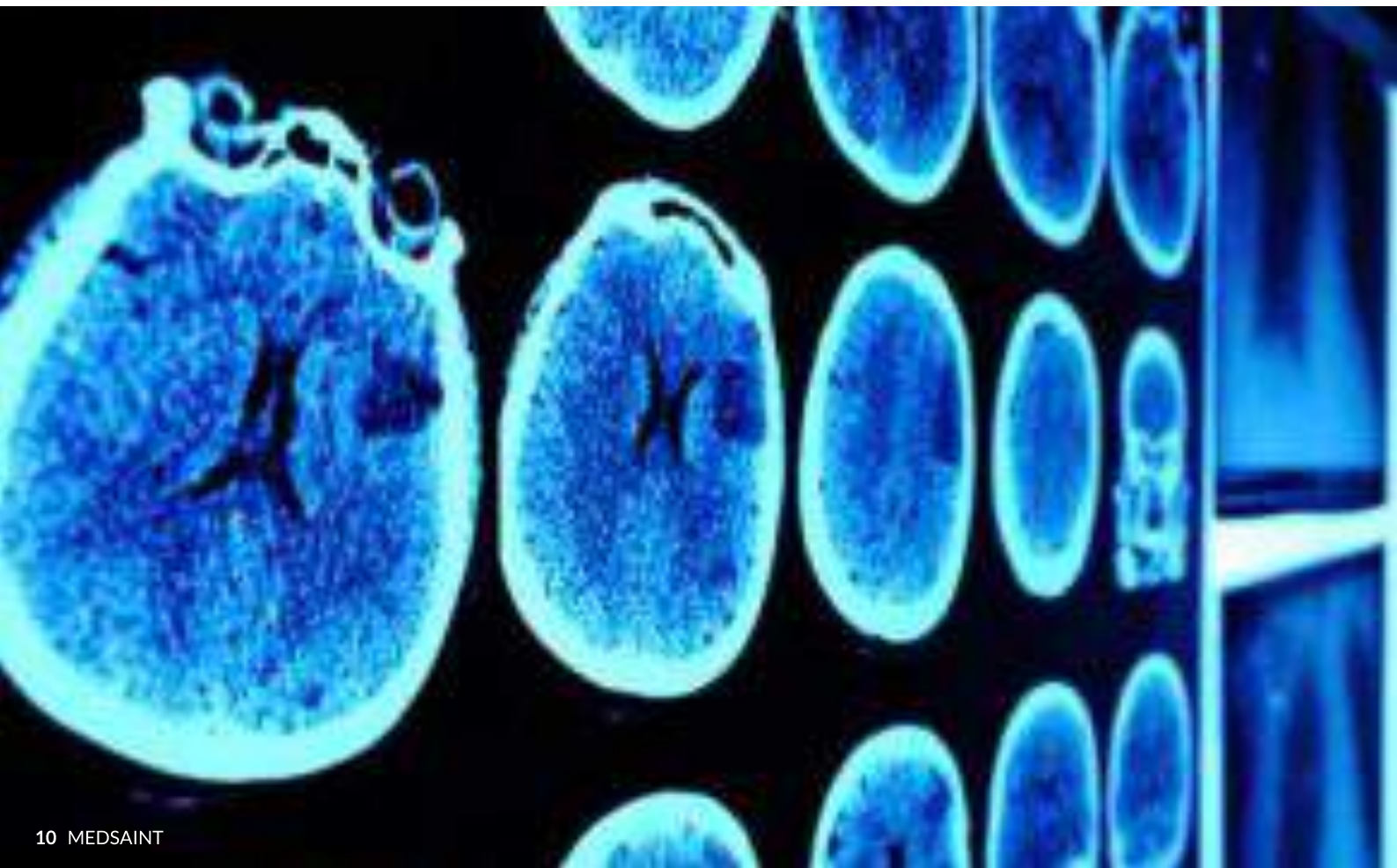
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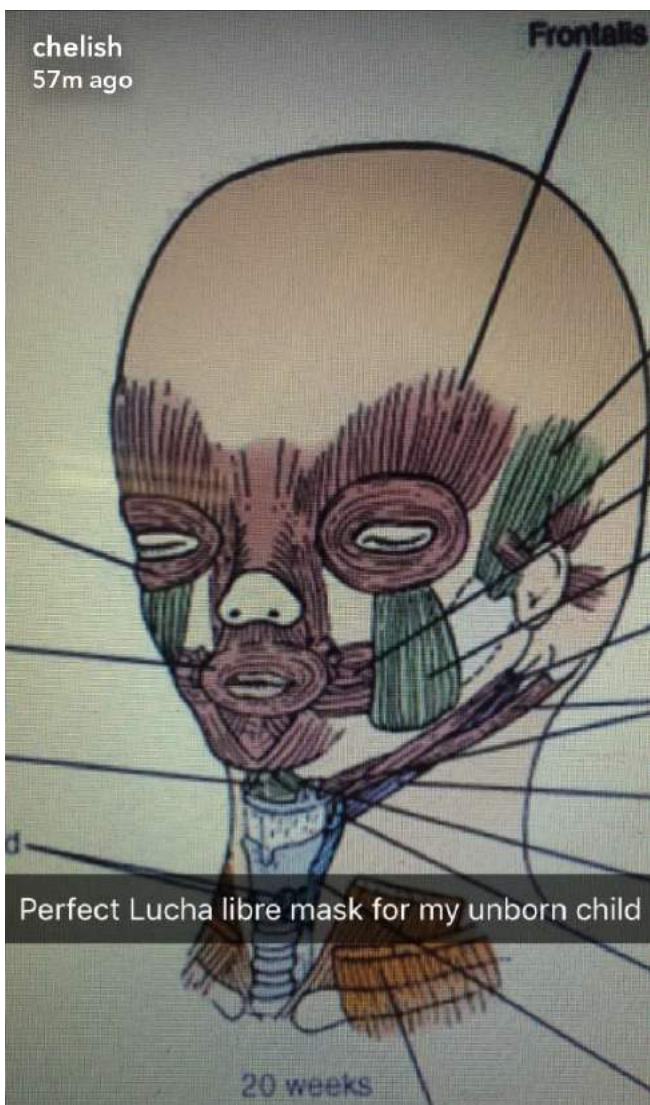


A COLLECTION OF WHAT MEDICAL STUDENTS SEE IN LEARNING MATERIAL

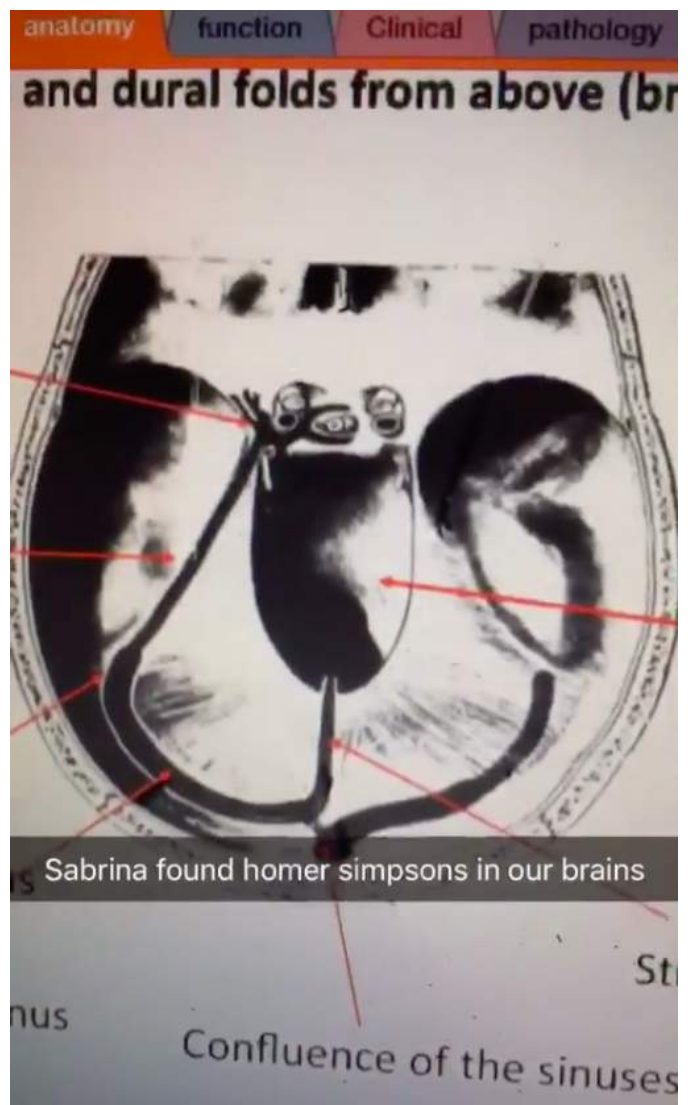
AS PORTRAYED IN SNAP CHATS

By Adrienne Tang

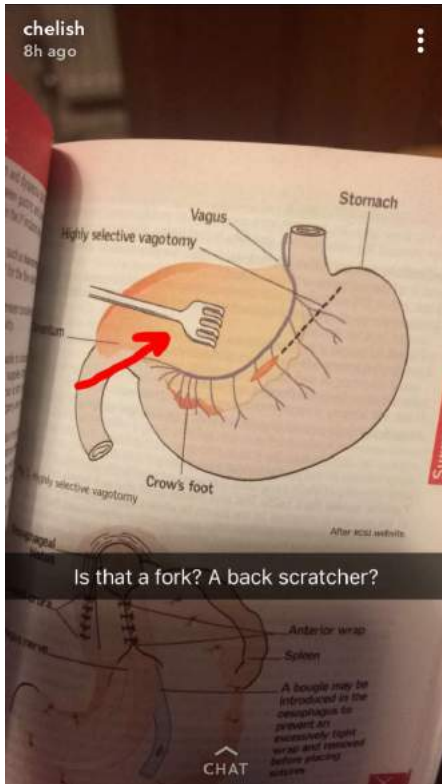
1. AND YOU THOUGHT YOUR UGLY YEARS HAPPENED IN PUBERTY



2. I SEE A BRAIN FULL OF MINIONS



3. AFTER ALL, IT'S NOT UNCOMMON TO GET HUNGRY DURING DISSECTION



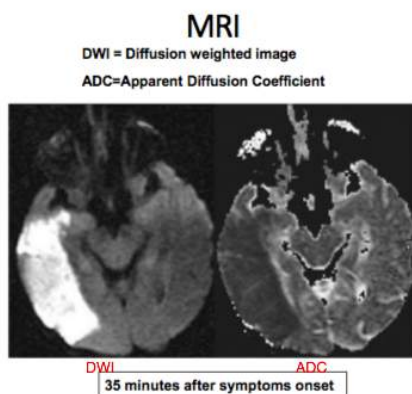
4. THIS IS WHAT SCREAMS AT YOU WHEN YOU WAKE UP WITH BACK PAIN



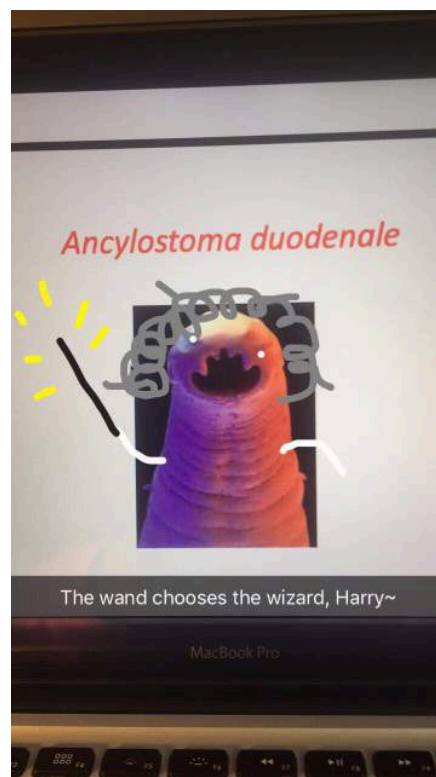
5. A CHINESE DELICACY



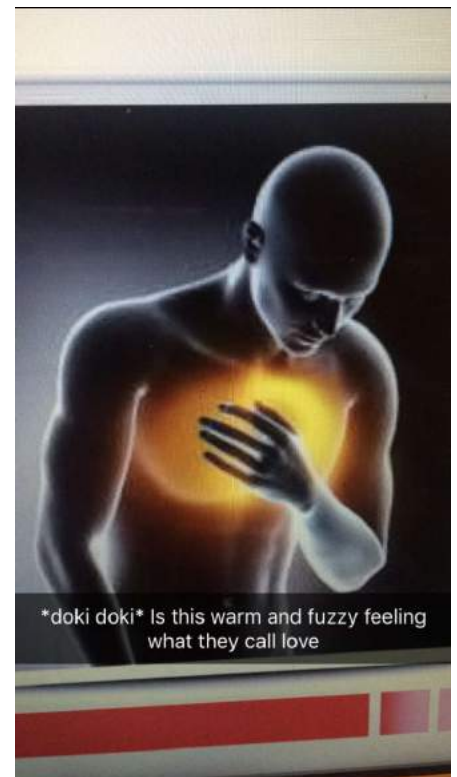
6. WHEN YOU SEE THE GRIN, YOU WILL NOT BE ABLE TO "UNSEE" IT



7. ITS NAME COULD VERY MUCH BE THE NAME OF A SPELL



8. VIRTUAL MODELS ARE CAPABLE OF LOVE TOO



IF YOU HAVE FUNNY (APPROPRIATE) SNAPS OF MEDICAL LEARNING MATERIAL, SEND THEM TO MEDSAINT!



WHAT SHOULD I SPECIALIZE IN?

A list of 6 important factors you should consider when choosing your medical specialty.

By Jodi Chiu

'What should I specialize in?'- likely the internal monologue of many students throughout most of their studies in medical school.

If you find yourself sitting through the beginning of every semester, hoping the system to be studied would be the one to spark your interest, I'm sure most can relate to your confusion.

Reassuringly, only a small portion of medical students come in with a specific goal in mind. Although some of these students successfully achieve their aspirations at the end of their studies, more become disappointed after clinical experience, realizing their dream job wasn't so attractive after all. Even more reassuringly, medicine can accommodate a breadth of diverse characters and interests because of the vast selection of specialties requiring different skill sets.

While true knowledge of your

desire to pursue a field comes from hands-on experience, and passion for a specialty is a large contribution to your ultimate decision, you will most likely find yourself conflicted with many additional factors that may influence your choice.

Below is a list of the 6 main factors that should be taken into consideration when thinking about what to specialize in. I hope you find this helpful!

1. Passion and interest

Passion and interest for a specialty is the most obvious and important factor that influences your decision. The signs of interest are quite obvious. If you're interested in a topic, you'll find yourself actually awake during lectures, sitting a little straighter in your seat, and possibly reading more about the topic after class. If you're not interested in a topic, you'll find yourself falling asleep on top of your notes in the library, dreading

to go to lectures, and crying over the idea of having to study.

Choose something you love - this is something you want to continue to enjoy for the rest of your career!

2. Quality and quantity of patient interaction

Some specialties, such as general practice and internal medicine, require more doctor-patient interaction, while others, such as research, radiology, and pathology, require less. In addition to the varying quantity of patient interaction, the quality of patient interaction between each specialty also differs. Surgeons and anaesthetists, for example, tend to have a higher degree of contact with unconscious patients, while GPs have a higher degree of contact with conscious patients. While some specialties, such as surgery and emergency medicine, require more physical work and examinations to be done to patients, other specialties, such as oncology and psychiatry, require more doctor-patient communication and collaboration. Additionally, GPs and emergency medicine doctors tend to see more patients, but for a shorter period of time, while doctors looking after in-hospital patients, tend to see less patients, but spend more time and focus on each one.

Your desire for the amount and type of patient interaction and contact is very much a personal decision. While some of us excel in clinical skills and communication workshops, others would rather work behind-the-scenes. If you're hoping to find a balance between the extremes, many doctors work as both clinicians and researchers, doing a few days of clinic, then a few days of research. Discovering the best fit for you comes with experience, and is a crucial determinant of the specialty you decide on.

3. Required skill sets

Although there are obvious skills and values that all doctors should possess, each specialty has its unique set of requirements. Generally speaking, surgeons are required to have a remarkable ability to remain calm, while also being dexterous and confident. In contrast, specialties in more diagnostic or problem-solving roles, such as GP, internal medicine, and research, are required to be more analytical and investigative.

While it is both possible *and* necessary to develop your skills no matter the field chosen, everybody has their talents, and discovery of those strengths will come with time through work experience, pre-clinical school now, and clinical school in the future. That being said, don't let your weaknesses stop you from choosing a specialty- there will always be something you will have to improve.

4. Competition for medical residency

Competitiveness for a spot in medical residency is often the factor that limits people from pursuing the specialty he or she truly desires. Many are often attracted to a field, but are hesitant to pursue their aspirations because of high requirements and competition. Especially at this stage, it can be very difficult to get ahead when our

exposure has been limited. Although many of us are still undecided on our futures, an important tip is to be proactive, both in making yourself more attractive and in narrowing down the specialties that interest you: seek to do more observerships, look for electives, work hard to excel in school, try to get involved in publications, look for job/ volunteer opportunities in medically-related areas, and make connections.

5. Prestige

While quite a superficial consideration, it is one that influences the decisions of many. Prestige can drive people towards certain specialties (in hopes of being admired), or drive people away from specialties (in fear of being frowned-upon). Despite the hierarchy of prestige that undeniably exists amongst medical specialties in the eyes of both medics and the public, every specialty plays a vital role in the functioning of the medical field as a whole. You should, therefore, think about the areas of medicine that make *you* happiest, and not the areas that will make your family, your friends, or the public happy. If you are passionate and interested about your chosen specialty, you will very naturally find yourself proud of your work as well. Setting aside external influences will exponentially increase the chances of you choosing the field best fit for you, and excelling in the specialty you are truly interested in.

6. Intensity of the job- work hours and stress

Last, but certainly not least, it is important to consider the intensity of the specialty you have chosen. Work hours is one of the largest and most obvious considerations when it comes to job-intensity. Hours can vary from long to standard, or irregular to regular; thus, varying in effect on social life. In addition to work hours, stress levels also play a large role in job-intensity. Stress

levels can be influenced by factors comprising job requirements, consequences of mistakes, and types of patients encountered (including emotions of anger, fear, or sadness that patients may take out on you). While you may adore certain aspects of your field of interest, it is important to consider whether the sacrifices that come with the specialty are suitable for you or the lifestyle you are seeking to have.

Regardless of the specialty, there will always be aspects of your job that you will dislike. This is why it becomes vital to weigh each of the factors mentioned above, apply it to every specialty you are considering, and to understand that your passion for the field should always outweigh any disadvantages that may exist. I hope you found this article helpful! Good luck! :)

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HOW TO REDUCE STRESS DURING REVISION

By Iren Shabanova

As one of many school-oriented, goal-driven medical students, I am definitely not alone in saying that the majority of my stress comes from exams. Four times a year, our knowledge of the curriculum is brought to the test in a grueling bombardment of multiple choice and short written answer questions. However, what I personally find more difficult than the final test is enduring the marathon of revision leading up to it. This long, horrible road is laden with set-backs and periods of self-doubt that few have the ability to endure without engaging in unhealthy coping mechanisms. From three years' worth of experience taking medical exams, I have put together some tips on surviving revision without losing your mind in the process.

1. Plan ahead.

In the first days of revision, I like to write out all the lectures I need to cover in a single Excel file and divide them into groups based on content. In this way, I can study all the lectures related to one another in consecutive order and understand the information better by building onto the basic knowledge of the initial lectures. By having all the coursework in one document, I can see approximately how many lectures I should be covering each day so as not to get behind, keeping in mind

that some lectures take much more time than others. While this method works for me, others prefer to divide their revision in other ways. Regardless of your preference, planning ahead can greatly help you stay organized and give structure to your revision to avoid stress leading up to the exam.

2. Do not compare yourself to others.

As medics, we tend to be very hard on ourselves when it comes to revision and often go to unhealthy extremes in an effort to be as

prepared as we can possibly be. Oftentimes, studying almost becomes a competition of who can sit in the library longest or who studies more. However, it is important to remember that everyone has different ways of studying and just because your friend is the first one at the library in the morning and the last one to leave, does not mean that your method of studying is any less effective – it is simply yours. Do not try to push yourself to the brink of exhaustion just because that is how someone else chooses to study. Some of us work better during the day, others in the morning or late at night, some people need to write everything out by hand, while others prefer diagrams – just remember that everyone has their own process of learning and retaining information. Find what works for you and while revision is definitely no walk in the park, it should not be taken to extremes or compromise your health and well-being.

3. Eat healthy and drink water.

I have found that eating healthy and drinking lots of water helps me focus and reduces stress during revision. Remembering to eat, choosing natural rather than processed foods, and getting the

necessary nutrients are all easy things that will do wonders for your brain and your body and make revision just a little bit more bearable.

4. *Sleep well.*

While we study, our brains are working at full power for the majority of the day and it is vital that we allow them to re-charge overnight with some proper sleep. Remember that revision is a lengthy process and you need to keep your energy levels up for between one and two weeks of solid studying. Giving your body the rest it requires is critical for consolidating information and keeping your mind sharp for the day ahead.

5. *Take an hour to relax.*

This was something I had difficulty with in my first few years at the med school. Only this year have I come to realize just how important it is to take breaks during revision. I have gone from being someone who would not leave the house during the revision period, to not being afraid to go for a walk, take a long lunch, or get a coffee at Taste with a friend every day. When I feel my brain getting tired and my attention wandering, I go outside for some fresh air instead of panicking and trying to study even harder. Taking breaks instead of forcing yourself to sit and review

will do wonders for your mental health and will give you new-found energy to sit down and focus.

6. *Meditate.*

While this might sound cheesy, meditation is an amazing way to clear your mind and de-stress. When I come home after a full day at the library, I like to let my mind relax by plugging in my headphones and listening to a meditation podcast to fall asleep.

7. *Study with friends.*

I have found that being around your friends during revision can make a world of difference for how you feel. Being able to ask your friend a question or clarify something you didn't understand can make your revision much more effective. Plus, explaining something to someone else in your own words is a proven way to consolidate your own learning and can highlight any gaps in your understanding of the material.

8. *Get up and move around.*

While the revision period can become a time when medics enter a bizarre study-induced vegetative state, it can be quite a sudden shock for your body. Even though you no longer have the luxury to go to the gym at 3 pm without losing your spot at the library, it is important to remember to move around. Get up

earlier and go to the gym before you would normally wake up to study at least once a week. Wear gym clothes to the library and go for a jog during your lunch break. Turn your coffee break into a walk, then do some stretches and jump around to some music. All of these things will help get your blood flowing and will make you feel much more energized and healthy.

As someone who has greatly struggled with over-stressing myself, I can say that implementing these points has greatly helped me stay sane during the revision period and endure the study marathon that leads up to exams. Although these changes come gradually and with time, being mindful of your stress is something all medics could and should do. And, in the end, remember that the hard work you have been doing all semester will pay off, just don't wear yourself down in the meantime.

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PHASE 2, WHERE TO?

Which medical school do you want to head to for the next part of your studies?

By Antonia Dick

Although the thought of packing your bags, hanging up your gown and leaving behind the coastal town of St. Andrews for the bright lights of the city is a heart-wrenching one, it is something that all of us St. Andrews medics will have to do sooner or later. Having fully integrated into the bubble, where anything more than a ten-minute walk is an exhausting commute, you may have forgotten what it's like to have more than two choices of destination for a night out, or actually having to make plans to see your friends without just bumping into them on the street. So the prospect of choosing where to go next might be a difficult one, not least because you have a choice of excellent medical schools but all with incredible cities to match. Whether you're on the English or Scottish route, here's a quick run-down of what the schools and cities have to offer.

UNIVERSITY OF DUNDEE

The City - Not quite had enough of the east coast of Scotland but want to sample a Scottish city? Look no further than the more down-to-earth side of the Tay Bridge! With far cheaper nights out, a lively city centre and the current regeneration of the cities cultural centres, Dundee is a city on the rise. Voted the best 'young university' in the UK by Forbes magazine this year, you'll not only be moving to a great city but an excellent university. Plus, you're twenty minutes away from St. Andrews if you feel like visiting your friends you've left behind (you know you'll be back for a ball or two).

The Medical School - The medical school is known to be one of the most clinically integrated courses around and no doubt you'll be on the wards of Ninewells from day 1. There's plenty of opportunities to take part in research over summer and student selected components are early on

in your first year there, a great chance to fill in any gaps in your knowledge you find when moving to your new medical school.

Places - 10% of all Scottish Route Places

UNIVERSITY OF ABERDEEN

The City - Moving to Aberdeen will give you the opportunity to move further north, and experience a different area of Scotland, being close to many historic towns and landmarks. Aberdeenshire is laden with castles and beaches, so you won't miss St. Andrews too badly, however the city also has its share of sports, music and culture with the Aberdeen Exhibition and Conference Centre hosting a range of concerts and events regularly. You'll be surrounded by Scottish history whilst also being able to enjoy everything the modern city has to offer.

The Medical School - The unique selling point of the medical school is the opportunities it

provides to engage in rural medicine, with placements all over the highlands and islands. The peripheral teaching hospital at Raigmore in Inverness serves the entirety of the highlands, and there is an opportunity to spend a year here if you are particularly interested in rural medicine. The Foresterhill campus in Aberdeen offers modern facilities integrating medical teaching, dentistry, research, medical sciences and other areas all in the one place.

Places - 10% of all Scottish Route Places

UNIVERSITY OF EDINBURGH

The City - Moving to Edinburgh, you'll be able to retain many of the things you may love about St. Andrews - a town with strong traditions, history, beautiful buildings and cobbled streets- however your local castle just got a little bit bigger. Living in Scotland's capital, you'll have access to endless musical and performing



Glasgow University Medical School

arts events, including the world-famous Fringe festival, and the Military Tattoo. The Edinburgh playhouse hosts some of the world's biggest musicals and plays, and as well as this you'll have the pick of some of the best shops, restaurants and bars in Scotland. Bursting with history and charm, Edinburgh is just a magical place to live in general, where you'll be sure to find your own traditions and favourite things to do there as it has so much to offer.

The Medical School - You'll be joining a historical and influential medical school, with notable alumni such as Joseph Black and Sophia Jex-Blake to name just a couple. The medical school has modern facilities which are constantly being developed, situated next to the Royal Infirmary and soon the new Royal Hospital for Children and Young People. The

school carries out a great deal of research and their standards are recognised worldwide.

Places - 30% of all Scottish route places

UNIVERSITY OF GLASGLOW

The City - Scotland's biggest (and some may say best) city takes a bit of exploring to find all that it has to offer-as each end of the city has its own unique attractions. The university is situated in the city's west end which boasts museums, parks, independent shops and restaurants and heaps of art and music. Whatever kind of music or night out you enjoy, there will definitely be something for you with a wide range of venues, pubs and clubs. Glasgow is definitely the place to make up for all those big nights out you've been missing in St. Andrews. You won't find anywhere more convenient and easy to shop, as everything is situated close together in

the city centre. Taking a tour of Glasgow by bus, foot or on the subway will show you that the city has much more history and hidden gems than you might expect.

The Medical School - Whilst the purpose-built Wolfson medical building is situated on the university campus, you'll spend a lot of time at the brand-new Queen Elizabeth University Hospital, with teaching facilities on site. The hospital campus is linked with the children's hospital and maternity and neuroscience units, as well as state of the art pathology laboratories, so is a great place to become integrated in the world of medicine. Glasgow offers extensive elective periods, which offer a wide variety of choice to students, including chances to study different subjects and in different countries.

Places - 50% of Scottish route places

UNIVERSITY OF MANCHESTER

The City - If you've ever been to the city of Manchester, then you won't need much convincing-it has everything you'd want from a city situated in a compact city centre, with fantastic transport links on top of this. The city offers a vibrant music scene and nightlife as well as having some of the best football clubs and sports teams in the world. Its packed with culture and art, shopping opportunities and every kind of restaurant you could wish for. The northern quarter of the city offers something different with vintage and urban shops, quirky bars and cafes and new, exciting places to eat.

The Medical School - Manchester medical school is the largest in the UK and has the unique feature of allocating students to a Health Education Zone, a specific hospital which

your learning and placements will be based around. You will have the opportunity to rank each zone in a similar way to ranking phase 2 universities. There's lots of chances to personalise learning and explore different areas of interest at the university. If you enjoy full body dissection then it is also practiced at Manchester!

Places-approximately 50/70 English route places

BARTS AND THE LONDON SCHOOL OF MEDICINE AND DENTISTRY

The City - It's no secret what the city of London has to offer-pretty much

everything you could wish for. Here you'll have the amazing experience of living in the biggest and most bustling city in the UK, and encounter all the opportunities that will come with this. Much of the teaching and university life is situated in the east end-giving you the chance to experience a slightly less touristy side of London and to explore the city for yourself. One of the teaching hospitals and campuses is however, situated in the city where you will be surrounded by all of the history and famous attractions. Living in London, you'll also be able to take advantage of the beautiful coast and countryside in

the South of England, as well as extremely cheap travel to other UK cities and abroad!

The Medical School - Barts encompasses two historic and esteemed teaching hospitals-St. Bartholomew's Hospital in the city, and The London Hospital Medical college in the east end-the oldest medical school in England and Wales. Studying medicine in London, you will be exposed to a more diverse range of patients and health problems than anywhere else, and will often be at the forefront of new technologies and research. The course involves a lot of choice with Student Selected Components and project

work which allows students to be involved in the local community. The Royal London Hospital is an exciting place to study as home to London's air ambulance as well as one of the leading trauma and emergency care centres and biggest paediatric hospitals in the UK.

Places - Approximately 20/70 English route places

Images from:

https://www.dphotographer.co.uk/image/205658/glasgow_universiy_medical_school

<http://www.qmul.ac.uk/media/news/items/smd/130939.html>



Barts and the London School of Medicine and Dentistry

A SEMESTER IN PICTURES



BMS Committee and Jannettas - September 2017



Hecklings - September 2017



Hecklings - September 2017



FAF ball - November 2017



Last dissection - December 2017



SNIMS - November 2017



Cheese and Wine - September 2017



Post-APE - December 2017



Last lecture in St. Andrews - December 2017



December 2017



FAF ball - November 2017



Christmas BOP - November 2017



SNIMS - December 2017



FAF ball - November 2017



FAF ball - November 2017



FAF ball - November 2017



FAF ball - November 2017



SNIMS - December 2017



SNIMS - December 2017



St. Andrews Park Run 2017



Teddy Bear Hospital Committee 2017

SHOULD IDIOPATHIC DVT PATIENTS BE SCREENED FOR OCCULT CANCER?

Decades of studies have suggested an association between idiopathic deep vein thrombosis (DVT) and subsequent diagnosis of a previously undiscovered cancer.

By Chelsea Chan

Middle-aged Patient 'D' is admitted to hospital with swelling of his right leg. He had not noticed until he had to cut open his shoe because his foot did not fit. A CT scan diagnoses him with deep vein thrombosis (DVT); this confirms what the consultant had surmised from Patient D's medical history.

However, despite the straightforward diagnosis, years of literature would suggest that the thrombus may have a more sinister cause – cancer. Patient D is young, and his DVT is idiopathic. He has also smoked for twenty years. Much like how the swelling in his leg went unnoticed, cancer could also remain hidden until its presence manifests in a catastrophic event.

THE IDEA THAT A CLOT COULD INDICATE AN UNDIAGNOSED CANCER WAS FIRST SUGGESTED BY ARMAND TROUSSEAU IN 1865.

And yet, the literature in support of routinizing extensive cancer screening in idiopathic DVT patients is anything but straightforward. An article published this year in the British Medical Journal (BMJ) that examined the existing literature doubted the necessity of extra screening (2). Many consider there to be flaws in the way the data was collected in some of the papers (2,3). The question requires both ethical and practical consideration, and ultimately, it is not easily answered.

The idea that a clot could indicate an undiagnosed cancer was first suggested by Armand Trousseau in 1865, in what is now known as the

Trousseau sign of malignancy. Trousseau postulated that in a rare form of venous thromboembolism, blood clots that caused vessel inflammation and appeared as nodules under the skin were associated with cancers, particularly pancreatic, gastric, and lung cancer. Trousseau's case was compelling – he later identified the same sign on himself and consequently died of gastric cancer.

In Prandoni's prospective cohort study (3), the authors highlighted two key issues in several preceding studies.

- 1) Studies had been limited to small or retrospective samples of patients.
- 2) Bias in the studies were likely, either because:
 - a. Overt signs of cancer were not excluded from the study.
 - b. The search for subsequent cancer was favoured in patients over the controls.

The possible causes of bias are of concern because, in the worst case, they have the potential to superficially inflate the prevalence of cancer in this group of patients. Similar concerns were brought up by the BMJ article in relation to a 2008 review that involved studies that could have potentially included patients that were at a higher risk of cancer (2).

Aside from concerns with the quality of previous studies, the BMJ article also cited the Screening for Occult Malignancy in Patients with Idiopathic Venous Thrombolism (SOME) trial (1,2). It is the largest prospective study to date, which suggested that the

percentage of DVT patients diagnosed with occult cancer at a 12-month follow up was *not* in fact as high as previously suggested – 3.9%, rather than the swooping range of 6-20% as previously stated.

However, if the number of confirmed diagnoses of occult cancer is, in fact, smaller than expected, should doctors still extensively screen idiopathic DVT patients?

On one hand, there is moral friction in the idea that as physicians, we would decide not to screen for a disease that could be treated. Is it ethical not to pursue further testing if it could help diagnose someone, simply because the percentage of those that could be impacted is small? The point of screening is that the vast majority will not produce a positive result for the disease, but that the screening will make a difference in the lives of the few who are identified by the screening. Furthermore, the paucity of cases for very rare diseases does



Image from: <https://img.medscapestatic.com/pi/meds/ckb/44/36044tn.jpg>

not undermine value in its research – surely this rationale could similarly apply to DVT patients with undiagnosed occult cancer.

IS IT ETHICAL NOT TO PURSUE FURTHER TESTING IF IT COULD HELP DIAGNOSE SOMEONE?

However, though moral reasons to screen for occult cancer are sensible, they are not without limits. Take, for example, the parallel between screening for occult cancer and screening for other diseases – unfortunately, their purposes are fundamentally different. Screening for diseases such as colon and breast cancer is preventative – the hope is that the disease will be treated in an early stage, which will result in a better prognosis. In comparison, screening in an idiopathic DVT patient may lead to discovery of a cancer that has already progressed, and is likely metastatic. The DVT patient with occult cancer is not likely to have a better prognosis than the breast cancer patient who has had their cancer detected early and will go on with a decent prognosis.

Furthermore, a screening routine would have practical limitations. Routine cancer screening includes

taking a full history, physical examination, and a few basic diagnostic tests such as blood work, an X ray, and urine analysis. Extensive cancer screening would include the routine package, as well as Computed Tomography imaging of the abdomen and pelvis, and a mammography in women. Requiring a CT scan of every idiopathic DVT patient would be an added burden to imaging departments, which already face a demanding load and are understaffed for radiologists in the UK. It must also be considered that of 100 DVT patients, 20 patients at most would receive a CT scan that benefits them, but at least 80 would receive unnecessary exposure to radiation. Extensive screening is not cost or time effective, nor does it necessarily yield the greatest benefit for most patients.

The NICE guidelines offer that physicians should “*consider further investigations for cancer.*” Ultimately, evidence serves patients on a person-to-person basis – though not every DVT patient will have an occult cancer, perhaps we owe it to Patient D that his consultant will be as informed as possible on the topic to decide the

best course of action.

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UNDER THE MICROSCOPE WITH PROF. HARRISON - PERSPECTIVES ON PATHOLOGY AND RESEARCH

"Pathology is like pictures that tell stories - transforming a two-dimensional picture into a four-dimensional story that happens in space and time to the patient."

By Jasmine Low

Given that most of the medical students here in St. Andrews will be involved in research projects in the future – either the summer project for second years or the dissertation project for third years – I thought it would be a great opportunity to interview Professor David Harrison and learn more about his interest and perspective in research.

What was it that led you to become a pathologist?

I am interested in pathology because it looks at all sorts of diseases, not just cancer. I trained in pathology and I am also interested in research: I like to understand why things look like the way they do; understanding it can bring a difference to tests we do clinically.

I like the idea of seeing something,

being able to analyse that and coming up with a mechanism. It's like taking a two-dimensional image that informs what happens before and after taking that image, then trying to form a four-dimensional inference—the challenge of taking information and turning it into a story that will make a difference to the patient.

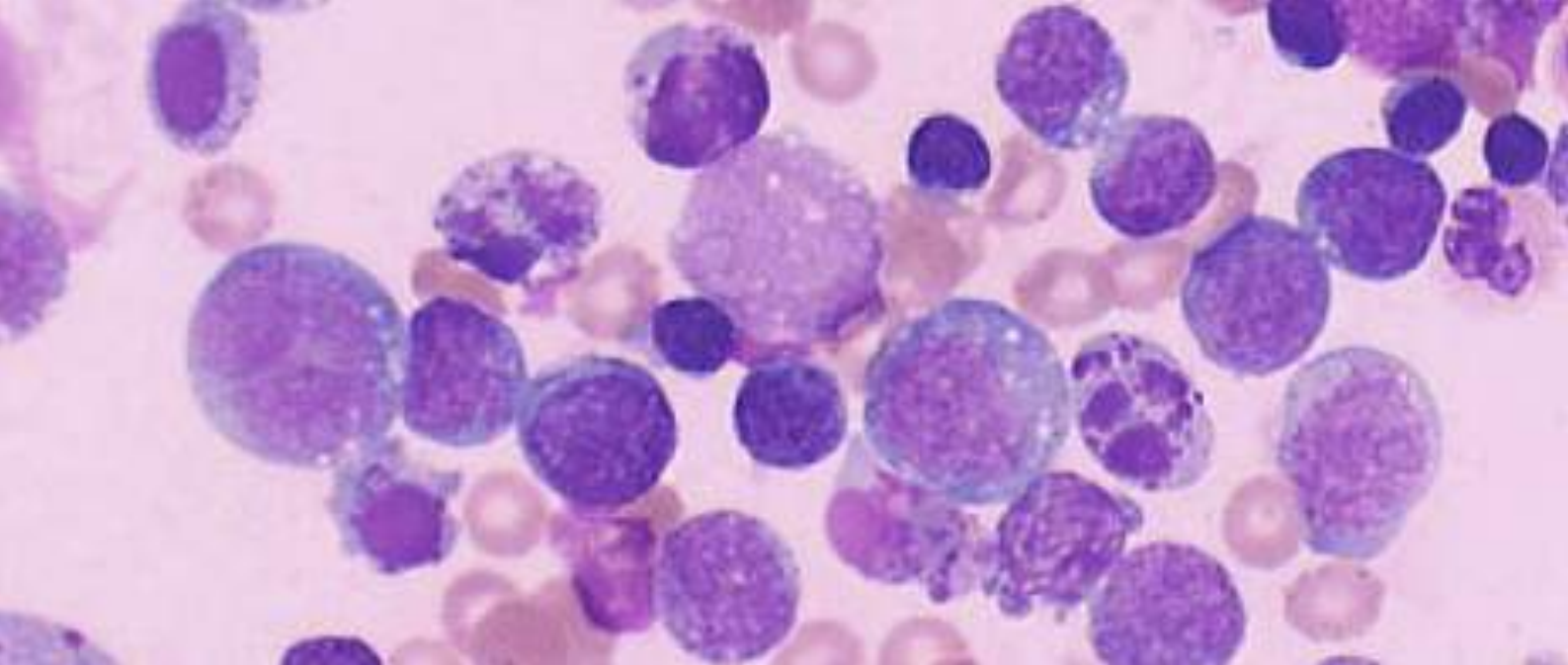
What does a pathologist do?

Typically, a pathologist would do some autopsy, cut up some specimens to select tissues for microscopy, analyse these tissues, have multidisciplinary meetings with oncologists, surgeons, radiotherapists et cetera to construct patient management.

On Mondays, I head to the health board headquarters in Edinburgh for meetings over governance of human tissue for research, and after that I would go to The Royal Infirmary of Edinburgh to look at some cases for liver, kidney and transplantation as well as speaking to clinicians and supervising doctors training in pathology. On Tuesdays and Wednesdays, I am in St Andrews to deliver some lectures and meeting with PhD students about their individual research. I would do research talks on Fridays as well some teaching online. some research talks on Fridays as well some teaching online.

What do you think about medical research?

The thing about research is that it matters long term but it may have less impact on patients in short term. Medical research is difficult.



WE NEED TO THINK WHAT WE ARE DOING, WHY WE ARE DOING IT AND THE DIFFERENCE WE CAN MAKE.

It's sometimes not done properly, perhaps too small a scale to make a difference, or without a clear question in mind or with the appropriate design. It's important to keep in mind that research only makes a difference when it's designed properly. For the development of research, we need to think what we are doing, why we are doing it and the difference we can make.

While the element of giving funds to huge organisations/bodies can make big differences to health care, there may be a problem of “group speak”—leaders with big reputation can be wrong at times and ignore the “left-out” ideas. Therefore it's important to have a mix of centralised and devolved research. It is also important to note that health technology and assessment can probably make a big difference, for example in surgery than finding new genes – doing things differently might help patients more. There's a misconception that good research is always cutting edge intellectual but actually those that are practical are as important in making a difference to patients.

How is the future like for research in pathology?

Digital imaging and computational modelling are quite promising as they help us understand complex biological systems. Genetic testing and proteomics are very helpful as well. We can use tissue culture to study the effects of drug intervention, then use genetic technology: if you change a gene's expression, you can observe what will happen to the cells—survive, grow faster or slower, undergo senescence et cetera. If you do this over a period of time and collect dynamical information, combining it with data from tissue, you can think about constructing a model that allows you to make a prediction of what will happen over time.

I'm sure that digital pathology will change practice in the future. Not because digital is better than optical microscopy, but because it allows us to exploit IT. You can now screenshot pictures of the biopsy and email those securely to the consultants. This is not routine just yet, but once you have a digitalised image, you can use artificial intelligence to screen for certain things. Therefore, it is important for pathologist to understand what a computer can do and become the translator between two sides of the table in multidisciplinary meetings—between the clinicians and scientist.

What is your biggest achievement? What do you find most rewarding?

I can make a reasonably good Punjabi potato curry.

Well, I wouldn't say it's a big achievement but when I was in my training, I was examining a kidney biopsy and I was looking at proliferative glomerulonephritis. For this condition, patients usually get better and I thought the excess cells in the glomerulus must either have migrated away or undergone apoptosis - how else would the patient get better? I wrote this as a short report to a journal; that was basically the first account of how proliferative glomerulonephritis resolves. Is it a big research finding? No. Is it clever science? Absolutely not. But do I like it? Yes, because it is just a picture and I think about its meaning; it's down to observation.

What is the hardest part of being a researcher?

Many people would say funding because only a handful will be able to get significant amounts of recurrent funding.

In my case, I approach research by making an observation that spurs an idea. It is important to think what you want to spend your life career doing while studying for a PhD and not after years later. To be honest, this career can be kind of awful for non-medics (who often

retain their ability to go back to clinical practice) – probably only about 5% science PhD students stay in academia although more may have wanted to do so.

What advice would you give to medical students who might be interested in research as well as doing clinical things?

First of all, decide what you want to do for yourself; ask around but don't always agree with everyone else.

Secondly, get experience: internship, paid or not, do it and try it. Don't restrict yourself into thinking there's only one type of research. They don't only have be shiny machines, white coats et cetera. There is maths, statistics, computing, social science, philosophy – any of these can be factored in.

Thirdly, read, but not solely medical research papers. Read other stuff that is interesting like philosophy or other developments in technology.

Do something that you have a reason for doing.

You may want to plan a career: going to conferences, making posters et cetera—great, but it's a shame if your life is being dictated by having to tick these boxes to get ahead. You should definitely enjoy doing what you're doing: get a job or better still, get paid to do your hobby.

Professor David Harrison graduated from the University of Edinburgh Medical School in 1983 and completed training in pathology in 1990. Since then, he held various positions such as the Chairman of Medical Research Scotland (2009-2014), honorary consultant pathologist in Lothian university hospital, chair of a hospital and nursing school in the Palestinian sector in Israel for 12 years as well as many other responsibilities. Professor Harrison has honorary professorships in Edinburgh and in Medicinal Chemistry at the University of Florida. He currently holds the John Reid Chair of Pathology in the University of St Andrews.



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WHAT IT'S LIKE DATING A MEDICAL STUDENT

By Adrienne Tang

Medics seem to live separate worlds from the rest of the school population. We socialize in the library instead of the Union, our schedules are controlled by Galen, and we know a gruesome amount about the human body. So what does that say about our love life?

1. She chooses eau de post-mortem — “what’s that smell on you?” “Oh, it’s just my cadaver”. We can’t help the scent of formaldehyde rubbing off on us after a grueling 2 hours in the DR

2. He’s surprisingly okay with intimate details... — “don’t worry about me, it’s just a stomachache” “period cramps? Oxytocin can be a pain.”

3.... But you might not be — “babe, look at this sty on my eye. It’s definitely filled with pus.”

4. You won’t see her very much during revision period — expect to find her in a library cubicle wearing the same hoodie she was wearing last week with multiple cups of coffee at her desk and a look of torture.

5. He could turn a very romantic moment into his own study session — *holds your cheek* “angle of mandible is innervated by great auricular nerve C2-3, NOT cranial nerve V3.”

6. She’s ruined all medical dramas and horror films for you — “There’s no way those stitches would hold the human centipede

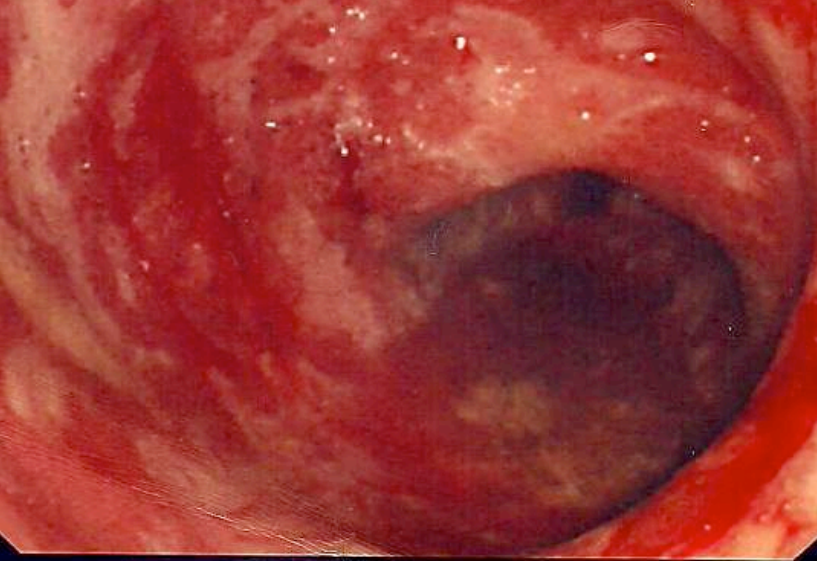
together.”

7. He tries excessively hard to take care of you when you’re sick — “don’t move one inch! Stress suppresses your immune system”

8. Your grades go up — sometimes, the only way you’ll get to be near her is to sit across from her in the silent section.

Regardless, you know they’ll keep your heart beating, literally and figuratively <3

Image from:
<https://www.glamour.com/gallery/15-times-greys-anatomy-restored-our-faith-in-love>



IS THERE A LINK BETWEEN ULCERATIVE COLITIS AND ATOPIC DERMATITIS?

By Jodi Chiu

Introduction and Background

Ulcerative Colitis (UC), one of the principle forms of Inflammatory Bowel Disease (IBD), is a debilitating chronic condition resulting in formation of ulcers in the mucosa and submucosa, beginning in the rectum and continuously affecting a variable length of the colon (1). Although UC can affect people of any age, incidence has a peak amongst those aged 15 to 30 years, with prevalence of 2.4 to 294 cases per 100,000 persons in Europe, as previously reviewed (1,2). Symptoms of UC include diarrhoea, abdominal pain, bloody stools, and malnutrition, ranging from mild to severe, amongst others.

Crohn's Disease (CD), is another common form of Inflammatory Bowel Disease (IBD). In contrast

with UC, CD is characterized by inflammatory changes affecting the full thickness of the intestinal wall that can occur anywhere along the gastrointestinal tract, usually beginning in the terminal ileum, then developing elsewhere as discreet, focal lesions. Similar to UC, CD can affect people of any age, but has a peak age prevalence of 30 to 39 years old. The most common presentations of CD include abdominal pain, weight loss, and blood and/or mucous in stools (3).

Atopic Dermatitis (AD) is a common chronic inflammatory skin condition, causing the skin to become red, dry and irritated. Appearing more commonly in children, it typically presents periodically with flare-ups and can be triggered by irritants to the skin (4,5).

Because of the widely established inflammatory properties of UC, the relationship between UC and other inflammatory diseases, including arthritis, AD, and uveitis, have been extensively studied (6–9). This essay specifically focuses on the relationship between AD and UC. The continued search for a connection between the prevalence of the two inflammatory conditions within a patient, both known for structural dysfunction of epithelial barriers, is not only crucial in better understanding the familial and genetic impacts on the diseases, but can also aid in paving the path towards the development of more efficient treatments and combination

therapies.

Discussion

The increased prevalence of AD amongst those with IBD

Most recently, Kim et al described the increased risk of AD amongst patients with IBD (OR 1.366) (6). The group attributes such findings to the augmented Th17 phenotype expressed amongst those who tend to develop AD, which is also increased in patients with UC (10).

Specific to UC, several other studies have also suggested its relationship with AD, finding a prevalence of AD higher amongst those with UC compared to the healthy population. Notably, Hammer et al found a significantly higher prevalence of AD both amongst those with UC (23%), and amongst first-degree relatives of those with UC (3%), compared to controls (7% of healthy controls, 1% of relatives of healthy controls) (7).

It is worthy to note that studies have also found a significant relationship between the development of the other major Inflammatory Bowel Disease, Crohn's Disease, and AD in a patient or within their family (8,9). Gilat et al found AD to be remarkably more frequent amongst those with CD ($p < 0.005$), and amongst the patients' first-degree family members (fathers $p < 0.025$; mothers $p < 0.002$; siblings $p < 0.01$) compared to healthy controls (9). Looking at the histology, Arisawa et al found abnormal infiltrations of eosinophil into the lamina propria in

the biopsy specimens from descending colons of patients with AD (5). Such observations are consistent with results from other studies, which found the inflammatory milieu of the lamina propria of UC-affected colons to consist of 20% to 70% eosinophils (11,12). This not only suggests the presence of latent chronic inflammation of the colon amongst those suffering from atopic dermatitis, but also hints at the relationship between UC and AD.

Explaining the connection between UC and AD-immunology, genetics, and stress

Studies have suggested numerous explanations for such a noted correlation. Of importance, as mentioned above, an overriding Th17 phenotype may rationalize the immunopathogenesis of both UC and AD. One study highlights the implications that Th17/regulatory T cell (Treg) immune imbalance may have on the development of UC (10), while Koga et al explains increased number of Th17 cells observed in peripheral blood and sites of inflammation of AD may contribute to exacerbations of the condition (13).

Another important exploration of the connection between UC and AD is genetics. Although UC was not specifically studied, upon comparison of the genome-wide association studies of AD and IBD, 39 of the 163-established IBD risk variants reached $P < 0.05$ for AD, hinting at a correlation between the two diseases (4). More specifically, Lees et al identified the IBD loci (relevant for both UC and CD) *C11Orf30* to be genetically overlapped with AD (14).

Finally, anger and stress may also result in a causative correlation between UC and AD. Patients have described the frequency and severity of their UC flare-ups to be related to stressful periods of their lives. Patients have also described a similar relationship with AD, where

psychological stress aggravated their skin condition. Such psychoneuroimmunological relationships have not only been described by patients, but have also been proven amongst studies (15–17). Stress is said to have a direct effect on the structure of the epidermal barrier, leading to dysfunction (16). Similarly, another study has found long-term stress to increase risks of triggering UC flare-ups in the long-run (17), and has also been shown to play a pathogenic role in the inflammatory disease (15). Relevant to both AD and UC, the activation of the Hypothalamic-pituitary-adrenal axis during stress has been known to play a role in exacerbating both conditions due its interaction with the immune system (15–17).

Future Directions and Conclusion

Both UC and AD are characterized by their inflammatory properties, and have been proven to be linked to each other in their prevalence amongst patients and their family members. Although various explanations have been made on the connections between UC and AD, further explorations should be done on the concrete relationships between the two, so that a better understanding of the causes of the conditions can be obtained, and improvements to treatments can be made.

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Images from:

https://img.medscapestatic.com/thumbnaillibrary/dt_170301_atopic_dermatitis_800x_600.jpg

<http://gastroenterologymaster.blogspot.ca/2013/05/ulcerative-colitis.html>



THE DIRTY TRUTH ABOUT EXAMS

A short story on the woes of revision week

By Puroshini Pather

So.

Guess you've made it.

Guess you've sweated through 4.0 GPAs, A-levels and embarrassing medical interviews only to wind up face down on the carpet buried in lecture notes after one week of class.

Well done for even making it this far. But how will you take it from here?

Will you wake up early for 9AM lectures? Be on time for clinical skills?

Or even *GASP*, do the REQUIRED READING?

The stars only know what you can accomplish while at Med School. The sky is the limit, as they say. But if that were true...

Why are you in the Library at 1.15AM trying to memorise 549 drugs that all sound the same, look the same and ARE the same?

The library is empty. Everyone has packed up and left you behind for their friends, their social lives. Their voices are cheerful as they leave you there to rot.

The corridors are dark. The night outside is silent as you waste away, withering in the dark depths of your cubicle with your 90 slide lectures.

You are alone, you think.

But not quite!

In the corner, you can see that 3rd year medic wearing pyjamas and surrounded by 6 empty coffee cups as they drool over a picture of Cranial nerves.

Over there you spot a 2nd year sobbing over David Crossman's 300 slide cardiology lecture.

And over there...is that...Is that a FIRST YEAR? They look so full of life! So full of hope! They radiate MOTIVATION!

The angelic light shining from the 1st year student is too much and you turn away. The library has started to get cold and the radiators no longer radiate heat.

They only radiate sadness.

You pack up your lecture notes, chocolate wrappers, sweet wrappers, chip bags, coffee cups, sandwich papers and wonder- when did you get so many pimples? My body used to be okay, you think. I used to play sport, do music, be healthy, eat lettuce!

Just kidding you never ate lettuce.

When was the last time you slept more than 6 full hours?

Time is a figment of your imagination at this point.

It's okay, you think. Tomorrow is a new day, a fresh start, I can get up early, have a good breakfast, get to the library and finish that lecture —

You wake up at noon.

Outside, the sky is grey and raining and you have to wake up and study.

Dude, you think. This sucks.

You add a few more expletives into that sentence.

You drag your heavy carcass out of bed and slowly ooze your way towards your laptop. You have to go over those lecture notes. You haven't even echoed yesterday's lectures.

You sit down and your buttocks become one with the chair.

You are the chair now. The chair is you.

You mash out a few notes and decide you are hungry.

Hmmm, should I eat a salad? Make a delicious, nutritious soup? Maybe I could eat some kale —

Your Domino's pizza delivery has now been processed.

Thank you for ordering an extra large, deep dish cheese-crustured Ranch BBQ with a side of wedges and a tub of Ben and Jerry's Chocolate Fudge Brownie ice cream. Your delivery will be in approximately 20 minutes.

At this point, you have considered intravenously injecting caffeine directly into your bloodstream. But in order to find the right vein, you have to go over Ourania's Blood

Supply lecture again.

Ain't nobody got time for that.

Don't people *see* how *busy* you are right now? ASOS Delivery only costs £1.99 if you order by 6pm! What a deal, dude.

Oh fiddlesticks, its 11.30PM? How did it get this late? What were you doing? How can this be? Is this real life, or is this fantasy? Oh man, someone liked your Facebook post, you better check –

NO!

You are stronger than this! You're going to finish this week's lectures by the end of TODAY.

(It's 11.58PM)

.....by the end of TOMORROW.

You rub your face against the keyboard some more. It doesn't matter if you use your face to type or

your hands, your notes will still make no sense.

Phew, it's been a long, stressful day. Maybe you should turn in and wake up super early to get tons of work done. Humans need 8-9 hours of sleep a night, right? So if you sleep at this exact moment right now, you can get 8 hours, 32 minutes and 20 seconds of sleep.

Perfect!

You set your alarm and slither into bed. You have done *tons* of work today. I mean, maybe not quantitatively, but one anatomy lecture in one day counts, right?

It's time to get a good night's sleep and wake up at 8AM and finish studying. You have it all planned out in your head. Everything is going to be fin—

You wake up at noon. The MSA is in

2 days. You're only on Week 3 lectures.

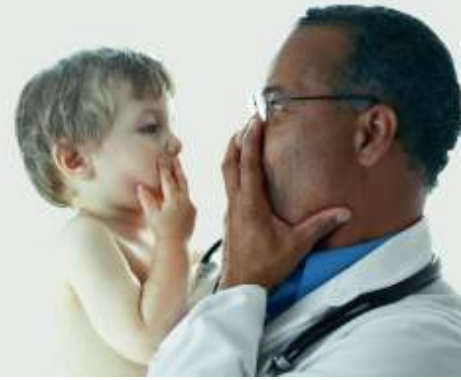
Oh no.

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<https://campusriot.com/wp-content/uploads/2013/11/College-Student-Sleeping-in-Library.jpg>





PROFESSIONALISM AND 'FITNESS TO PRACTISE'

By **Sammir Bushara**

A scope into the GMC 'Fitness to Practise' at St. Andrews- its policies, investigations, and consequences

You've made it. It feels like the culmination of years of hard work, stress, and uncertainty as you find your seat in the slowly filling lecture theatre. You gather your thoughts, settling into what is to be your first day of introductory talks at medical school. As the day ends, you leave the lecture theatre a little overwhelmed by the assault of information, admin, and expectations thrown at you. For many new medical students, a mere three letters make the deepest impression: FTP – 'Fitness to Practise'.

It is disquieting to think that this newly-earned status as doctor-in-waiting can be wiped away before you even graduate. On that day and many times since, it is drilled in us that we are expected not only to work to a high level academically, but to demonstrate the standard of behaviour expected of a medical professional. One often-quoted figure is that there is an average of 'one FTP case per cohort' of medics at St Andrews, which can result in expulsion. As

one such cohort of new students glance nervously around the lecture theatre, this issue really hits home.

This fate, however, lies at the very extreme end of what could happen when a student's FTP is called into question. 'Fitness to Practise' itself not only covers issues of conduct, but also those of health, if they may hinder a student's ability to progress in the course and eventually practise. Each medical school is responsible for setting out its own policies on dealing with FTP issues, in line with General Medical Council (GMC) policy. The policy here at St. Andrews can be found in the School of Medicine Handbook, the link to which is below. However, a brief overview of proceedings is as follows:

On first instance, FTP referrals are passed on to the Dean of Medicine, who assesses the case and decides whether to initiate an FTP investigation, dismiss the case entirely, or choose one of several intermediate courses of action. If an investigation is initiated, a full

report must be written by a nominated investigator, and the student undergoes a hearing in front of an FTP panel. The possible outcomes (in increasing order of severity) are dismissal of the case, a formal warning, undertakings (remedial action), the imposition of conditions, suspension, and expulsion.

What, however, are the criteria used to determine the severity of the FTP concern? Guidance for this is set out by the GMC. Warnings, for instance, are given when a student's behaviour 'raises concerns,' but does not indicate that FTP is impaired. Expulsion, on the other side of the spectrum, is invoked when a student's behaviour 'is fundamentally incompatible' with continuing their medical training. This includes 'showing a reckless disregard for patient safety,' being dishonest, and abusing 'their position of trust.' While these appear to be somewhat subjective conditions, the GMC has also given common examples of cases which lead to FTP investigations. These

range from criminal charges, to academic dishonesty, to issues with attitude towards work.

While it would have been interesting to find statistics on FTP investigations pertaining to medical students, the broad nature of the criteria for disciplinary action is enough to demonstrate the range of ways in which a student could find themselves on the wrong side of FTP guidelines. While expulsion is often a result of more deliberate and severe breaches of professional expectations, more 'casual' breaches can easily lead on to other sanctions. These can include breaches of patient confidentiality over social media, or unruly behaviour under the influence of alcohol. Any disciplinary action on a medical student is transferred to the GMC at the point of applying for provisional registration, and so students should be cautious of the fact that any breaches of professional behaviour may carry through to, and detrimentally affect, their future careers.

Sources, in which more information can be found:

GMC guidance:

https://www.gmc-uk.org/Medical_students_professional_values_and_fitness_to_practise_1114.pdf
[48905163.pdf](https://www.gmc-uk.org/48905163.pdf)

St Andrews School of Medicine student guide:

http://medhandbook.st-andrews.ac.uk/wp-content/uploads/2017/07/students_FtP_student-guide.pdf

St Andrews School of Medicine official policy:

http://medhandbook.st-andrews.ac.uk/wp-content/uploads/2014/05/students_FtP_University-policy.pdf

Images from:

https://www.professionalstandards.org.uk/images/default-source/Regulator-Headers/_medical_council.png?sfvrsn=2

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MEET THE COMMITTEE



Jodi Chiu - *President*

3 fun facts about me:

1. I don't have a problem with putting ketchup on almost anything I eat... it just makes the food taste better
2. I have a rubber duck collection. I find ducks absolutely adorable
3. When I was younger, my dad was forced to cut my hair in my sleep because I was terrified of scissors. My bangs were crooked for the first 5 years of my life

Adrienne Tang - *Vice-President*

I was born in Taipei, raised in Vancouver, and currently study in St. Andrews. Where do I call home? I haven't decided yet. I want to visit as many cities, make as many new experiences, and welcome as many people in my life while the opportunity exists. Medicine is immensely grounding, but there's so much more to seize.



Chelsea Chan - *Editor*

1. I have no talent for anatomy, but if you want to be regaled about Chopin's childhood, *I am your woman*.
2. Apparently, Canadian accents exist and I have one.
3. During my Skype interview to get here, my Microsoft laptop began updating. Finished the interview Asian-squatting with a tablet between my knees, treating Alan Stewart to a view of my double chin.

Sammir Bushara - *Treasurer*

Hey. I'm Sammir, and I'm the treasurer of the committee. I am a second year medic, and can be easily found staring blankly at a laptop screen in the library. Other occasional hobbies include walking, blowing moodily on a harmonica and the odd bit of writing (handy, that!).



Puroshini Pather - *Publisher*

(☺☺) Well hello there! I am one of your gracious hosts, Puroshini. I enjoy salad, marathons and yoga.

JuST KiDDiNG I put nutella in my hot chocolate and watch Youtube videos. Like that video where they make miniature pancakes in a tiny oven with a tiny spatula for their pet hedgehog. Man that was a good one, you should watch it.

2017/18



Antonia Dick - *Publisher*

I'm Antonia, a second year medic from Glasgow. In my spare time I like to play guitar, go the beach and the gym and I'm also learning to surf. I'm a big dog lover and I also read a lot. I hope to write more articles about health and fitness in medicine in future editions of Medsaint. So far I think I'd like to be a GP when I finish medical school!

Iren Shabanova - *Publicity Representative*

Hey everyone, my name is Iren and I love to travel the world, try new things, cuddle dogs and laugh at everything (but mostly memes). Some of the things I haven't yet tried but really want to include: skydiving, learning to scuba dive, going to New Zealand, and travelling all over Asia.



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