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NARRATIVES

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LETTER FROM THE EDITORS

Dear Readers,

Thank you for taking the time to read the latest issue of H&P. This edition of our journal is entitled "Narratives," in tribute to the shared stories, reflections and experiences that shape the practice of medicine. These take many forms, ranging from historical accounts to clinical histories and personal reflections. In the words of psychiatrist Alfred Adler, narratives help us "see with the eyes of another, hear with the ears of another, feel with the heart of another." Adler's vision was an early example of medical practice guided by empathy, or as he called it, "social feeling."

Latent in Adler's description of 'social feeling' are two ideas. First, medical practice is grounded in something greater than individual physicians and patients. It is a set of practices, stories, and communities that we create together, a 'social' construct. Second, 'feeling' is an indispensable obligation of every physician; feeling not just for, but with, patients, and striving to understand their cultures, backgrounds, pain and joys. Both these tenets rely upon seeking out and reflecting critically upon the narratives that inform medical practice.

The authors featured in this issue bring these ideas to life through a variety of narratives. Matthew Thompson (SMS V) presents the first in a two-part series chronicling the life of Japanese physician Dr. Takashi Nagai, a founding figure in radiology and treatment of victims of the atomic bombings. This gripping, expansive historical account highlights the myriad socio-political forces that shape medical practice, while vividly illustrating the importance of empathy and humanity in medicine.

Authors also present narratives from their own clinical encounters with physicians and patients. In our 'Day In The Life' column, Michelle-Linh Nguyen (SMS I) spends a day shadowing Dr.

Gil Chu, seeing patients, medical training and more through the eyes of one of the most charismatic professors at the School of Medicine. Aarti Sharma (SMS III) narrates her experience during inpatient rotations with a patient in liver failure, leading to a rigorous exploration of how encounters with patients influence the evolution of our clinical ideologies. Innate to medicine as a profession is also the profound ethical tension between obligations to those in need and one's own personal and professional responsibilities. With this in mind, Leo Ungar (SMS III) presents a humorous but insightful dissection of whether medical students should feel morally encumbered by the ever-pervasive necessity for change.

The last narratives in this issue are from two interviews with leading physicians. In the Conversation column, Mihir Gupta (SMS III) talks with leading palliative care expert and author Dr. Ira Byock about his new book, "The Best Care Possible." Dr. Byock reflects on his experiences as a physician and medical school professor, as well as his extensive research and writing, to illustrate that palliative care reform is an urgent priority for patients, families and the health care system. We conclude the issue with our traditional Leaders In Medicine interview. Swati Yanamadala, Angela Guerrero, and Afaaf Shakir (SMS I) interview the new Dean of Stanford Medical School, Dr. Lloyd Minor. Dean Minor discusses both his own medical journey and the future journey he envisions for the School of Medicine. From the staff of H&P, we welcome Dean Minor and look forward to continuing this narrative with him in the years to come.

Sincerely,
MIHIR GUPTA AND AARTI SHARMA

Humanities

3 TCDCM

LEO UNGAR

8 The Cirrhosis of Epiphany

AARTI SHARMA

Features

13 Takashi Nagai

MATTHEW THOMPSON

19 A Day in the Life:
Medicine, Gil Chu Style

MICHELLE-LINH NGUYEN



Johana Oviedo

Conversation

23 The Best Care Possible: An Interview
with Dr. Ira Byock

MIHIR GUPTA

Leaders in Medicine

27 Lloyd Minor, M.D.

ANGELA GUERRERO, AFAAF SHAKIR & SWATI YANAMADALA

Photography

33 Photo Narratives

TCDCM

LEO UNGAR

Screed about altruism
(e.g. 3rd world medicine/community health/science/education etc.)
trying to reconcile all med students' unironic save-the-world values
**with the inconvenient truth that, however much we're doing,
we could be doing more**

AS I SIT HERE WRITING THIS ARTICLE, AND AS YOU SIT HERE READING IT,¹ THERE ARE PEOPLE DYING OF MALARIA

in Africa, people without medical care just across 101 in East Palo Alto, important medical scientific problems neglected with lab desks in Clark and Lokey unoccupied, preclinical students untutored, clinical students unmentored, important work undone. Are we, medical students, doing enough to solve these problems? Do we ask ourselves that question?

A lot of us do a lot already, of course. Stanford has a Global Health concentration. Exactly *** (meaning statistic that I will later look up) students from the class of *xxxx*, *yyyy* from *zzzz*... (all figures, etc.). These many students used MedScholars funding to go to [these places] and do [this] [this] and [the other]. And others do their do-gooding closer to home, at Stanford's free clinics, where, according to PFC.com [or whatever] there are X # of medical students in N number of student chairs, and the hours/wk estimated for each ranges from 5 (lab manager) to 20+ (overall manager). Student scientists among us are as abundantly talented as they are extraordinarily motivated, working brilliantly and for insane hours, developing technology that turns neurons on and off with light, vaccines that can prophylax not just against bacteria and viruses but

against *stress* and the damage to our immune systems, minds, and psyches that decades of it can cause, etc. So the simple charge with which I opened – that we, med students, aren't doing enough to make good on our purported desire to be do-gooders can be rebuffed quickly, and not altogether unjustly, by pointing to these aforementioned stats and accomplishments, and offering that we are doing a lot, tons, actually, and that any suggestion to the contrary is rooted either in ignorance of the facts on the ground, or just a messed up view about what counts as “doing enough.”

This last charge, however, that any view requiring more of us than we're already doing is “messed up” cannot be so easily debunked.

When I was in college, I came across an eminent moral philosopher, one Peter Singer (PS), who made this really good point that's relevant here, and he made that point via this story:² So imagine you're walking by this shallow pond, and there's this eight-year-old kid drowning in the pond. You could save him, but you'd have to wade into the pond. You're wearing expensive shoes, though, like \$1500 Louboutin shoes, the ones with the trademark red undersides, and if you ran into the pond to save the kid, you'd ruin them. Is it alright/moral not to save the kid?

¹ I credit Peter Singer with this formulation as well as with the idea of opening a paper with it, recognizing how hook-y it is. Really, a lot of the ideas herein can be credited to Peter Singer, who, full disclosure, was an advisor of mine as an undergraduate.

² “Thought experiment,” for those of you savvy to philosophy lingo.

Everyone says no. Of course you have to save the kid. All right then, PS continues, happily, because he has you just where he wants you now. Imagine, PS continues, and this isn't really imagining because it's actually true, that there are African children whose lives you can save³ RIGHT NOW by buying them 75-cent mosquito nets.

Are you really going to tell me, especially after what you just said about the Louboutin shoes and the shallow pond, that it's alright/moral not to buy those nets because you'd rather spend that money on shoes or whatever? Reductio ad absurdum. QED.

My guess is you have some idea of where I'm going with this.

Hang out on a med school campus and you'll

³ Title of PS's later book on this subject, *The Life You Can Save*. [Random House Publishers]

catch a glimpse, or more than a glimpse, of the kind of save-the-world medicine-y Coombaya yes-we-can'ism that – to hipsters, the ironically inclined, and all those who are united in that they jade too quickly – can come off as a little too sincere and self-congratulatory. A professor I recently heard speak said, as an example of this sort of thing, something like: “The blessing and the burden of your medical training is that that you can make a positive difference in whatever community you choose to join.”⁴ Saccharine? Possibly. But he's right. We have skills that we've invested time and energy developing, and those skills put well to use can help people.⁵ We can give people curative antibiotics, remove festering organs,

⁴ Coombaya. Is all this too close to Spider Man's Uncle Ben's corny refrain that “With great power comes great responsibility.” Or maybe instead it just effectively recalls, Luke 12:48: “To whom much is given, of him shall much be required.”

⁵ I know it sounds corny, but in corn there's always a kernel of truth. Which is, I point out, the rare witticism that itself demonstrates what it denotes.



Johana Oviedo

resect tumors. So why aren't we putting those skills to use in places and settings – which, when it comes down to it, are *all settings*, be they scientific, educa-

The value placed on helping is, in medicine, an institutional value, and as members of the medical profession, this ethos is part of both our professional and likely also personal moral



Aria Jafari

DNA. That's an important point here, because some people respond to Peter Singer and to the shallow pond argument by claiming that helping doesn't matter so much to them, not as much as other things might. But, you see, as doctors, that option just isn't viable for us. If you're a doc, or a med student, or a premed, or a nurse, or whatever, helping folks matters to you. You can't answer TCDCM question by flippantly rejecting its premise – that if we can help people a lot while costing ourselves compara-

tional, or clinical – where people with those skills are few and far between? And if we choose not to, and in whatever time we spend not doing that, how different are we from the guy who chooses not to wade into the shallow pond to save the kid because he didn't want to mess up his fancy shoes?

tively little, we should. Because you've bought that premise already. You're here, aren't you? What makes these considerations so poignant for doctors is that question isn't *whether* helping matters to us – it does, we've already revealed that to ourselves by becoming a part of this thing – it's how much it does, and especially *how much* it does relative to other things that matter to us too.⁸

The question, to reiterate, is this: in developing countries, science, communities, education, everywhere, there is the change doctors can make (TCDCM). We already try to make that change where and when it's comfortable to, but why don't we also sharply feel the moral demand of having to make that change everywhere and always? Why don't we demand making that change of ourselves?⁶

So I have this medical school friend, Javier, and Javier and I were playing squash and after a good hour of running me around, trying to retrieve his irretrievable rail-hugging drives to my backhand corner, I decided to talk to him about this stuff. Now I should back up and tell you about Javier. Javier's from Mexico. Born there. Parents from there. Sister's still there. Spoke (speaks?) Spanish at home. Learned English at school.⁹ And academically awesome. Princeton. Stanford

In medicine we value helping. We gave things up, (free time, money, some amount of prestige, sleep, etc.) when we chose this profession, presumably at least in part because helping matters to us.⁷

⁸ Another way that this problem is special for us as doctors is that it doesn't just have to do with charitable donations that we aren't making. The original PS paper making the point above had primarily to do with money we could be but aren't giving to charity, when that money could go to saving kids dying of preventable causes, and particularly those causes preventable merely by spending more money on their prevention. In medicine, though, and this is the point I'm trying to make here, doing our jobs is like giving to charity, in that we could be doing our jobs more, and if we did, we could be similarly doing more to prevent morbidity and mortality. It's not clear that the same is true in most other professions, and to the extent that it is, it is less directly. (I.e. if you're a philosophy professor and you give one more lecture on Kant, is that really as directly life-improving as if you're a surgeon and do more pediatric cleft palate repair?)

⁹ In a janitor's closet, specifically, one that played home to his San Diego public school's ESL program. It's a good story.

⁶ And is jading too quickly and irony in general about too much more than defending ourselves from having to ask ourselves this question, and questions like it, when we suspect deep down that we can't answer them?

⁷ Example: Harvard grads can join Goldman Sachs. They'll earn more money there than in medicine. Right away. Work similar hours. Enjoy greater social cache amongst an elite young Ivy Grad cohort that increasingly views finance and entrepreneurship as hot and sexy and medicine as old-timey and blasé.

Medical School.¹⁰ MSTP. Rhodes. He couldn't be too much smarter or more successful.¹¹ Works long hours in a lab filled with towering green-glowing columns of fluorescent labeled goo,¹² where his goal is to uncover the mechanism(s) underlying, so as to ultimately reverse, immunesenescence, the phenomenon that people's immune systems get worse as they get older.

"I was scared to go. But that was the reason I wanted to go in the first place..."

In the end, I did what I hoped I wouldn't do: I chickened out."

I wouldn't go through all of Javier's sundry and myriad accomplishments/outline the highlights of his CV (and they're only the highlights), but they matter here because they give weight and credibility to his thoughts about the big question at hand, TCDCM. His answer, which, I'm guessing is the answer most of us would give, at least if we were being honest, wasn't that he's doing as much as he can, making as much difference as he can make; and if that's true for Javier, a guy who, as detailed above, is making a big difference already, it's surely true for the rest of us, too. No, he could be doing more, he admitted. He could, say, not be hanging out on weekends but instead be going into lab and making more progress on immunesenescence, and he could be not going to dim sum but planning out medical trips back to Mexico or wherever, not kicking my ass at squash but instead making even more of a difference than the mountain of difference he's making already. He admitted that, not eagerly, exactly, but

¹⁰ Obviously.

¹¹ Re successful, I'm reminded of this great Tom Lehrer quote about accomplished people. "It's people like that who make you realize how little you've accomplished. It is a sobering thought, for example, that when Mozart was my age, he had been dead for two years."

¹² Marvel Comics style, like the ones Wolverine is suspended in when they're trying to figure out how to replace his skeletal calcium matrix with adamantium.

honestly, no excuses. He said that it was about comfort, really. That he's comfortable working as much as he does, and where he is, and would be uncomfortable working more or elsewhere.¹³ And I get that, I really do, because of the incident that got me thinking about all this.

My senior year of college I applied to work in a clinic in Haiti, where I would have treated the underserved sick and learned about medicine in the third world. I was scared to go. But that was the reason I wanted to go in the first place. As I wrote six years ago in my application:

"I'm scared to spend a year in Haiti. I have a host of reasons why I shouldn't go there. But there's one compelling reason why I should. And that reason is, in the end, why I'm submitting this application.

"That reason is that I'm scared. I'm scared by the suffering there. I'm scared because it's like nothing I've ever seen before. I'm scared because, for the first time in my life, I won't be able to retreat back into my study and objectify it.

"But that's what I need urgently to learn at this critical point in my life. That human life, human suffering, human meaning, can only be objectified so far.

"In the end, experience is irreplaceable. And crucial. Without it, when I get older, when I get comfortable, when my idealism begins to fade, I might ignore what scares me. I never want to. What scares me most is what's most worth fighting to change."

In the end, I did what I hoped I wouldn't do: I chickened out. I withdrew my application. Which got me thinking.

We're nearing the end here, I promise. But before we get there, let's review. We started off asking whether it's incumbent on us to do more than we're doing (PS) and, if so, especially, why we aren't doing more. Then we said, Response 1, because we might not buy the premise that helping matters. But, counterargument to Response 1

¹³ And that we have to draw the line somewhere, after all, don't we?



Michelle-Linh Nguyen

my own personal moral cartograph. But listen – and here’s the point I really want to leave you with – how do you draw those lines? How do you decide that doing one more peds cleft palate repair, or mentoring one more student, or taking one more history, or working in a clinic in Haiti, or listening with your medically-trained-and-therefore-morally-burdened ear to one more heart isn’t as important as what you could be doing away from lab, away from patients, away from medicine? Where are the boundaries of our responsibilities to others and to our-

is basically: really? You’re in med school; you don’t really believe that. Alright, then, so, Response 2 was well, I’m doing as much as I could already, couldn’t be doing more. Counterargument to response 2 is, basically, please, enough with the excuses, you could be doing more, Javier is, and you know that, and even he could be doing more, and he knows that. What keeps us from doing more and being better is comfort, not necessity.¹⁴ The way out of this moral morass is, then, I think, Response 3, yes I care about the Peter Singer helping people as much as possible stuff, but that’s not the only thing I care about, it’s not even the only thing I care about morally, so the difficult task I face, and am doing my best to confront, is how to parcel up my time to overlay most perfectly

selves? Do you ask yourself that question? I’m genuinely curious.¹⁵ If so, how do you answer? If not, why not? How is it that you/we/I pay such exquisite attention and work so dedicatedly to master the minutia of medicine, but don’t stop, ever, really, to consider how it’s incumbent on us to parcel up our time, and especially to strike that vital balance between our medical missions and ourselves?¹⁶ &

¹⁴ Protracted digression: medicine seems unusual to me, or at least different from some kinds of graduate study like philosophy and math, in that in medicine, diligence seems to matter more than talent does. Granted, diligence matters in all things; I read *Outliers* and Malcolm Gladwell’s 10,000 hours mantra harkens quickly to mind. But I submit, and this is really the key premise on which this whole point depends, in different domains, the relative importance of diligence to talent differs. Math and philosophy, as previously discussed, seem to me areas where talent matters more; some people/math professors look at math problems and solve them instantly whereas others who have spent almost equal times practicing and studying math could spend careers cogitating over those same problems and not get anywhere. But in medicine the greatest barrier to performance seems to be just how much knowledge we can internalize, and knowledge internalization yields to time spent internalizing knowledge. And if you’re with me so far, then my point about comfort follows: the biggest barrier to diligence seems to be the discomfort of maintaining continual diligence. Hence my conclusion that, not just vis-à-vis ethics but vis-à-vis medical accomplishment, our biggest bugaboo is not a lack of talent but a preference for comfort and its demands for satisfaction that intrude on our otherwise-diligent dedication to the betterment of our craft.

¹⁵ Any resemblance of this section of this essay to DFW’s “Consider the Lobster,” including this sentence, which is the same verbatim as one therein, is purely noncoincidental.

¹⁶ Juxtaposing something Dr. Verghese wrote with something he said in a speech I heard him give leads to some of the same questions, I think. In *My Own Country* he writes about his dedication to his HIV-positive patients, and how it was sometimes to the detriment of his family life, and he interestingly explores the effect of all that on his relationship with his then-wife. In his keynote lecture to our class welcoming us to Stanford, however, he concluded by talking about how, almost paradoxically, many of his HIV patients said that the silver lining on the dark cloud of getting ill was that being ill facilitated strengthening and in some cases even reestablishing relationships with family members, and, at this point Dr. Verghese very poignantly said something like – and I remember this vividly, since it piqued my curiosity about this stuff then, too – when all’s said and done, it’s our relationships with our family and loved ones that matters the most. Do you see how these two sentiments/stories could get someone thinking about the tension between our medical lives and our personal lives? Was he thinking about that then?

THE CIRRHOSIS OF EPIPHANY

AARTI SHARMA



Mihir Gupta

CLASSIC CALL NIGHT. 18:46. FOURTEEN MINUTES UNTIL WE CAPPED. Fourteen minutes. The interns wore pretentious masks of busyness, studiously avoiding surreptitious glances at their wristwatches and smartphones. It was as if everyone could palpate the focused malignancy directed towards my resident's pager, that poor abused chunk of plastic which dutifully adopted the brunt of anticipatory pincer-glances every fourth night. Fourteen

minutes, thirteen, eleven. Too good to be true?

NNNNNNNEEEERRRPPPP NNEEERPPP!!!!

Apparently so.

"Right, Sharon, you know the drill."

My intern (not unpredictably) issued the standard theatrical groan. "Hit me."

"57 year-old female, end-stage HepC cirrhosis with what seems to be an acute flare, here for an expedited liver transplant workup. She's down on the telemetry



Anuja Singh

floor. Should be a quick one, check that GI is also following her. No signs/symptoms of SBP, but might need a therapeutic tap soon.” He paused, looking up at the “med student” dry erase board, which had a list containing common illnesses like choledocholithiasis, COPD, pancreatitis, CHF, CKD. “Actually, Aarti, why don’t you join her? You’ll learn something, albeit probably only logistically, about transplants and such.” *So much for doing laundry tonight.*

We headed down to the patient’s room, navigating nimbly around the labyrinth of BP machines and biohazard cans obscuring the entrance. I can’t say that I was impressed upon my initial assessment of that face. But in retrospect, her appearance was almost inspirational, akin to whatever perversities had engendered Edvard Munch’s haunting immortalizations. Her eyes protruded from exsanguined sockets – jaundiced, granular, muddy.

Pale skin concertinaed starkly against her skull, creating an exquisite series of wrinkles that hugged her mandibles with relentless tenacity. She might have been beautiful before the illness took a chokehold, with her high cheekbones, pastel green eyes, arched nostrils. The distribution of her body weight was also fascinating – everything above her ribcage was painfully cachectic, cadaveric, the embodiment of storybook macabre. Below was another story. Her ankles were literally 10 to 12 times the size of her wasted upper arms, her abdomen distended and tight with presumably ascitic fluid. Her legs resembled Sculpey clay – pressing on her erstwhile tibial plateau revealed pitting edema so deep that our residual finger trails failed to resolve by the time we left the room.

I went back upstairs to read more about her history. Eva¹ had come to us from an outside hospital where she

¹ Names and specific details of this narrative have been changed/modified/invented to maintain confidentiality.

had been receiving care for her end-stage liver disease. She had contracted hepatitis C from a blood transfusion many years ago, which had since slowly progressed to symptomatic cirrhosis. She had no history of alcohol or IV drug use or high-risk sexual behavior. Her MELD score² that day was a 24, basically signifying good candidacy for transplant if the workup was in order and all other parameters were within suitable limits. At that moment, I wasn't especially fascinated with the concept of cirrhosis. Liver failure, OK. The liver metabolizes things. Fantastic. LFTs, straightforward. Alk phos, biliary, also comes from bone, test GGT. Very good.

I took a quick look at her baseline labs. If expletives were justified for anyone I had taken care of, this patient merited the entire series. Especially the British ones. There was a transaminitis. Alkaline phosphatemia. Profound hyponatremia, hypokalemia. Coagulopathy. Elevated BUN and creatinine. Anemia, leukopenia, thrombocytopenia. High HepC viral load. Every abnormal value in the book was in there, taunting me from her chart. *Wow, normal echo and CXR. Those must be mistakes.* Fatigued, we placed a battery of orders and wrote her progress note (containing a problem list the length of a state constitution), finally staggering out of the desolate hospital at 10pm.

At 7:15 the next morning, I walked into Eva's room. Her face was drawn taut in what seemed to be visceral pain, and her breathing was staccato.

"Good morning!" I rubbed her shoulder gently, issuing my standard *I'm-sorry-I-have-to-wake-you-up-but-that's-the-consequence-of-being-in-a-teaching-hospital-you-get-to-see-the-med-student-super-zealously-early-in-the-morning-otherwise-she-has-nothing-to-present-to-the-attending* smile. Her eyes flashed open.

"Hello." She smiled faintly. "I remember you from last night." She struggled to prop herself up.

² MELD score, ie Model for End-Stage Liver Disease, incorporates the patient's levels of serum bilirubin, creatinine, INR (and, on occasion, sodium) to determine survival.

"No, no, don't worry. You look really uncomfortable right now – are you in pain anywhere?"

"Everywhere...stomach, legs." She groaned and leaned back into her pillow. "Groin. *Oh God.*"

Review of systems. "Any chest pain, shortness of breath? Headaches? Pain anywhere else?"

"Little bit with the urination but then they have this tube inside there so maybe that's it."

"The Foley? Yeah, we're supposed to be monitoring your fluid output, and we're also checking your urine to make sure you don't have some sort of infection. Do you think you would like anything stronger for this pain? It doesn't look like what you're getting is doing the job."

"No, I'll manage with these occasional Vicodins that they're giving me. I hate taking pain meds. I just need to relax. As long as I can do that, I'll be able to deal with a large part of the pain."

"Ok, I'll come and check in the afternoon. I'm just going to do a quick physical exam on you, and then you can try to get some rest again." She closed her eyes again as I gently laid my stethoscope over her atrophied sternal border.

"It is the great masquerader: the 'syphilis' of multisystem failure."

Over the next few days, I had long conversations with Eva whenever there was a lull in the afternoon's activities. She was such a lovely person - always greeted me with a smile despite the day's physical exertions. She whispered conspiratorially of how the patient in the adjacent bed lied flagrantly about taking her home medications and how tasty the hospital pudding actually was. She loved her grandson, a golden Italian

boy who always begged her for motorcycle repair money. She had never used alcohol, illicit drugs, or engaged adverse sexual behavior or anything to render her susceptible to cirrhosis; she loved her ‘vanilla’ job as an accountant and confessed sheepishly that she ate too many Twix bars.

Secondary to my time following Eva, I learned about the liver in more clinical detail than I had any other condition during the rotation. So much so that

“Sometimes I found myself in a ‘hit-us-with-your-worst’ mode.”

I might have come to believe what the ancient Egyptians once postulated: that the liver was actually the body’s *eminence grise*, the consummate puppetmaster. The brain, the heart... simply figureheads. (It is in fact documented that early civilizations utilized the phrase “I love you with my whole liver,” secondary to reigning conviction that the organ was more central to existence than other vital structures given its size and comparable blood consumption.)

At face value, the liver’s functions are grossly understated as basic chemical modification – redox, sulfation, acetylation; admittedly it is much easier to appreciate in a state of florid failure. Cirrhosis is a profoundly beautiful illness, viciously logical, a maelstrom unfulfilled in its own iterative destruction. For as the organ shrinks further and further (both literally and figuratively) into functional oblivion, it drags every system conspicuously down with it. Every dyscrasia, dystrophy, every constellation of symptoms, every physical manifestation of displaced quantifiable markers – more often than not can be feasibly attributed to the irreversibly injured organ. It is the

great masquerader, the ‘syphilis’ of multisystem failure.

We know the classic textbook signs/symptoms of cirrhosis, manifestations of portal hypertension and hyperestrinism. We know to ask for a history of hematemesis, intravenous drug use, alcoholism, rectal bleeding. We know to look for pedal edema, asterixis, “spiders,” and fluid waves on physical exam. Percussing out the liver reveals a disconcertingly curtailed span of dullness, leading to grave nods from all observers-in-training. Another day in the preclinical life of HHD and POM.

It is another experience altogether on the wards, as you watch your own patient suffer from the cruel paradoxes imposed by the illness. It is another experience when she is found to have multiple bilateral DVTs upon lower extremity ultrasound but concomitant prominent ecchymosis under the translucent skin of her forearms and a perilously prolonged INR. The cirrhotic liver can no longer create coagulation factors, but is simultaneously incapable of metabolizing anticoagulants; the absurdity leaves patients precariously prone to both bleeding (especially with a history of gastric varices) as well as thrombosis.

It is another experience when your entire team anxiously waits for an ICU consult to arrive after her sodium drops below 105meQ/L, despite a week’s worth of workup for hyponatremia. Despite pumping her chock-full of normal saline while simultaneously diuresing with climbing doses of furosemide to prevent abdominal and pulmonary fluid ‘third-spacing,’ always anticipating a recurrence of that pesky holosystolic flow murmur. It is another experience as you sit in a panic by her bedside, asking her to “hold out [your] hands like [you are] stopping traffic,” scrutinizing them for the slightest sign of vibration or tremor indicating the feared ‘liver flap.’

It is another experience when you enter her room late one afternoon, pleased to see her finally sitting up in a chair...only to observe that she is breathless, dyspneic, asking to lie down again. “Does that help you breathe more comfortably? Are you anxious?” “Yeah, whenever

I sit up I can't breathe as well." *Odd. It's like anti-orthopnea.* I quickly auscultate her lungs and heart. Clear. Another bizarre manifestation of end-stage liver failure, I later find – a condition termed (very creatively) hepatopulmonary syndrome. One of the symptoms is 'platypnea-orthodeoxia,' namely, dyspnea upon transition to an upright position from recumbency.

It is another experience as you watch her BUN and creatinine creep insidiously upward, dejectedly adding hepatorenal syndrome to her litany of problems, wondering sardonically which one was next on the list. Hepatopulmonary, hepatorenal, hepatic osteodystrophy...sometimes I found myself in a 'hit-us-with-your-worst' mode. Cirrhotic cardiomyopathy? BRING. IT. At least another hatch mark on her progress notes would improve her chances of receiving a new liver.

The workup for her transplant ambled along, more consult teams becoming progressively involved. Gastroenterology, hematology, nephrology, radiology... the smartpage list grew longer. *All of this, completely iatrogenic from a contaminated blood transfusion.* We are taught to regard all patients as equally deserving of treatment modalities despite the particular etiologies

of their illnesses. But I couldn't seem to reconcile Eva's tragedy with the causality of other cirrhosis cases – the innocuity of blood for 'healing' contrasted with the transgressions of methadone addicts and refractory alcoholics. I chastised myself for my simplistic thinking – after all, choice is never in the palm of a single entity, and merit was no contingency for a chance at life. I wish I did. I wish I were noble enough to defenestrate my sense of morality and regard all of them as congruent. Was I a worse person for this? For loving her perhaps more than other patients with the same problem? I still don't know.

Because I think most of us commence medical school with relative measures of naïveté, whether they be driving idealism, optimistic curiosity, or parametrical ignorance. Unfortunately, as we inch further along the massive journey towards becoming physicians, these naïvetés are never comprehensively eliminated. They are titrated, qualified, sometimes refined, sometimes mangled. This is what I have found to be most disillusioning, this absence of gross realization. I don't know what happened to Eva. I rotated to another site before she received news about a potential transplant, or improvement, or progress. But of all the cases I have seen, I felt that this was the one from which I should have at least gleaned some leap of transformation. I saw the most humanity there, but also the most calamity and unfulfillment – was that not enough of a plea for at least a microepiphany?

No. In retrospect, it is better that we don't sign off on a clinical circumstance with an immediately different perspective. Because inherent to those shifts is a negation of true comprehension. We cannot possibly have understood the magnitude of a patient experience if we think we have departed transformed– and yes, that is an innately discouraging thought. But it also places a reassuring enclosure on our ontologies, because the most useful, and by the same token most pernicious, modifications to our philosophical underpinnings happen through complete ignorance of their occurrence. &



TAKASHI NAGAI

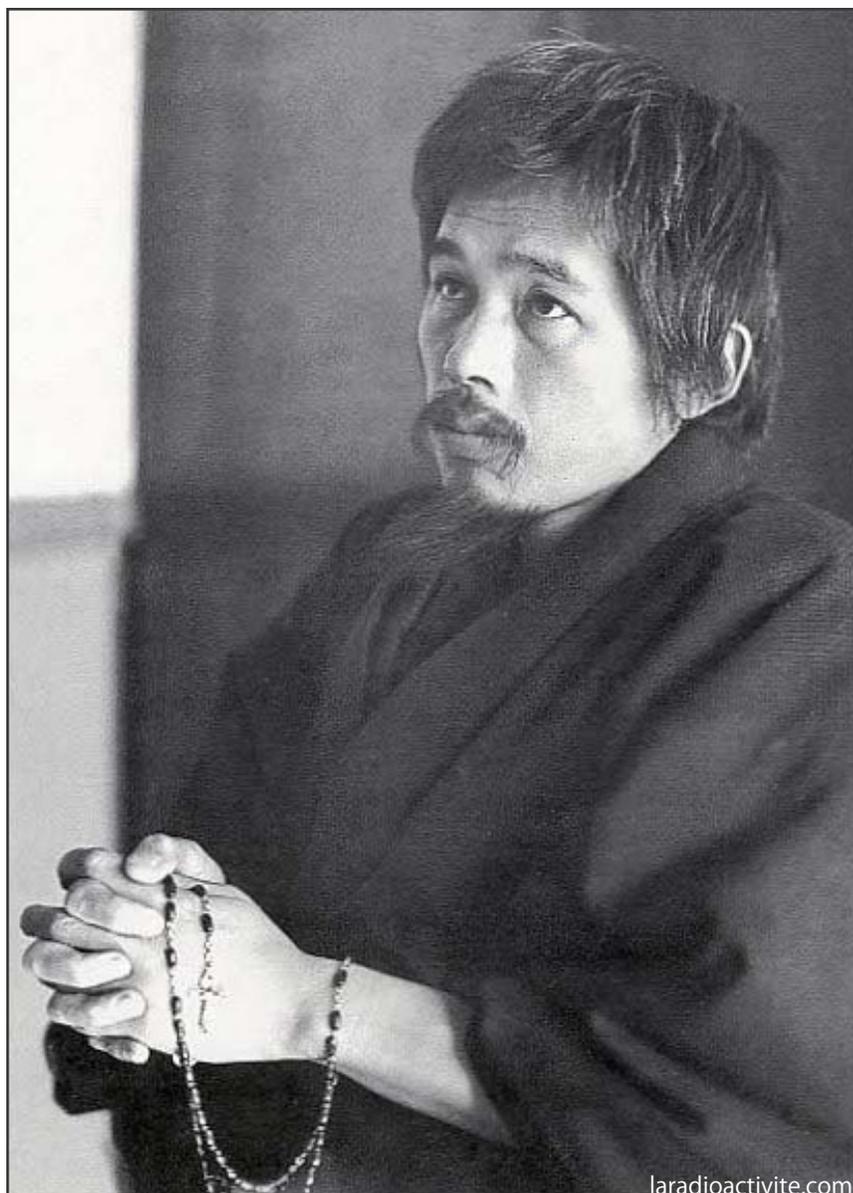
THE BIRTH OF JAPANESE RADIOLOGY AND THE AFTERMATH OF THE ATOMIC BOMB: PART I

MATTHEW THOMPSON

TAKASHI NAGAI WAS BORN IN 1908 INTO AN ANCIENT SAMURAI FAMILY AT A TIME WHEN JAPAN WAS RAPIDLY MODERNIZING.

Traditional herbal medicine was giving way to Western medical science, mediated primarily through German texts imported from Europe. The new science did not fit so well with conventional Japanese customs, but the Meiji emperors, impressed by the scientific advances of the West, sought to bring Japan to a level of medical competence that matched or exceeded that of the Western powers. After training in Germany, doctors came back to Japan eager to educate the next generation of physician scientists in the newly founded medical schools. Caught up in this early excitement about medicine, Nagai's father, Noboru Nagai, became a western-trained doctor. Takashi, his only son, followed in his father's footsteps and enrolled at Nagasaki Medical College, not far from his native home in Shimane Prefecture.

Nagai loved science and eagerly studied his medical textbooks, which were written primarily in German. He planned to join his father in his medical clinic in rural Japan, and soon became one of the top students of his class. The practice of medicine in Japan in the early twentieth-century did not differ much from how it was practiced in Europe and America. The medical practitioner was adept at investigating the signs and symptoms of disease, and making inferences about the differential based upon the diagnostic tools in his arsenal—mainly his hands, his eyes, his smell, and knowledge of the natural course of the disease process as it was exhaustively described in anatomy and pathology texts. But the most important tool available to the medical practitioner in Japan was aptly described by Sir William Osler: “Listen to your patient, he is telling you the diagnosis.” A thorough history and physical exam, followed by an extensive process of inferential reasoning, discussion with other practitioners, and consultation of relevant medical texts, led to



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the diagnosis. The EKG and the X-ray were new diagnostic tools whose capabilities were as yet untapped: the EKG had just been invented in 1903, but was in limited use. Roentgen in 1895 discovered the X-ray, but medical departments in Japan were unsure as to how it would fit into the current practice of medicine.

Nagai was interested in internal medicine, but his training required that he take a radiology course with Dr. Suetsugu, the only radiologist appointed to the medical faculty at Nagasaki Medical College. Dr. Suetsugu had studied the new art of radiology in Vienna, and was excited to bring this novel science to Japan. His colleagues, however, did not think radiology had much of a future and gave him a few

shabby rooms in the hospital with which to do his research. The medical students soon learned from their professors that radiology was an inept and imperfect science, and that the tried and true tools of medical diagnosis, especially the stethoscope, were more useful than images of a patient's bones and lungs. Nagai had no interest in radiology, and even performed badly on his radiologic examinations. Nevertheless, he was well-liked by the students and faculty, and was elected to give the address at his graduation. Days before his speech, Nagai contracted a severe meningitis that left him partially deaf. Before his illness, he had been offered a faculty position in internal medicine at the Medical College, but now with his hearing impaired, the administration could no longer honor their agreement. They instead offered him a faculty position to assist Dr. Suetsugu with radiologic research. Nagai remembered Dr. Suetsugu from his medical studies, and thought him a bit odd. He was not excited about working with him in radiology, but reluctantly agreed, reasoning that at least he would be able to apply his skills as a doctor and advance medical research, even if it was

in a field as primitive as radiology. When he recovered from his illness and graduated from medical school, he joined Dr. Suetsugu somewhat halfheartedly in his medical offices in the hospital. Thus began his career as a radiologist. Little did he know that through this unexpected path, he would gain the knowledge of atomic energy that later guided his service to the Nagasaki population following the aftermath of the atomic bomb in 1945.

The eccentric Dr. Suetsugu was excited about the prospects of radiology but honest about the effects of radiation exposure. Nagai related conversations with the unconventional doctor in his diary: "See

this photograph. It's of Dr. Holzkecht of Vienna. He taught me while I was overseas. He was one of the great pioneers and literally gave his life for radiology. He lost one finger from radiation exposure and then another. Finally, they had to amputate his right arm. Here is a copy of notes he made on better ways of protecting doctors and technicians from radiation. Oh yes, it's hard to read. After the amputation, he had to write left-handed." Despite the obvious risks of radiation to his health, Dr. Suetsugu was committed to advancing the nascent field. "X-ray technology is the wave of the future," he told Nagai, "and Japan has to face the fact that in radiology, we are nearly forty years behind Europe. I can promise you little more than hard work and an abysmal lack of appreciation from hospital staff and students. Add to that serious risks to your health. But you'll be a Japanese pioneer in a vital medical field." Dr. Suetsugu's enthusiasm proved to be contagious, and Nagai likewise soon devoted himself entirely to the new science of radiology.

Nagai's professional career was taking off. He published many scientific manuscripts on the nature of radiation and the possibilities of atomic energy, and became a specialist in the theories of atomic structure and nuclear fission. But he was disturbed by what was happening to Japan during his years in medical school and early academic career. The Meiji Restoration in 1868 resulted in the end of the Tokugawa shogunate and the beginning of imperial rule under the Emperor of Japan. "Meiji" means "enlightened rule" and refers to the goal of combining western military and scientific advances with the traditional values of Japanese society. Nagai keenly felt the tension involved in combining these two seemingly disparate cultures and philosophies.

Many of his teachers, enamored of western science and philosophy, began to belittle the ancient religious stories of the Shinto and Buddhist religions of Japan, and seemed to advocate a form of scientific reductionism that reduced the essence of man to his

material properties. Before beginning his anatomy studies, Nagai related that one of his teachers pointed to a cadaver and said, "Gentlemen, this is man, the object of our studies. A body with physical properties. Things you can see, weigh, measure. And this is all man is." This portrayal of humanity had not in itself bothered Nagai when he had begun his medical studies. But he gradu-

"I now know I have come to China not to defeat anybody, not to win a war. I have come to help the wounded, Chinese as much as Japanese, civilians as much as combatants."

ally started to observe the fruit of this philosophy in the way his professors treated other patients—their cold manner, their lack of sympathy, and their disregard for the patient's moral values. As a result, he began to doubt that science could explain everything about man—his thoughts, his emotions, his hopes and dreams. He had read many brilliant scientific hypotheses about the origin of human emotions, but he knew from his reading that many of these had been abandoned and replaced by new hypotheses that were just as problematic as their predecessors.

Nagai was restless and later said of this time: "For five years I was deeply troubled by a little voice I heard, waking and sleeping: 'What is the meaning of our lives?' I read the life stories of all kinds of people in my quest for the meaning of mine, but the more I read, the more complex the question became. Of course it did; I was studying others' lives rather than my own. My life is not theirs. The life of each one of us is different, and its meaning is unique...I began feverishly reading philosophers. The more I read them, the more complex the whole question of life's meaning became...I doggedly tried to follow

the demoralizing reasoning of a number of moderns who ended up by saying that life is incomprehensible. Yet the more I thought about it by myself, the more I began to see that birth and life and death can be and should be straightforward.” One thinker did appeal to Nagai—the contemporary French scientist and philosopher Blaise Pascal. He read and reread Pascal’s *Pensées*, a collection of “thoughts” about human nature, scientific progress, and religion. Nagai argued and debated with Pascal, but respected him as a scientist, and was challenged by his claim that science could not comprehend the whole of human nature.

Nagai continued his reading and thinking while working long hours with Dr. Suetsugu in the hospital. He was deeply engaged in a project on the effects of x-rays on

rabbits, when he received a telegram announcing that he was to report for army duty. Since 1931, the Japanese army had been involved at war with China over territorial claims in Manchuria, a northern Chinese province. Nagai believed firmly in the Japanese claims to territorial sovereignty in China, but regretted leaving his experiments unfinished. In Manchuria, he witnessed firsthand the atrocities committed by the Japanese against Chinese civilians, and realized that Japanese casualties were far greater than the government-controlled media was willing to admit. As a doctor, he was charged with taking care of the wounded, and he relates in his diary that he worked around the clock to amputate limbs from Japanese soldiers who had been victims of modern scientific warfare. Until his tour of duty in China, Nagai



Johana Oviedo



had believed that scientific progress would usher in a new era of prosperity and peace for all humanity. But he could see that scientific progress had also made it possible to kill thousands of people with great accuracy and precision. He also became skeptical of the Japanese government and military, which had used propaganda to convince the Japanese people that it was their “sacred duty” to occupy Manchuria.

After his tour of duty, Nagai returned from Japan determined to marry. During medical school and his first few years of radiology training, he had rented a room from the Moriyamas, an older Catholic couple who lived not far from Nagasaki University. Very few Catholics lived in Japan at this time, but a sizable number in Nagasaki still retained the faith that had been introduced to them by Frances Xavier, a Spanish missionary to Japan in the 16th century. The new religion had at first won many converts under Xavier’s influence, even among the ruling feudal barons. But later it had been ruthlessly suppressed and persecuted. The Japanese Catholics went underground but somehow held to their

traditions, despite periodic travails. Since the Meiji Restoration they had been allowed to practice their faith, but were viewed by many Japanese with suspicion for having accepted a western religion. Nagai became interested in this religious minority through the writings of Blaise Pascal and the Catholic family with whom he was staying. He also desired to marry the Moriyama’s daughter, Midori. When he returned from China he asked for her hand, and to his great relief Midori accepted. Shortly thereafter he accepted instruction in the Catholic faith from a Japanese priest.

Many aspects of the Catholic religion seemed at first strange to Dr. Nagai, but through reading and study, he came to wholeheartedly embrace its teachings. He was especially drawn to the Society of St. Vincent de Paul, which helped the poor with clothing, food, and shelter. Nagai discovered that his medical skills were highly valuable to the organization, and he convinced other doctors and nurses at Nagasaki Medical College to join him on day trips to the surrounding villages to care for the medical needs of the poor. Meanwhile his career as a radiologist was gathering momentum: he had written many scientific articles and chapters in textbooks, and grew in demand as a lecturer. Radiology was becoming a vital and respected discipline in medicine, just as his mentor Dr. Suetsugu had predicted. But once again his busy schedule of radiology research and charitable work came to a screeching halt when he received another telegram: he was being called up for duty to serve once again with the Japanese army in China as their chief medical officer.

This time the fighting was much worse, and the casualties kept the young doctor busy with amputations and wound dressings. He did not believe the propaganda about the Chinese: “You look at their faces and see they are good people who think and feel just as we do. We have been told that killing members of an enemy group is not murder, but that this is just war waged to preserve justice and peace. Yes? Well, where is justice and peace? I am finding it harder to see them.” Nagai did not see himself simply as a Japanese doctor caring for Japanese wounded

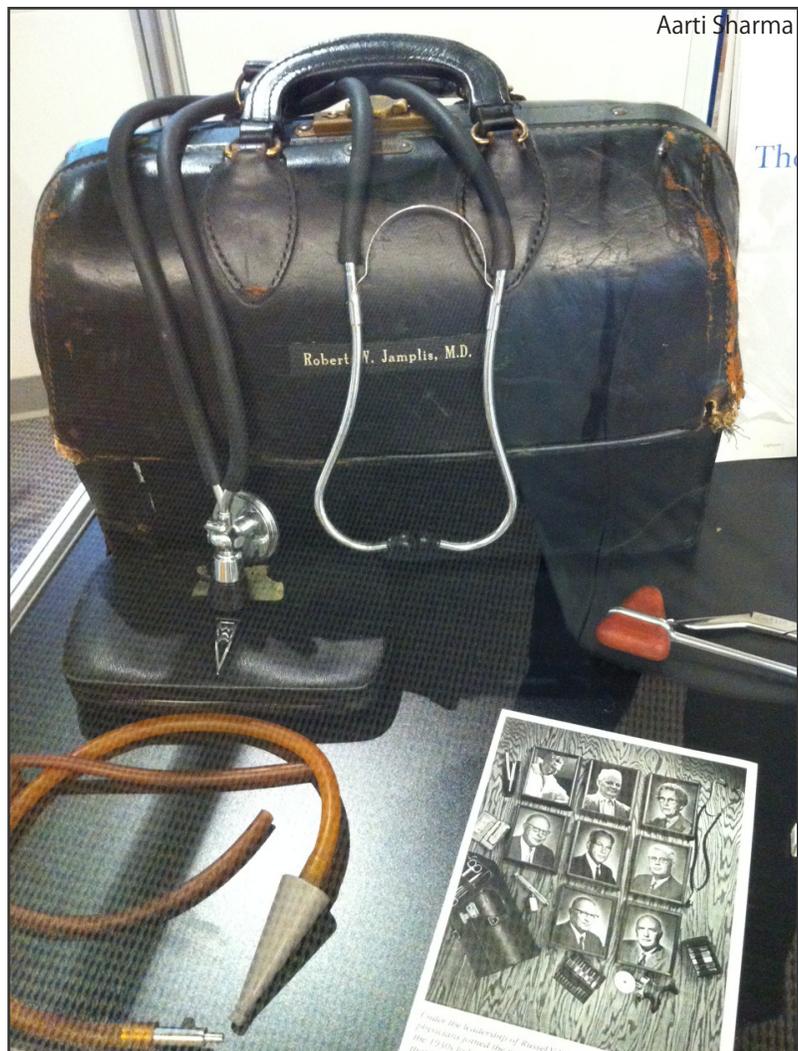
but as called to care for the Chinese as well: “I now know I have come to China not to defeat anybody, not to win a war. I have come to help the wounded, Chinese as much as Japanese, civilians as much as combatants.” Nagai set up a medical group to care for wounded civilians and children, and sent letters back to his friends in the Society of St. Vincent de Paul in Japan. They responded generously with gifts of food, clothing, and children’s toys. Nagai soon got in touch with other chapters of Chinese Vincentians, and was able to distribute parcels through them as well. He set up a first-aid post to treat wounded Chinese civilians, who were initially afraid of the Japanese doctor in military uniform. They soon came to trust his kind face, however, as they realized how much he genuinely cared about them.

When Nagai returned to Japan in 1940, Nagasaki Medical College promoted him to Professor of Radiology. Tuberculosis was especially rampant in Japan at that time, and he initiated a massive chest X-ray campaign to detect TB in its early stages. He continued his research and lectures and became quite famous for his discoveries. But he was adamantly opposed to the war in China, and regretted Japan’s declaration of war upon America with the bombing of Pearl Harbor in 1941. He wrote in his journal that he had a premonition that the buildings of Nagasaki would one day be reduced to rubble as a result of the war. The day after Japan bombed Pearl Harbor, December 8, 1941, Nagai told his class: “Look, it’s a war with the American colossus and a very powerful Britain. Most of us will have close relatives among the casualties. You have no idea what war in China was like. War against America and Britain will be ten times worse... Japan will be cut off from the international flow of

medical research. We will just have to study and research all the harder.”

Within a mere four years, war with America would devastate the Japanese homeland. Nagai would be one of the few survivors of an atomic blast that instantly killed thousands of his friends and family—including his own beloved wife. As one of Japan’s foremost experts on radiation and atomic energy, Nagai would actively serve the medical needs of his people, and use his expertise as a radiologist to help conduct groundbreaking studies on the effects of radiation poisoning. Above all, his writings about the need for the Japanese to forgive the Americans and work together to build a new Japan would make him a national hero. &

Part II to follow in the Spring 2013 issue of H&P.



Aarti Sharma

A DAY IN THE LIFE

MEDICINE, GIL CHU STYLE

MICHELLE-LINH NGUYEN

MOST STANFORD MEDICAL STUDENTS BEST KNOW DR. GILBERT “GIL” CHU AS THE DIRECTOR OF MOLECULAR FOUNDATIONS, a class advertised to bring first year medical students up to speed in molecular biology. As a social science major in college and having taken two years off from school, I hunkered down as the social whirl of Mini-Quarter began and prepared myself to be severely humbled by the coursework.



Aarti Sharma

I soon understood why Dr. Chu is such a well-known pre-clinical educator: he has an unreserved and entertaining lecturing style (often punctuating talks with a distinct and somewhat sinister chuckle); he spent all of Mini-Quarter trying to memorize MS1 names with varying success; and most strikingly, he spent a borderline-ridiculous amount of time combating student confusion over concepts like V(D)J recombination and unequal crossover. Crowds of first-year medical students radiating around Dr. Chu and his portable white board in the LKSC Cafe became a close-to-daily sight this past September.

I have come to realize that this constant availability is part of Dr. Chu's nature and not solely related to Molecular Foundations. My initial shadowing request was greeted with a quick reply: "Love to have you come. ... Would you like to come this coming Wednesday?"

Molecular Foundations did push me to "catch up" on my molecular biology, but my true takeaway was learning from Dr. Chu's realistic, bittersweet perspective on oncology.

"I don't cure people," he would pointedly state during lecture. "I just prolong life." I appreciate the humility that rests in a statement like this, especially when it comes from a well-published, well-respected physician-scientist who has been a Stanford faculty member since 1987. Dr. Chu may be most famous in academic circles for his work investigating DNA repair mechanisms and helping establish significance analysis of microarrays, but his role as a medical oncologist specializing in gastrointestinal and colorectal cancers means he has also worked with, guided, treated, and survived countless patients.

Through shadowing him I hoped to learn from the clinical side of Dr. Chu as well as understand more about oncology, a field I had never considered before taking Molecular Foundations.

...

The first time I shadowed Dr. Chu I met him in Berg Hall's lobby on the 2nd floor of LKSC at 9 AM after he had attended that morning's medical grand rounds. He was predictably surrounded by a group of my classmates, neon yellow backpack strapped casually over one

shoulder, discussing that morning's speaker. We left at around 9:15 after I watched him simultaneously inhale a bagel and encourage my classmates to critically question the grand rounds speaker.

On this occasion — my second time shadowing — I knocked on his office door at 8:45 AM to find him, computer mouse in hand, face lit by monitor glow, editing a manuscript. His current challenge was inserting a tiny line into a figure. He explained his desire to make it completely clear to a reader that they had spliced a gel lane into the figure. "It's really important to make sure that they know we did that."

I admit, this is the type of esoteric activity I often try to avoid, but in that setting, as we were about to begin a long day of clinical appointments, I sat and basked in the contrast it provided from the less controlled, and arguably less peaceful, world of interpersonal interaction and clinical care.

...

My second day shadowing felt like a setup. Each of the six patients that came in somehow reinforced aspects of the MS1 curriculum that I, at some point or another, have complained about having to learn. It turns out that alongside all of the complaining, we've learned a lot. For example, I can now easily identify the major visceral organs on an abdominal CT scan. It's the little things.

As I started writing, I realized that I couldn't adequately convey my experience without risking patient confidentiality. The details are what would allow you all, as readers, to connect with the individuals that came into the oncology clinic that day. Unfortunately, those same details are also what make people unique and identifiable. I didn't feel like I could do the six patients we saw justice if I had to trim their stories into descriptors like "72-year-old male came in for follow-up on metastatic colon cancer."

As I withdrew from this idea and re-collected my thoughts, I realized that all of us are hoping to become "good doctors," or at least avoid becoming terrible ones (just kidding...kind of). I decided that collect-



ing my thoughts on the practice of medicine--in this case as handled by Dr. Chu and his support staff would allow me to continue on my quest to define “good medicine” in its many forms. I’ve compiled my observations below:

Good medicine is straightforward and honest.

“You are a very, very sick man. And you know that.” – Dr. Chu to a man who he had diagnosed just minutes earlier with an advanced pancreatic cancer that was probably invading his duodenum and causing jaundice and massive abdominal bleeding.

Good medicine is knowing how to share information so your patient can understand. There is little more disturbing than not knowing what is going on inside

your own body. Hopefully we’ve all experienced this as patients ourselves.

“This is the stomach... and this is the small intestines...” Dr. Chu sat in front of his patient and his patient’s wife. They formed an oblong triangle. Dr. Chu was bent over a poster-size piece of tissue paper he had torn off from the roll that usually covers the bench patients sit on, sketching the digestive tract, pancreas, liver, and biliary ducts. The sketch was helping him explain the pathophysiology behind the jaundice and gastrointestinal bleeding that was setting an entirely new and unfamiliar and unwelcome course for both of their lives. After he finished explaining, the wife folded up the drawing and tucked it into her purse.

Good medicine is teamwork and cooperation.

Though patients were technically in clinic to be seen by Dr. Gilbert Chu, it became increasingly clear to me that those who were coming in for follow-ups were there to see Dr. Chu and Margreet, the nurse practitioner who works alongside the MDs in clinic, as a package. Every recommendation made that day was a negotiation between them, something I quickly appreciated as the day became more and more hectic and details started to blur together in my mind. They worked to fill in gaps in each other’s understanding and caught one another’s mistakes. Margreet acted as timekeeper, keeping Dr. Chu on schedule and the flow of a busy clinic day moving. “She’s mean!” he declared with a flash of his mischievous smile after Margreet pointed out that he was asking too many context-determining questions that were leading to clinically irrelevant conversations, pushing them later into their schedule.

By 6:30 PM, Dr. Chu, Margreet, and I were the only three people left in the workroom. When he and I left at 6:45 PM, Margreet was still sitting at her computer, medical records radiating from her work station, typing up notes. “Thank you, Margreet. You were really great today,” he said as we prepared to leave the room.

Good medicine is often exhausting and all-consuming, but good medicine is also keeping in touch with life outside of the occupation.

“What do you do to unwind?” I asked Dr. Chu as we power-walked through the hospital towards radiology to confirm a case of pancreatic cancer that an outside radiologist had failed to report. He had been rushing from one thing to another since we arrived in the clinic at 9 AM. It was now 4:45 PM and both of us had eaten only bars for lunch. I was running on adrenaline. I had no idea what was keeping him going.

The question seemed to catch him off-guard, and I could almost hear the cranks shifting his mind from clinical work to personal life. Dr. Chu swims to relax. And watches *The Big Bang Theory*. I couldn't help but laugh at that. He didn't try to conceal his pride when he told me that his wife was part of the first class of women to attend Cal Tech, the university at which the show is set.

Good medicine is practicality.

“I'm not being nosy. The purpose behind these questions... I think it's important to get to know you because it affects what treatment I recommend.” – Dr. Chu explained to an 88-year-old patient with newly diagnosed pancreatic cancer after quick fire questioning his son and him about their living situation and social lives.

As we walked down the hallway after exiting the patient's room, Dr. Chu explained to me that it's incredibly important to understand the context behind the disease. Who would be available to help the patient after he could no longer live independently? What does the patient value? What is important to the patient's happiness? In all of the interactions I witnessed, his advice was consistently centered around the latter two questions.

Perhaps this is the nature of medical oncology, a field used to fighting hard in the battles but rarely winning the war. When time is limited, what is important? Some may label “getting to know” a patient a soft skill, but it serves more than a “soft” purpose. It can be incredibly practical in certain fields.

...

Shadowing Dr. Chu was really just what I needed as I slogged my way through fall quarter. As clinically focused as our coursework is designed to be, I have found it incredibly difficult to pull all of our coursework into a cohesive and relevant body of knowledge. Shadowing him allowed me to see how everything we are learning interacts to form the basis of knowledge we need to practice medicine. So much for complaining. &



Anuja Singh



Tania Reza

THE BEST CARE POSSIBLE

Dr. Ira Byock is a Professor at the Geisel School of Medicine at Dartmouth, and the Director of Palliative Medicine at Dartmouth-Hitchcock Medical Center. Dr. Byock has garnered numerous awards for his seminal work in the field of palliative care and advocacy on behalf of patients since the late 1970s. He is the author of several acclaimed books including *Dying Well* (1997) and *The Four Things That Matter Most* (2004). He was chosen to be the keynote speaker at Stanford's 22nd annual Jonathan J King Lecture, held in October of 2012. Dr. Byock joins *H&P* to discuss his most recent book, *The Best Care Possible* (2012), in which he chronicles several gripping stories of patients and families during some of the most difficult moments in their lives. The clinical narratives are interwoven with broader discussions of health policy, for which Politico recognized the work as a key issue book during the Presidential election. *The Best Care Possible* takes on the monumental task of transforming our national conversation about death and dying, with lessons for policymakers, the public, physicians, and medical students.

MIHIR GUPTA

An interview
with
Dr. Ira Byock

Mihir Gupta: What drew you to palliative care?

Dr. Ira Byock: I was drawn to the field really just through direct patient care. I saw significant unmet needs among people with advanced illness and their families. Pain and other symptoms weren't being well-managed or assessed. But beyond that, the profoundly personal aspects of advanced illness and dying were being ignored, as if they weren't within the purview of medicine. That felt wrong. Who else should tend to the intensely personal aspects of illness and dying than physicians? So I was drawn to it first and foremost by need.

What kept me in it was observing that once basic medical needs are met – pain and bowels are managed, skin and wounds are attended to – the deeper aspects of the personal experience of dying come to the fore. When uncontrolled symptoms are not allowed to conscript people's energy, they turn to the tasks of life's completion: not only fiscal and legal affairs, but relationships, making sure that there's nothing important left undone and unsaid. What I was seeing back in 1978 was that there was, concurrent with the pain, sadness and the poignancy of dying, a remarkable richness to life. People told me in so many ways that this was an extraordinarily valuable time in their lives. At the time, I wasn't prepared to hear that. I didn't know what to do about that. Throughout my career I've wanted to know more about the potential for valued human experience – how do you make it happen more often? How do you understand it?

MG: The book has lessons for clinicians, students, policymakers, the public, and patients. Was there a specific audience for whom you were writing?

IB: My attitude is to write in a way that's accessible to a variety of audiences. If something is said well, it ought to be accessible to people who don't know medical jargon. Within medical circles, often the articles by Atul Gawande and Jerome Groopman that are in *The New Yorker*, or by Abraham Verghese in *The New York Times*, get cir-

culated with at least as much impact as articles in *JAMA* or *The New England Journal of Medicine*. So I had very ambitious aspirations for the audience for this book, including medical students and residents in training, but extending to the readers of the best periodicals.

MG: You write that, “we are the benefactors and victims of scientific success.” What does it mean to be ‘victims’ of scientific success?

IB: I feel so fortunate to live in a time when we can cure the reasons people throughout history commonly died early. Appendicitis, heart attacks, pulmonary edema, and even serious pneumonias are quite treatable, and people live basically normal lives thereafter. But in fact, we invented chronic disease in the latter part of the 20th century. While people are living longer and for the most part living well, we are also likely to be sicker before we die than any of our predecessors in previous centuries. We live to accumulate more than one chronic illness: diabetes, congestive heart failure, prostate cancer, macular degeneration, and renal insufficiency are all common – so we're carrying more of a burden of disease as we approach the end of life.

MG: You emphasize that “communication is not ancillary or a chore in palliative care; rather, it is the core therapeutic medium of our discipline.” Given the time constraints in medical practice, how can physicians make communication a therapeutic medium instead of something that takes time away from patient care?

IB: I want to say to physicians of all specialties: communication is integral to what you do. In fact, you're communicating all the time with patients – not only the things you bring up, but the things you don't bring up. *Not* talking about people's fears, what concerns them in the future, or what their values are communicates that the relationship is all about the physiology and pharmacology, which impoverishes both patient and physician

in the clinical relationship. Communication is not optional – it is essential. We make the mistake of thinking that it takes too much time, but it would actually be time-saving to listen to the patient, understand what their perspective is, and really attend to their needs. It ends up translating into less time in the hospital and sometimes in an ICU. The economics have been studied, and it's pretty clear that having the whole conversation and attending to patients as whole people is highly efficient in the long run. Said in another way: the investment in communication pays dividends, and there is a high return on investment, not only on the quality of care but also to the total health resources invested in a patient.

MG: You describe how treatment decisions can provoke anger among patients or families that is directed squarely at the physician. How do you balance being sensitive to those feelings while not letting them sway your clinical judgment?

IB: I want to be a combination of honest, forthright and gentle when communicating and delivering bad news to patients and families. I do have to be honest, and have humility and deep respect in explaining our limitations and abilities to keep people alive. For instance, in discussing the high burden of a decision to have mechanical ventilation in the face of far-advanced lung cancer, occasionally any physician will draw intense anger. It's part of the job. I don't know anybody who relishes it, because it feels awful. And yet it's not about me. That truly is anger directed at me by people caught in an absolutely lousy situation: the unacceptable, emotional fact that someone they love is facing the end of life. That kind of rage, to a certain extent, may be functional for the person in that moment. And I have to accept it. I have to at least let it blow past me, with real humility, so I'm being as gentle as I can, but without retreat from or denial of the information.

MG: How does medical school need to change to better train students in the issues surrounding end-of-life care?

"I think we misunderstand the notion of professional boundaries; they have nothing to do with emotional detachment or distance from patients."

IB: A palliative care rotation and some didactics on the components of end-of-life care need to be required. But more importantly, there need to be standardized patients and videotaping of conversations with feedback, and a simulation center where students learn to meet with patients as you would learn to tie knots in surgery – learning the *feel* of listening, being able to imagine the patient's voice and vision, and communicating in ways that are culturally consonant. I can't do it in one lecture, but it can be taught.

Physicians can be taught skills which enable them to actually derive a sense of confidence and satisfaction from communication with patients. So, what can be done? To be simplistic, I want curricular parity with the beginning of life. We have two-hundred hours or so devoted to obstetrics and neonatology. Give me one-hundred hours to invest in rotations, hospice, palliative care, simulation labs, teaching communication, giving of bad news, having the CPR conversation, having the advanced directives conversation, having the conversation about helping people to feel complete, and supporting families in their grief. We can teach that stuff.

MG: How is the landscape of palliative care changing?

IB: The future of the field of palliative care is very much being written. Palliative care is really expanding as more hospitals are recognizing the need for and developing palliative care teams. Health systems are de-

veloping palliative care services in both inpatient and outpatient lines of clinical service, specialty services with dialysis and transplant teams, specialty pediatrics, and on and on. I think that is clearly going to continue, and the trends towards shared financial risk between insurers, Medicare, hospitals, and doctors will make it ever more attractive to have those conversations. The meticulous coordination of care – including the prevention of crises, early crisis management, ongoing early care planning – all makes incredible sense from a ‘value equation’: improving quality and diminishing costs.

What is also being written is what will be the breadth of services qualifying for palliative care. The Joint Commission is starting to promulgate standards, but in many places the palliative care program consists of a part-time nurse with social work and chaplaincy hours borrowed from other departments. Palliative care looks more like a hospice team; it’s interdisciplinary, comprehensive, and has specialty positions that are specially trained. I hope that the standards will cover the full breadth of palliative care. That’s what we’re trying to model at Dartmouth-Hitchcock Medical Center, and I know it’s being modeled at Stanford as well. Part of the future of this field is showing the measurable outcomes of that level of service.

MG: Any words of advice for medical students (aside from, of course, reading your book)?

IB: (*Laughs*) I strongly feel that the practice of medicine remains the highest calling, deepest privilege and most satisfying career that one could have. I want medical students to bring their whole selves to the clinical encounter to really enrich their practice. I think we misunderstand the notion of professional

boundaries; they have nothing to do with emotional detachment or distance from patients. In the book I talk about the three main boundaries: no killing, no sex (even when the patient initiates it), and no personal gain beyond legitimate charges for professional services. But that doesn’t mean you can’t be emotionally close to patients, that you can’t tear up when something is sad, laugh with patients, ‘kibitz’ with patients, or enter friendships with patients as long as you don’t violate those three boundaries. That’s what I hope comes through. This is an incredible privilege, the work that we do. We shouldn’t impoverish it and make it a parched exercise. Doctoring is a sentient, soulful and often joyful exercise. &



LEADERS IN MEDICINE

LLOYD MINOR, M.D.

Dean, Stanford School of Medicine

ANGELA GUERRERO
AFAAF SHAKIR
SWATI YANAMADALA



Image courtesy of the Dean's Office

Dr. Lloyd B. Minor, former provost of The Johns Hopkins University in Baltimore, recently succeeded Dr. Philip Pizzo as the Dean of the Stanford University School of Medicine. Dr. Minor holds a lauded background in Otolaryngology-Head and Neck Surgery and served as the chair of the department at Johns Hopkins. He has spearheaded myriad research and teaching initiatives, and is published extensively in the area of balance and inner-ear disorders. In addition, he is well-recognized in the medical community for having discovered superior canal dehiscence syndrome. He received his bachelor's and medical degrees from Brown University, performed a clinical fellowship at The Otology Group and The EAR Foundation in Nashville, Tennessee, and a research fellowship at the University of Chicago.

Afaaf Shakir: What led you to Stanford and how did you choose to make the big move from the East Coast to the West Coast?

Dean Minor: Stanford stands out as having come up with a system and a plan that has made it a truly outstanding research university. Stanford balances the strengths of its individual schools – each of which is extraordinarily strong – and nurtures the development of interconnections among its schools and programs in ways that make the university

as a whole stronger than the sum of its parts. Although that's easy to state, implementing it as Stanford has done is quite an organizational feat. I came to respect that leadership and organization enormously, and when I was asked to move to this position and had the opportunity to meet with the search committee, provost, and other leaders at Stanford, it only reinforced my respect for the people and organization of the university. It was a thus a very easy decision when I was offered this wonderful opportunity to lead the School of Medicine. It felt very natural, and I'm very honored and humbled to be here with so many talented people.

Swati Yanamadala: What made you interested in moving from being a clinician-researcher to also taking on an administrative role?

Dean Minor: At Hopkins in 1993, I started out with less than 300 square feet of lab space, but had a vision and drive to build a program that incorporated clinical practice, clinical research, and basic research. It rapidly became clear that you can't do this all yourself, and I was fortunate to work with outstanding colleagues and build an active lab and clinical group. When the department chair position opened, I was a member of the faculty and a professor, and I loved the department very much. Yet I saw that it had needs. We just weren't quite where we collectively wanted to be, and I felt like I had a vision for how we might be able to come together and be even stronger. After a search, the Dean asked me to chair the department, a role that I loved. What is so meaningful in leading high-performing organizations like academic medical centers and research universities is asking the right questions, convening the right groups to consider those questions, participating in the dialogue, looking for solutions, converging around answers and solutions, and making sure that we remain focused on getting to the endpoint. After 6 years as department chair, I was asked to look at the Provost job at Hopkins. It felt like it was a good time in which I could move into that new role and the department wouldn't have missed a heartbeat. Ultimately, I think that those of us who are leaders of high-performing organizations manifest success by how the organization does

long-term, and what we've contributed towards making it better. Your job is to make it better during the time that you're in the role, and I think that's a good attitude for leadership.

"It's that embracing of ideas that I think is uniquely Stanford, and one of the things that makes it such an exciting place to be."

Angela Guerrero: How do you see Stanford as compared to East Coast medical schools? Do you discern any major similarities or striking differences?

DM: It is an enormous advantage at Stanford that we are all on one campus. There are very few other medical schools and research universities who have that sort of arrangement, and it's a real blessing. I also find it refreshing that Stanford embraces ideas: people here convene around ideas, discuss ideas, really relish the opportunity to participate in shaping ideas. During the final stages of my recruitment to Stanford, Dean Richard Saller [Dean of Humanities and Sciences] hosted a dinner at his home for my wife and me and for the other deans and their spouses. We spent several hours sitting around his dining table talking about pretty much every topic you could imagine. This is a group of deans that really values each other's company, values each other's contribution to the intellectual enterprise at Stanford. It's that embracing of ideas that I think is uniquely Stanford, and one of the things that makes it such an exciting place to be.

AS: You mentioned a lot about ideas. Now that you're here, what are some of your ideas for the future

of the medical school, and do you have any big plans that you want to see come to fruition?

DM: A few things. One is that we have the major university-wide campaign for Stanford Medicine, which was launched publically in May. We have a group of remarkable volunteers that are working with us. The campaign had an initial 1 billion dollar goal, with 700 million to be devoted to the construction of the new Stanford Hospital, and 300 million for academic priorities. We're mak-

“Curriculum should never be static. We ought always to be thinking how we can be better, how we can change.”

ing great progress toward that goal, which was not envisioned as a ceiling, but rather as the start of the campaign. A steering committee meets every week to shape the ideas for academic priorities and get them ready to present to donors. My responsibility is to interact with the faculty on this priority steering committee and on the nine faculty working groups and help facilitate the asking of good questions, dialogue, and shaping the solutions.

I have tremendous respect and admiration for the CEOs of both Stanford Hospital and LUCH, and working closely with them as we plan our clinical future for Stanford Medicine is a big area of responsibility as well.

SY: How much have you interacted with Dean Pizzo, and how have those interactions shaped your vision for Stanford and your role as Dean?

DM: I interacted with Dean Pizzo a lot, and I have enormous respect for him. 12 years ago, just after Stanford had gone through the merger with UCSF, Dean Pizzo came in, and he really is responsible for the leadership that led to getting Stanford back on its feet as an institu-

tion. I can only imagine what it must have been like for Stanford to experience a joining and then a separation. The school is on very sound footing on all fronts, and that is a reflection of his outstanding leadership during the past 12 years. He's been very warm and welcoming to me.

AG: You've talked about how you plan to collaborate with other deans and members of the administration. How are you planning on seeking input from students?

DM: I look forward to meeting them. I've met with some in smaller groups already. I've asked Dr. Prober to work on arranging some pizza sessions and the like. But I very much welcome feedback from students. I'm pleased that we have a vibrant group that are interested in the health of the school and their education as well. I look forward to discussing with them as to what form and frequency of interactions would be most beneficial.

AS: What do you see as the biggest challenge in the way that our medical curriculum is set up?

DM: You can get the same presentation of information in several different ways. What is truly unique about a place like Stanford is that you have each other and you also have the faculty from which to learn. In biochemistry, we need to understand the Krebs cycle, right? Some people will understand that better in a lecture format, other people more rapidly from an online program. Still others will understand it better from reading in a textbook. The idea is that you students ought to have all the the options. But understanding the significance of specific enzyme inhibitors and how people deduce that attacking tyrosine kinase was going to produce some very effective therapies for diseases: that's something you get from interacting with the people who did the work - many of whom are actually here. We want to make sure that our instructional methodologies really maximize the interpersonal time that you have with outstanding faculty and with each other.

Curriculum should never be static. We ought always to be thinking how we can be better, how we can change. Because we're never going to reach perfection even if that exists, but we can always learn from our experiences and improve upon what we're doing.

AS: Talking a little bit about your own path through your medical career, what have been some of the biggest challenges that you've faced?

DM: I think building a career as a clinician-scientist has never been easy because you essentially have two jobs, two lives, and two sets of challenges. The reason people are successful at doing it is because those difficulties are energizing, and overcoming those challenges becomes the top of the mountain you seek to reach. It's never been easy, and it's gotten harder because of the tightening federal budget on research, because of increased requirements associated with clinical practice, and because of its economics. Yet I'm convinced that the transformative advances in medicine over the next several decades are absolutely dependent on vibrant clinician-scientists. This involves trade-offs, because if you have this schizophrenic existence where you're spending some time taking care of patients and some time in research, you're not necessarily going to have the breadth of clinical activity that someone who's full-time clinical is going to have. Nor are you going to necessarily have the scope of research activity that someone who is full-time in the lab is going to have. So how do you figure out that right balance? Mentoring and assisting young clinician scientists as they navigate this increasingly challenging path is I believe a major goal for us at Stanford. Something we're doing, but that we need to do even more.

AG: What are the biggest changes and advances you've seen in medical education since the time you were a medical student?

DM: I think we're only seeing the tip of the iceberg in



terms of our online education. I don't for a moment think that online methods are going to supplant the opportunities that each of you has, being in this environment with wonderful faculty and wonderful students with two very, very highly functioning hospitals. However, online methods can supplement and make more effective the interactions that you have among yourselves as students and the interactions you have with faculty, so it's a useful tool and adjuvant to regular curriculum. We are leading the pack on this front, thanks to Dr. Prober and the people working with him. A major goal is ensuring that we continue in this trajectory and that you as students are given the opportunities of benefiting from online education.

The other thing about medical education at Stanford that I think is unique is that two-thirds of Stanford medical students take five or more years before obtaining their MDs. I think that it is great to have that opportunity to explore, to leverage the strength of being at a research university with so many other fine schools – the law school, the business school. Encouraging our students to take advantage of the educational opportunities in those schools and to bring back that knowledge and apply it to what we're doing in the



Michelle Thuy Nguyen

school of medicine – I think this is something unique about Stanford that I would like to nurture even more.

AG: As a clinician-scientist, what other areas of medicine do you feel hold the most unanswered questions?

DM: I think the best way we at Stanford can make sure we're getting the answers to those unanswered questions is to continue to recruit and retain really outstanding faculty. We should let them do what they do best and make sure that we have a diverse array of interests among our faculty. We should not overly determine or specify the direction of our research. If we look at our Nobel laureates, they are people who are quite distinct in their backgrounds and areas of focus, but people who pursued their life's passion through their research. Each is different from the other, but they all benefited from being in the environment here at Stanford. It gave them an enormous amount of elbow room and the ability to work with outstanding colleagues like you. That's something I'm sure of which you're aware, but when I talk with the faculty here, that's generally in the

first sentence or certainly in the first paragraph when I ask, "Well, why did you come to Stanford? What keeps you here?" "The outstanding students' is always in the first group of statements, and it's really true having been on the hiring end for many years.

I think the truly transformative advances are probably ones that none of us today have in our minds, but if we recruit really great faculty and immerse them in this highly collaborative and entrepreneurial environment and embrace the exchange of ideas as we do, those sparks will be kindled. As such, it's hard for me to predict where the most transformative advances are going to come, either in medical science or at Stanford in the next five to ten years. But do I feel that if we're doing our job in nurturing the development of outstanding faculty and students, and providing an environment that encourages collaboration, we're going to be at the forefront in those developments.

SY: What initially sparked your interest in medicine and subsequently to go to medical school? Where do you think you would be if you hadn't chosen that path?

DM: I think the pivotal lens in my life was when I started playing the cello at around eleven years. What I learned from that in addition to a great appreciation for and love of music, was that the more I practiced, the better I became. And that was kind of neat. In junior high and high school, that led to a lot more attention to my studies than perhaps had been present in elementary school. I found too that I really enjoyed science and that I probably was pretty good at it. I then decided that, although I loved music and I was a reasonably good cellist when I was practicing a lot, that I was never going to be a Yo-Yo Ma. On the other hand, I decided I probably could make some good contributions to science, and I liked the notion of being able to bring science directly to the benefit of patients. So that's what led to medicine as being an obvious career choice from a pretty early age.

AG: You've done so much as a clinician scientist and

as an administrator. How do you balance those roles with your personal life?

DM: I try to exercise regularly and go to the gym three mornings a week. Now that I'm in this wonderful climate and environment, I'm looking forward to getting back to cycling. It's something I haven't done much in the past 19 years while living in Baltimore. I enjoy reading a lot, so I keep a number of books going on my iPad. I have a wonderful family so my wife will be moving out full time in January. We have two children who are both now in col-

“I hope our students don't feel artificially compelled to accelerate **the pace of their training** in ways that might not necessarily meet their needs.”

lege, and two wonderful Portugese waterdogs that I know are going to love being in this canine paradise.

AS: After having this extensive career as a physician, how have you changed as a patient?

DM: I've actually never had any major illnesses; I've never required anything more than routine health maintenance. Growing into middle age, I've become more conscious about exercising. I went through a period fairly early on in my academic career where our kids were young and I was working hard. I wanted to make sure that the time I wasn't working was spent with my family, so I wasn't taking a lot of time for myself and exercising. As we've grown older, I've tried to make sure that I'm spending the time to keep myself physically fit and become more conscious about what I eat to ensure that I have a healthy and balanced diet. That's occurred with age more so than as a young person, when I wanted my work to be very successful and I wanted to be a good husband and father.

SY: Do you have any additional advice for us as we're starting our careers in medicine? Is there anything else you wanted to share with the medical students?

DM: First – congratulations; this is not an easy school to get into, and each of you is here because each of you is really, really remarkable. That's the first message. The other thing I would say is to embrace and love the process. It's great to have a goal and you should always maintain goals in life. But enjoy the path, because that's where a lot of the richness of life is - in getting to the goal and the people you meet and the things you learn along the path. Sometimes we get too focused on the goal, on the endpoint, and we don't see the beauty around us or we don't embrace the growth and development that occurs from the process. I think that Stanford students already do have that attitude, but it's always something to keep in mind.

In general, medical training has become longer than it should be. I can make that statement, but bringing about the change is going to be much more difficult. There are reasons why medical school has become longer, but we ought to be looking at ways where it makes sense to shorten training. The fact that two-thirds of our students spend five or more years is very beneficial, because they gain insight and perspectives during that process that they would have much greater difficulty obtaining later in life. I hope our students don't feel artificially compelled to accelerate the pace of their training in ways that might not necessarily meet their needs. I myself spent eleven years after graduating from medical school before I received my first faculty job. My wife more than once remarked that I was going to qualify for social security before I got my first real job! But it was time well spent, because when I did get my first faculty position, I was able to hit the ground running. My career advanced quite quickly afterwards. I'm not saying that's the only way to do it, but it's not bad. So I hope our students never feel compelled to arrive at that goal in some predefined or artificially determined pace. &



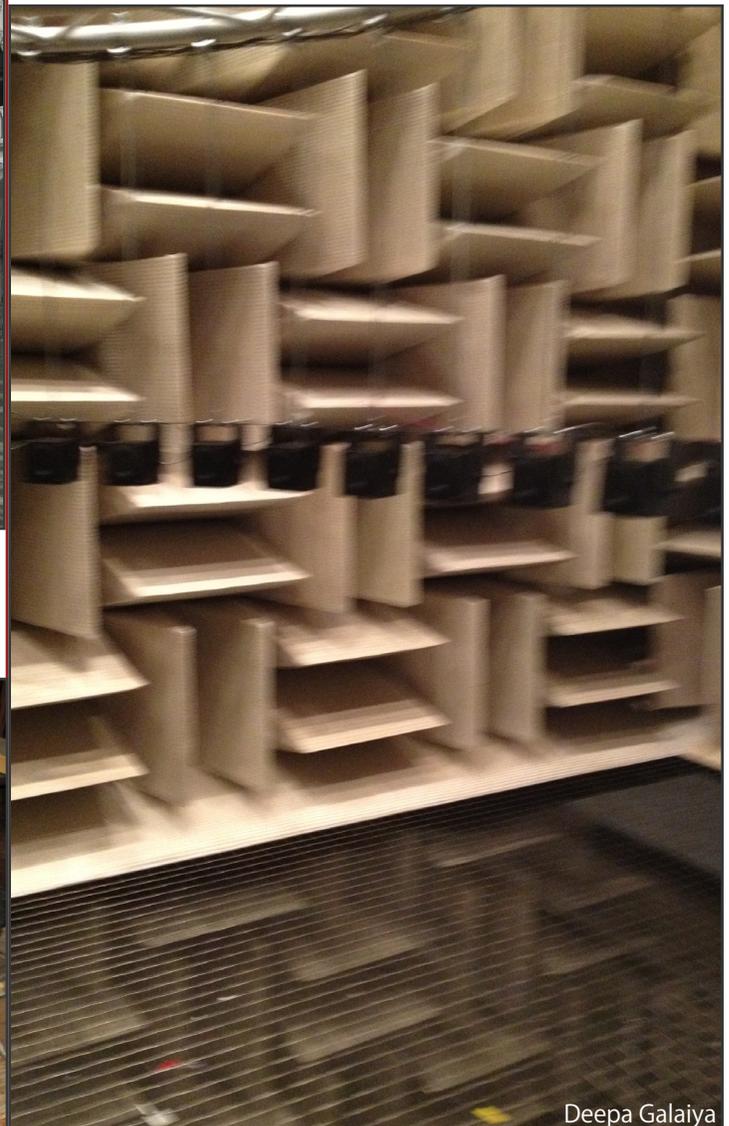
Atalie Thompson

Above: Tourists in long boots waded through the acqua alta--high tides flooding the Piazza San Marco in Venice, Italy on New Year's Day.



Aarti Sharma

Below: From inside the largest anechoic chamber in the world - the quietest place on earth. Three stories of foam muffle out all background noise. The floor is made of a wire mesh so that another story of foam can be located below where you are standing. The black things all around are speakers - you can stand in the center of the room and do hearing localization tests. This is at Vanderbilt, from the residency interview trail.



Deepa Galaiya

Left: A dentist's array of tools from the 19th century at a settlement in Bergen, Norway.



Tamara Montacute

Above: Heading into the Rwandan jungle for the chance to spot a Silverback gorilla. I was in Rwanda to help organize a conference on "HIV Prevention" while working as a global health fellow at the CDC..



Tamara Montacute

Above: I enjoyed working for 6 months as a public health intern with the UN's World Food Program in Panama City, Panama. I remember my walks to work through the canal zone and beautiful Panamanian jungle.

<http://bioethics.stanford.edu/arts/H&P.html>

H&P

