

Dr. Michael Yamashita

Cardiac Surgery

Overview

1. **Profile:**
 - a. **Positions:** Cardiac Surgeon and Assistant Professor (University of Manitoba); Director of Complex Thoracic Aortic Surgery; Surgical Codirector of Heart Failure - ECMO Program; Director of the Manitoba Thoracic Aortic Diseases Clinic
 - b. **Training:** Aortic and Endovascular Surgery Fellowship (Cleveland Clinic); Advanced Valve Repair, Minimally Invasive Valve Surgery, Atrial Fibrillation Surgery and VAD/Transplant Fellowship (Northwestern Memorial Hospital); Transapical Aortic Valve Replacement and VAD/Transplant Fellowship (UBC); Cardiac Surgery Residency (UBC); MD (McGill)
 - c. **Research:** aortic disease, heart failure, and outcomes post-cardiac surgery; coauthor of peer-reviewed papers in The Journal of Thoracic and Cardiovascular Surgery and The Canadian Journal of Cardiology; published five book chapters
2. **Pitch:** A very challenging and technical specialty with many precise heart and valve operations and can be tremendously rewarding when you save a person's life!
3. **Path:** He chose medicine so he could apply his science degree to helping people, knew he wanted to work with his hands, and chose cardiac surgery due to the fascinating physiology and operations. He went on to complete multiple fellowships because he was very interested and to carve out a position for himself in the field.
4. **Philosophy:** Do rotations, talk to surgeons, and get to know the field. If you like working with your hands and doing operations, cardiac surgery may be right for you!

Elevator Pitch

(2:07)

- ***"It's a very time-consuming and onerous specialty but the benefits are tremendous - I have the opportunity to impact a patient's life, really on a daily basis!"***
- Perform open heart operations and very precise surgical procedures to improve blood flow to person's heart, replace heart valves, do transplants, and support patients on hemodynamic and respiratory side with mechanical circulatory support devices

- He loves this challenging specialty - even though you don't do many types of operations, each one is difficult and unique to the patient

Personality

(3:31)

- He always had **dedication** to what he does and put in **hard work** for career, which is necessary to become a cardiac surgeon
- If you're willing to put in the **time and effort**, this can be a good specialty for you!

UK medical students' perception of cardiothoracic surgery

(4:16)

- Factors like saving or significantly improving people's lives were major attractors while factors like competition for jobs and training positions, geographic limitations of centers with training programs, and perception of cardiothoracic surgeons as arrogant were deterrents
- Dr. Yamashita's response:
 - He agrees with the above points except that cardiac surgeons aren't arrogant
 - They are confident in their skills and have to be a leader in operating room - need strong voice and to be assertive but this can be misinterpreted as arrogance
 - There are times where you save a patient's life in an operation but it's not routine
 - Specialty can be challenging in Canada due to limited locations for training and work (only ~30 hospitals have cardiac surgery in Canada)
 - Only ~150-175 cardiac surgeons in Canada but if you bring the correct training and skillset, you should be able to find a job!
- **Other stereotypes:**
 - Cardiac surgeons work a lot - it's definitely true!
 - Need time and personal sacrifice to be dedicated to job and patients

Referenced Material: *Preece et al. Are we losing future talent? A national survey of UK medical student interest and perceptions of cardiothoracic surgery. Interact CardioVasc Thorac Surg 2018; 27:525-529.*

Path

(8:26)

- Bachelor of Science in chemistry at McGill - very interested in science but always wanted to work with people
- After undergrad, he applied to many different fields (graduate school in chemistry, law school, medical school) and he ended up choosing medicine
 - Medicine was best outlet to apply science background to helping people
- Once in medicine, he knew he wanted to go into surgery (he liked working with his hands and with people) and he chose cardiac surgery since he loved cardiac physiology
 - After observing the first couple of open heart surgeries, he was hooked!
- Necessary to do at least one or two fellowships (won't have enough training or experience right out of residency to work independently and get hired at a center)
 - You want to choose an area of interest for fellowship
 - Large part of his practice is aortic surgery so he did fellowship at Cleveland Clinic, other fellowships are also interesting to him
- He did lot of background work with shadowing and electives to get a feel for the specialty
- He wished he had realized that priorities change over time - now he has a wife and children he likes to spend time with, and wishes the specialty wasn't so onerous
 - As a student, you have no other responsibilities and can do whatever you want but this changes over time
 - Very time consuming if practice is primarily surgical, but there are opportunities to do other things like research or teaching, allowing for more flexible hours
 - Also possible to transition to part-time surgeon as you get older
- Towards the end of his training, he started doing a lot of cases with help of attending surgeon - that's when he really knew he'd chosen the right field
- Specialty is highly technical so you end up doing more operations, which helps you get even better!

Day-to-Day Life

(18:24)

- Start at 7:15, sometimes meetings at 7
- Leave around 5:30-6 on nonoperative days and can be as late as 10 if doing two operations
- Operating room 3 days per week, one day for call (7 am to 7 am the next day), and one day for clinic, admin, and research work
- Work on average 11-12 hours a day plus calls

- OR days:
 - Most common operation is coronary artery bypass grafting (CABG) followed by aortic valve replacement
 - Then procedures specific to specialty: Dr. Yamashita does open and endovascular surgery for aortic aneurysms and resections, heart failure surgery (putting patients on mechanical circulatory support like ECMO or putting in heart pumps)
 - He loves doing aortic surgeries because it's challenging in itself - you have to stop circulation in patient (a lot of thinking and planning to do safe operation while protecting patient's brain, heart, and body - the many different approaches involved really fascinates him!)
- Clinic days
 - He sees all complex aortic patients in Manitoba (can be time consuming)
 - 6-10 patients in half day - talk to them about surgery, options, history/physical
 - Sometimes full day of clinic - regular clinic in morning and dedicated TAVI (transcatheter aortic valve implantation) clinic in afternoon (4 patients in half day - more complex and elderly)
- Calls
 - Call is 1 in 5
 - If called at night, it is to do an emergent operation, can get consults during the day
 - Called in couple times a month (he works with four other cardiac surgeons)
- He does most of his research at home after his son goes to sleep and on weekends
- He has a very heavy clinical load now (center is understaffed) so can't do too much academic work
- The biggest operations he does are thoracoabdominal aortic aneurysm surgery - "can be quite an exhilarating operation once it's done"

Final Comments

(28:45)

1. If you want to do cardiac surgery, do a rotation, get to know the field, talk to the attendings about their experience. Nothing can compare to firsthand experience!
2. The field is changing on a monthly basis with new innovations (for example, used to do invasive open heart surgery to fix aortic valve but now using TAVI, can deploy valve through groin using wires and catheters to replace aortic valve).