

fields of the future speaker series

Critical Care, Oncology, & Cardiology

with Dr. Zohra Prasla

High School / Undergrad Students & Parents,
Join Dr. Zohra Prasla to learn more about:

- the medical fields and its numerous specialties
- the road to becoming a physician &
Dr. Prasla's journey
- a day in the life of a doctor
- characteristics of a successful physician
- innovation and advancements in the medical field



Speaker

Dr. Zohra Prasla

Pulmonary/Critical Care Fellow,
Emory Univ. School of Medicine

Saturday, June 6, 2020
2 p.m. PT | 4 p.m. CT | 5 p.m. ET



Register to attend:
akebsw.org/fof2020

Zoom meeting details will be shared upon registration



FIELDS OF THE FUTURE SERIES: CRITICAL CARE, ONCOLOGY, AND CARDIOLOGY

ZOHRA PRASLA, MD

JUNE 6, 2020

OUTLINE



INTRODUCTION

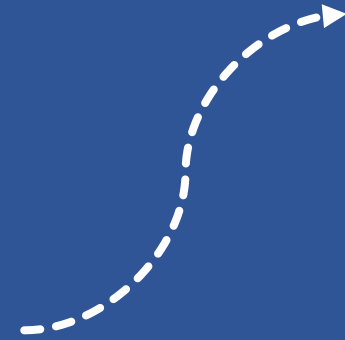
WHAT IS A PHYSICIAN?

ROAD TO BECOMING A PHYSICIAN

SPECIALTY SPECIFIC INFORMATION



MY JOURNEY



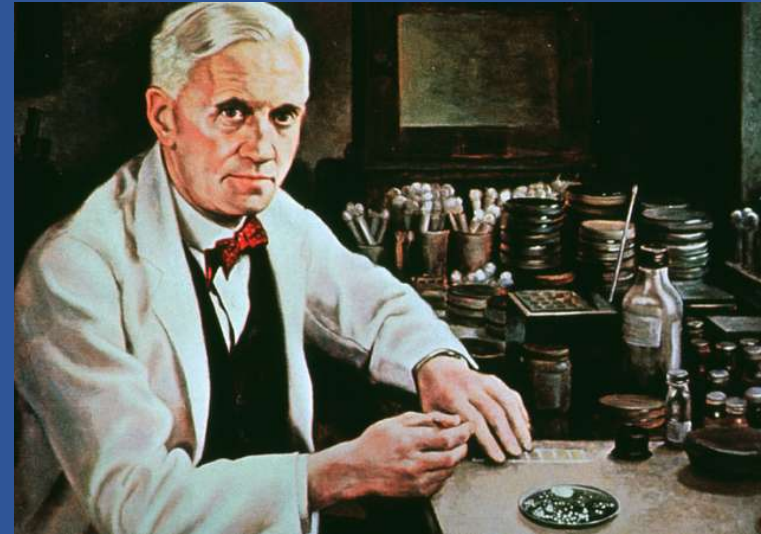
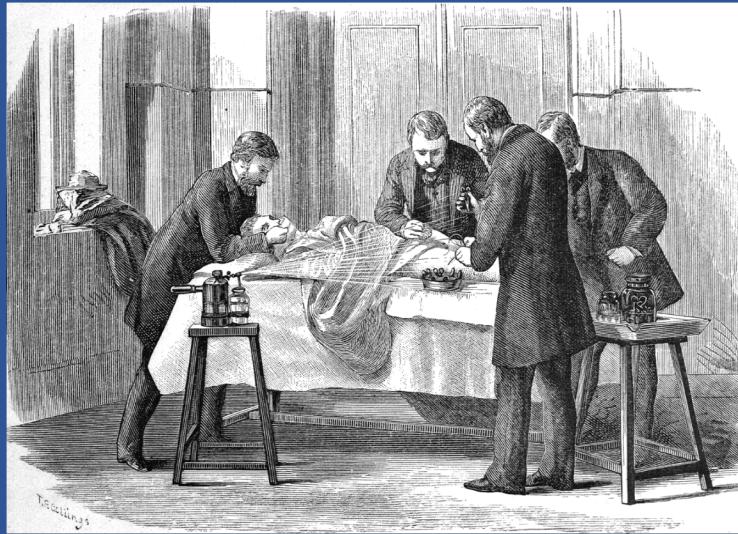
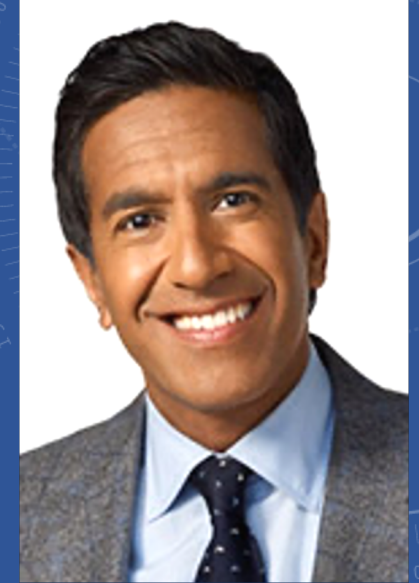
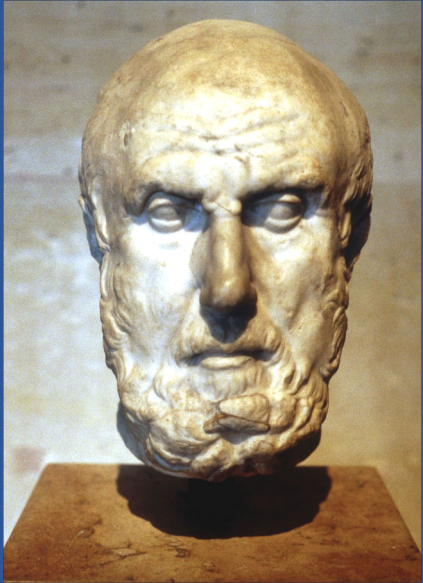
WHAT IS A PHYSICIAN?

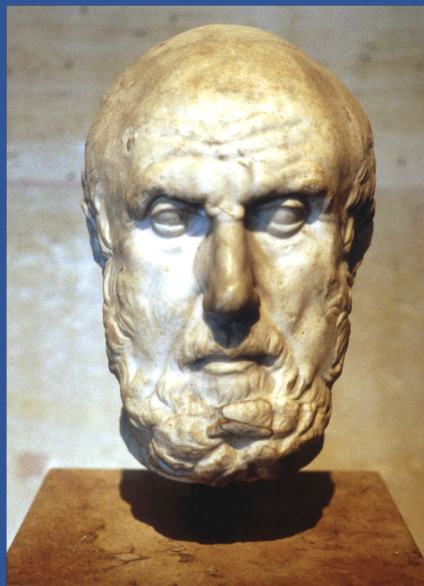


A word cloud centered around the word "physician" (in large red letters) and "doctor" (in large purple letters). Other medical specialties included are:

- ophthalmologist
- hospitalist
- surgeon
- cardiologist
- oncologist
- intensivist
- pediatrician
- orthopedic
- radiologist
- emergency
- gastroenterologist
- internist
- anesthesiologist
- dermatologist
- gynecologist
- nephrologist
- infectious
- neonatologist
- rheumatologist
- thoracic
- radiation
- otolaryngologist
- pathologist
- pulmonologist

FAMOUS PHYSICIANS THROUGHOUT THE CENTURIES

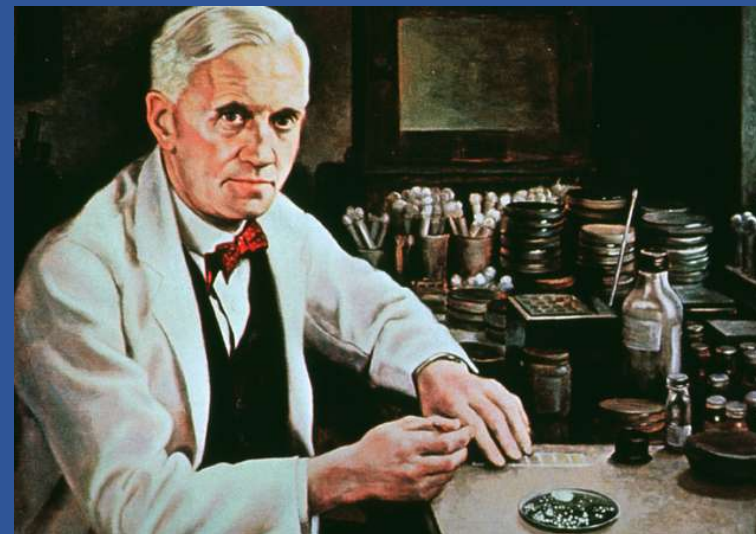
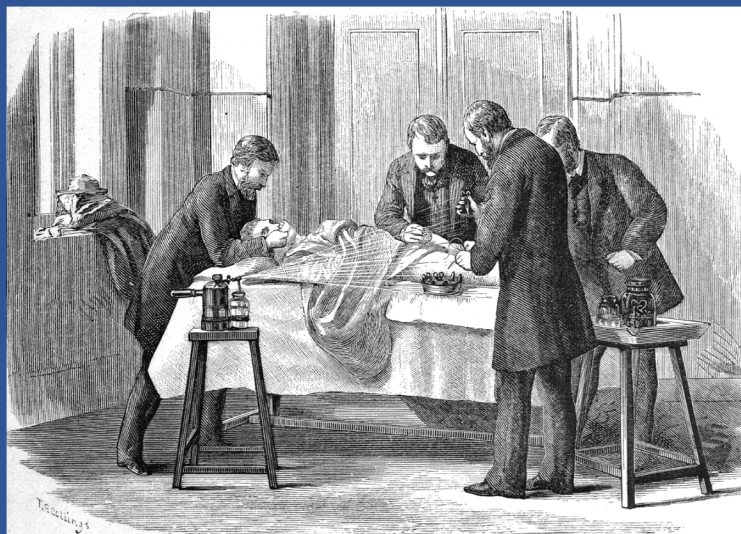




Empathy and Compassion

Conscientious

Intellectual curiosity /
Scholarly



Collaborator

Resilience

Courage



PHYSICIAN CAREER PATHS

- Patient Care
- Teaching and Supervision
- Research
- Administration
- Public Health
- Journalism
- Medical Informatics

WHAT IT TAKES



4 years of college



1-3 years of fellowship



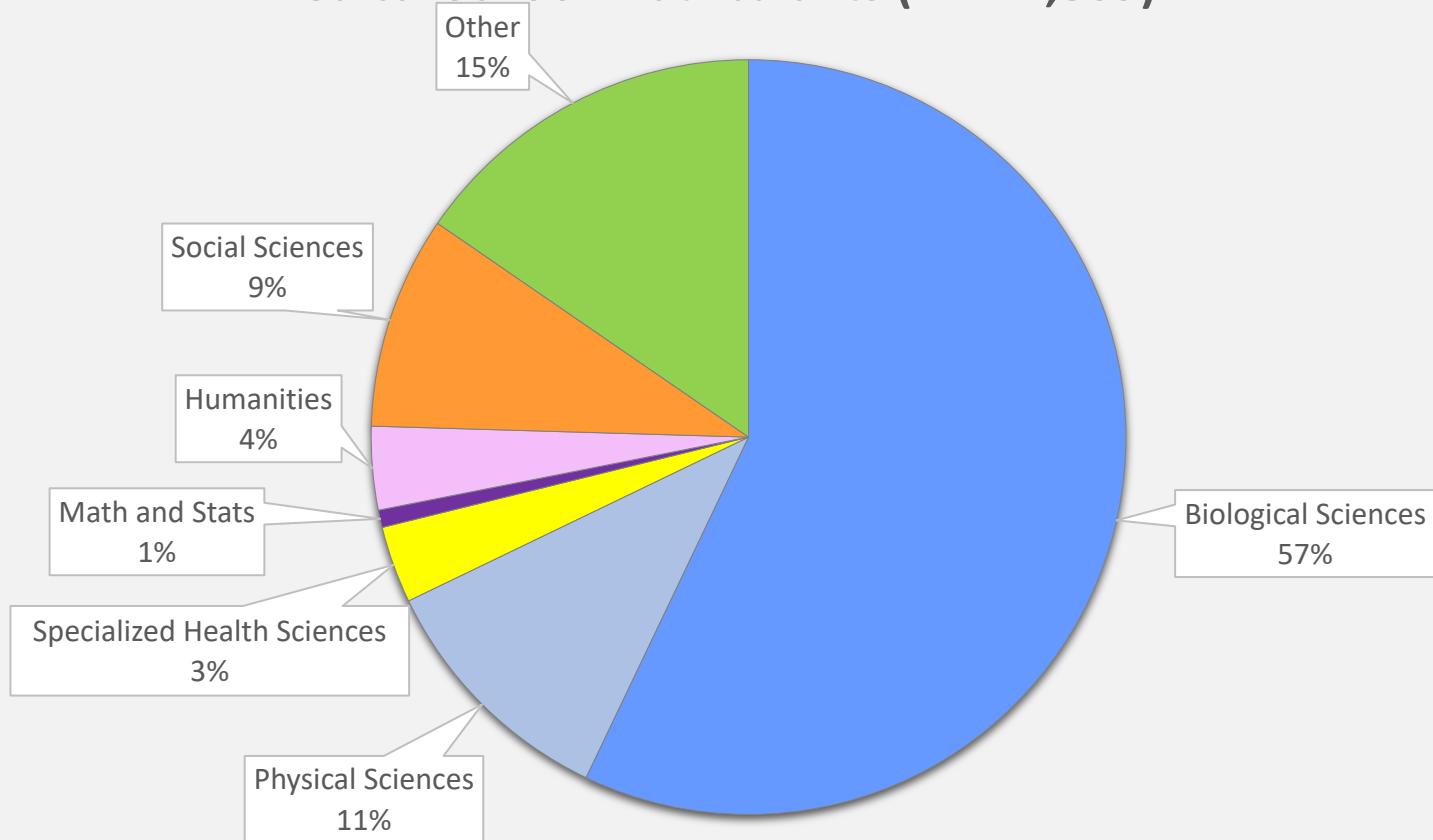
4 years of medical school



3-7 years of residency

UNDERGRADUATE MAJORS AND PREREQUISITES

Medical School Matriculants (n = 21,869)



Required Courses

Biochemistry

Biology

General Chemistry

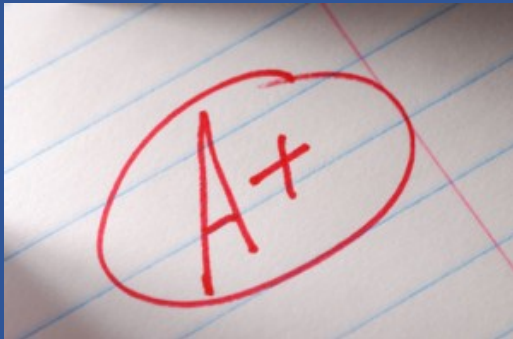
Organic Chemistry

Physics

Advanced Math
(Calculus or Statistics)

English

SUCCESSFUL MEDICAL SCHOOL APPLICANT



+

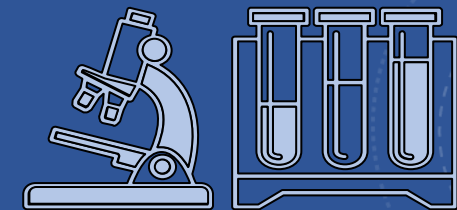
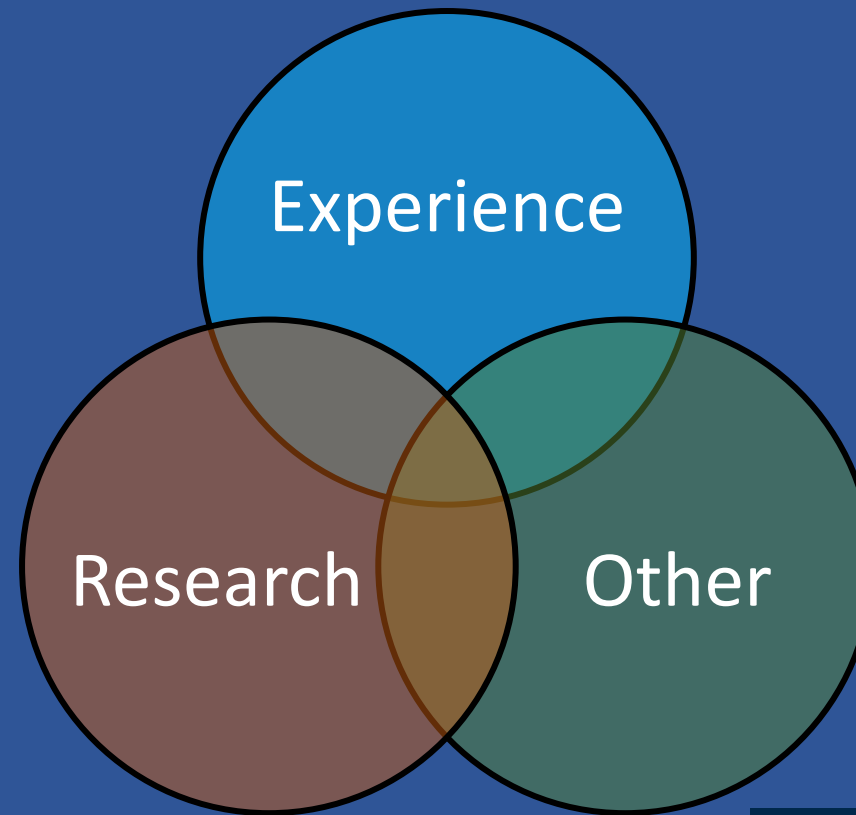
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| | |
|---|--|
| <u>INTERPERSONAL</u> <ul style="list-style-type: none">• Service Orientation• Social Skills• Cultural Competence• Teamwork• Oral Communication | <u>INTRAPERSONAL</u> <ul style="list-style-type: none">• Ethical Responsibility to Self and Others• Reliability and Dependability• Resilience and Adaptability• Capacity for Improvement |
| <u>THINKING AND REASONING</u> <ul style="list-style-type: none">• Critical Thinking• Quantitative Reasoning• Scientific Inquiry• Written Communication | <u>SCIENCE</u> <ul style="list-style-type: none">• Living Systems• Human Behavior |

AAMC Core Competencies

EXTRACURRICULAR ACTIVITIES



MEDICAL SPECIALTIES

Internal Medicine

- Hospital Medicine
- Cardiology
- Pulmonary/Critical Care
- Gastroenterology
- Hematology/Oncology
- Rheumatology
- Infectious Disease
- Palliative Care
- Allergy/Immunology

Surgical

- General Surgery
- Cardiothoracic Surgery
- Colorectal Surgery
- Endocrine Surgery
- Surgical Oncology
- Vascular Surgery

Pediatrics

- Hospital Medicine
- Cardiology
- Gastroenterology
- Pulmonology
- Hematology/Oncology
- Endocrinology
- Rheumatology
- Infectious Disease
- Critical Care Medicine
- Nephrology
- Emergency Medicine
- Developmental
- Allergy/Immunology

Independent

- Anesthesiology
- Dermatology
- Emergency Medicine
- Family Medicine
- Neurology
- Neurosurgery
- Obstetrics/Gynecology
- Ophthalmology
- Psychiatry
- Ear, Nose, Throat
- Orthopedic Surgery
- Radiology
- Radiation Oncology
- Physical Medicine
- Plastic Surgery
- Urology

FIELDS OF THE FUTURE

| Leading Causes of Death | Percent of total deaths |
|------------------------------------|-------------------------|
| Diseases of the heart | 23 |
| Malignant neoplasms | 21.3 |
| Accidents | 6 |
| Chronic lower respiratory diseases | 5.7 |
| Cerebrovascular diseases | 5.2 |

| Projected Physician Shortages |
|---|
| Cardiologists |
| Gastroenterologists |
| Hematologists/Oncologists |
| Pulmonologists/Critical Care Physicians |

| NIH Funding (2015) |
|-----------------------------|
| Cancer: \$5.4 billion |
| Heart disease: \$2 billion |
| Lung disease: \$1.6 billion |

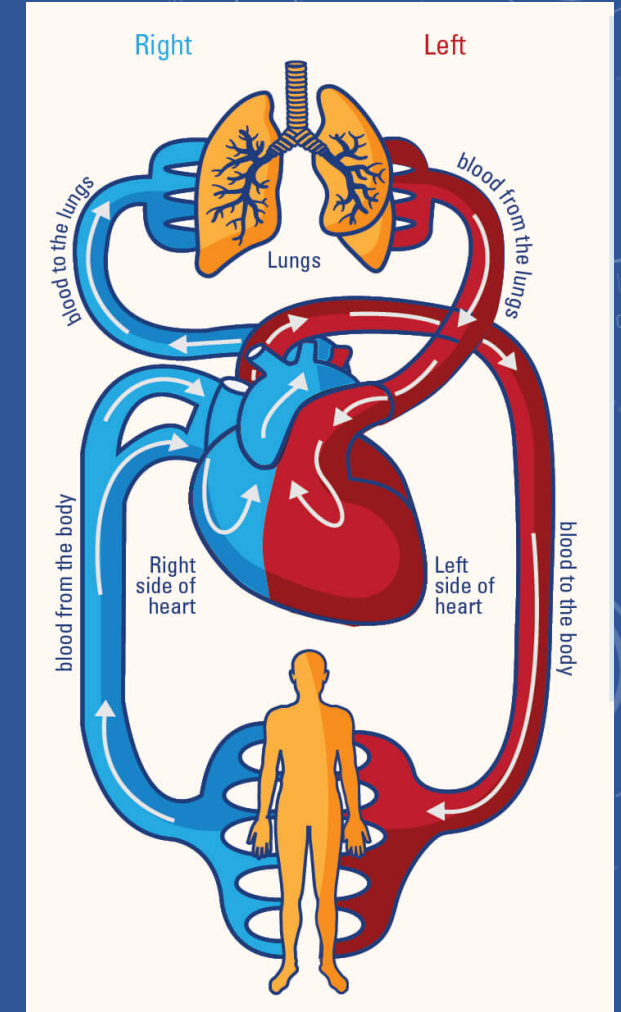
CDC: <https://www.cdc.gov/nchs/fastats/deaths.htm>

Health Resources and Services Administration: <https://bhwh.hrsa.gov/health-workforce-analysis/research/projections>

NIH: <https://report.nih.gov/biennialreport/>

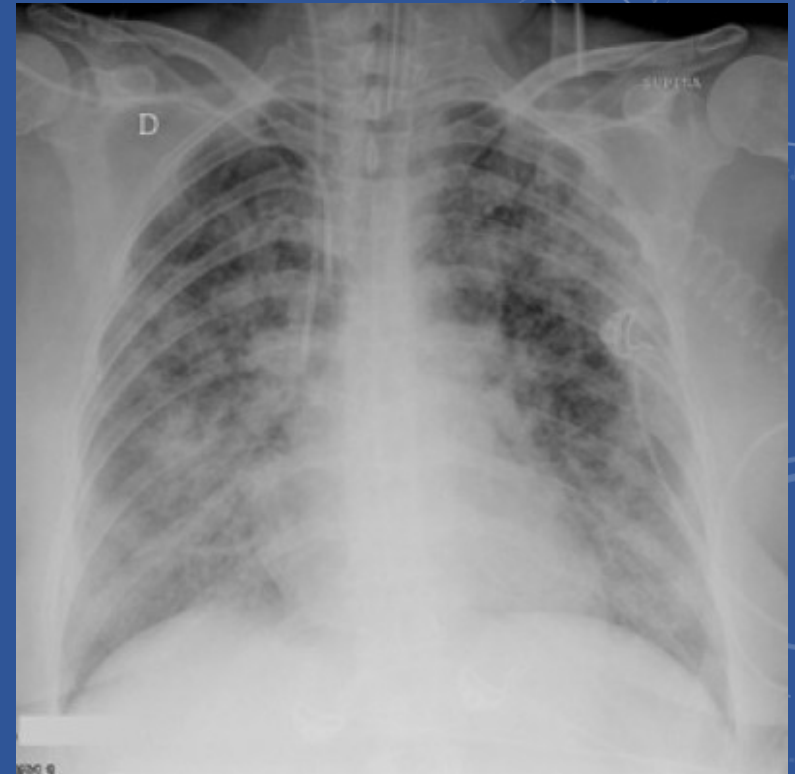
CRITICAL CARE

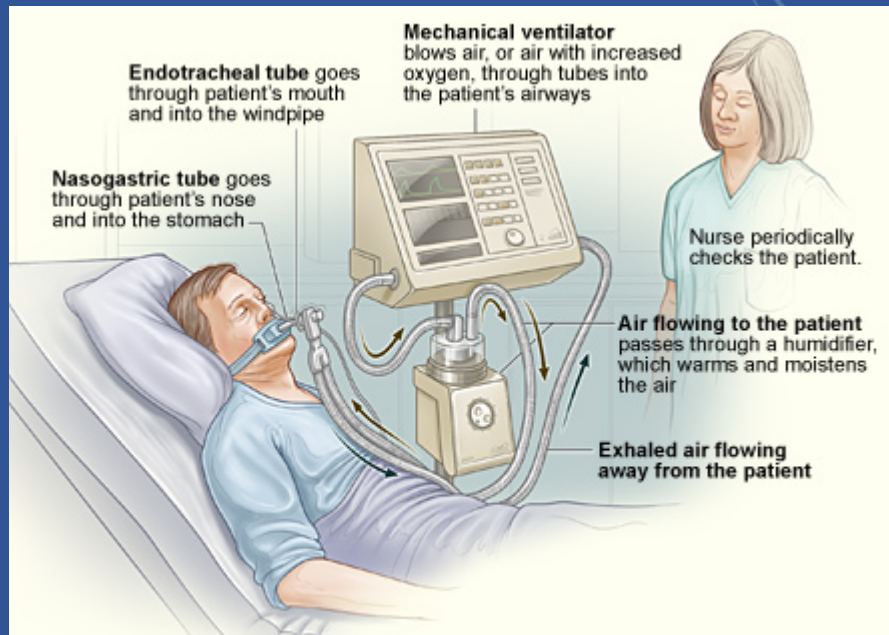
- Specialty Description:
 - Mix of medical and procedural specialty
 - Care for patients admitted to the Intensive Care Unit
 - Responsible for managing patients' breathing, heart, and other vital organs
- Routes:
 - Internal Medicine -> Pulmonary/Critical Care
 - Anesthesia, General Surgery, or Emergency Medicine -> Anesthesia/Critical Care
 - Cardiology -> Cardiac Care Unit
 - Neurology or Neurosurgery -> Neurocritical Care



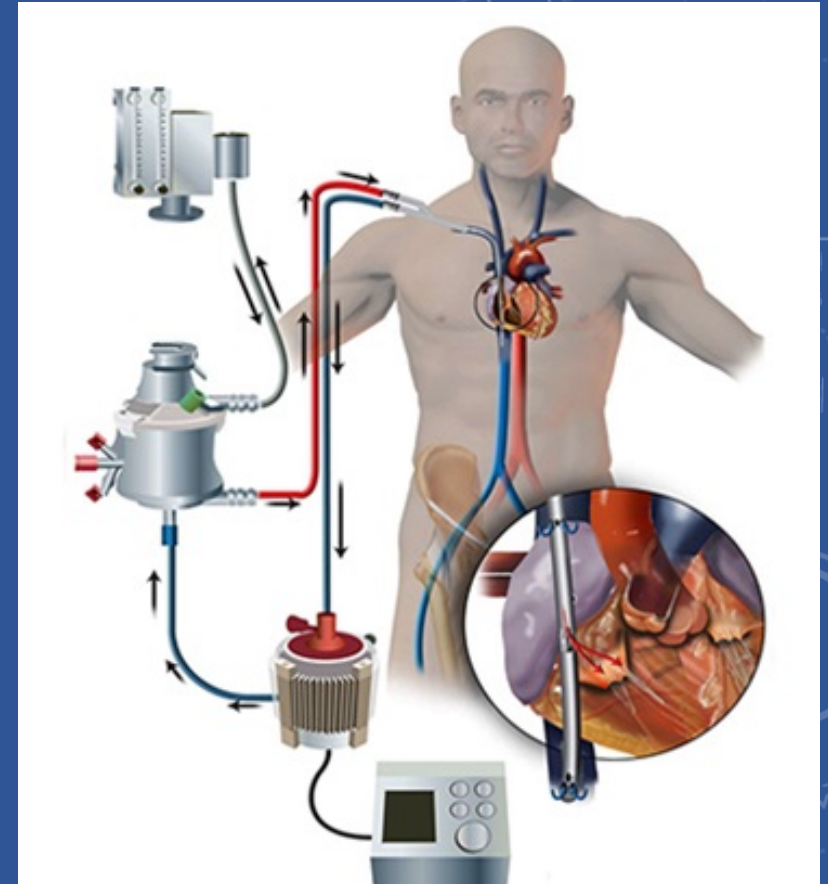
CRITICAL CARE

- Trends:
 - Advances in management of acute respiratory distress syndrome
 - More complex machines that can support the heart, the lungs, the kidneys





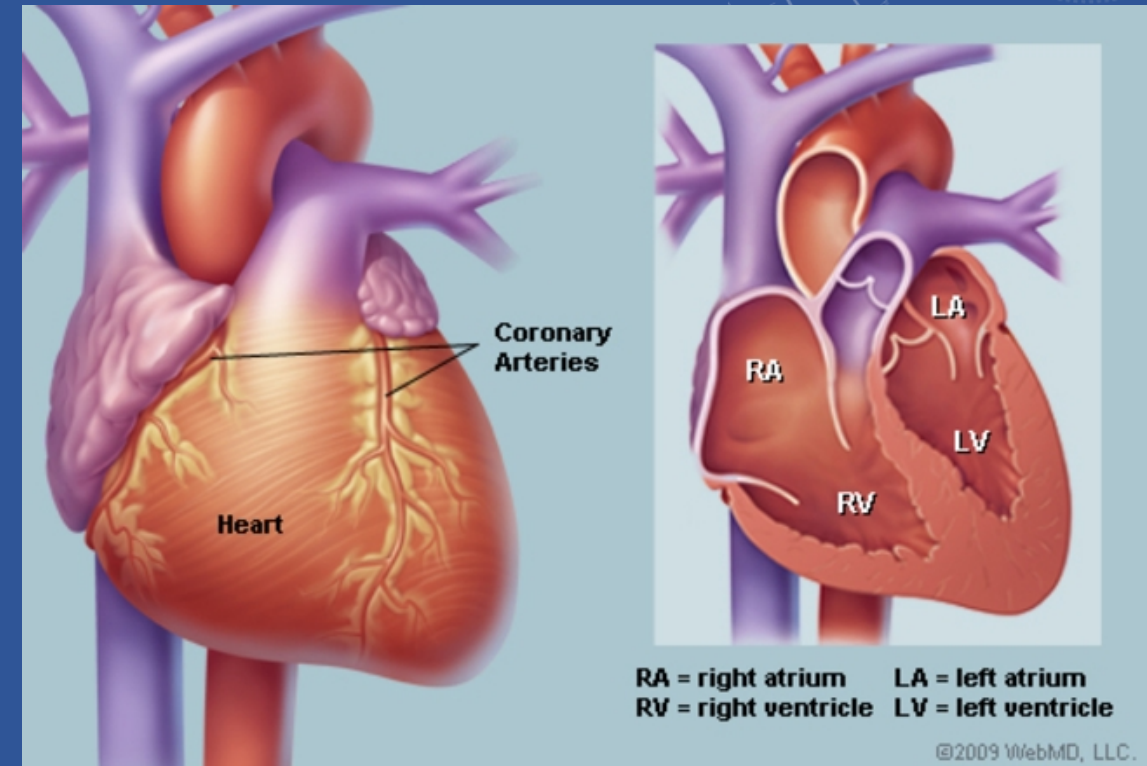
CRITICAL CARE



ECMO Machine

CARDIOLOGY AND INTERVENTIONAL CARDIOLOGY

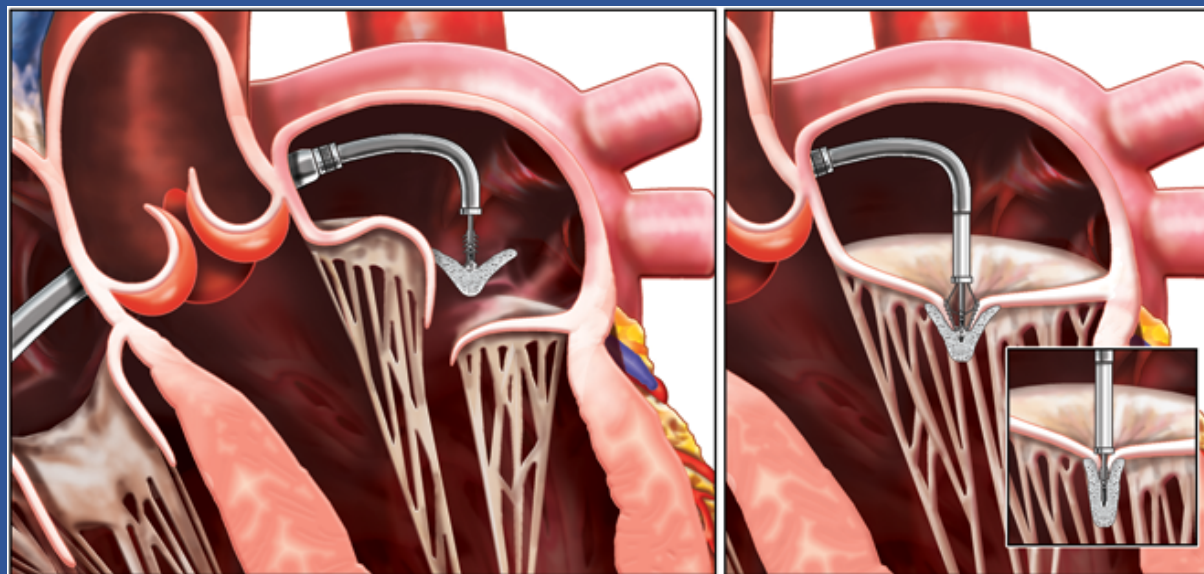
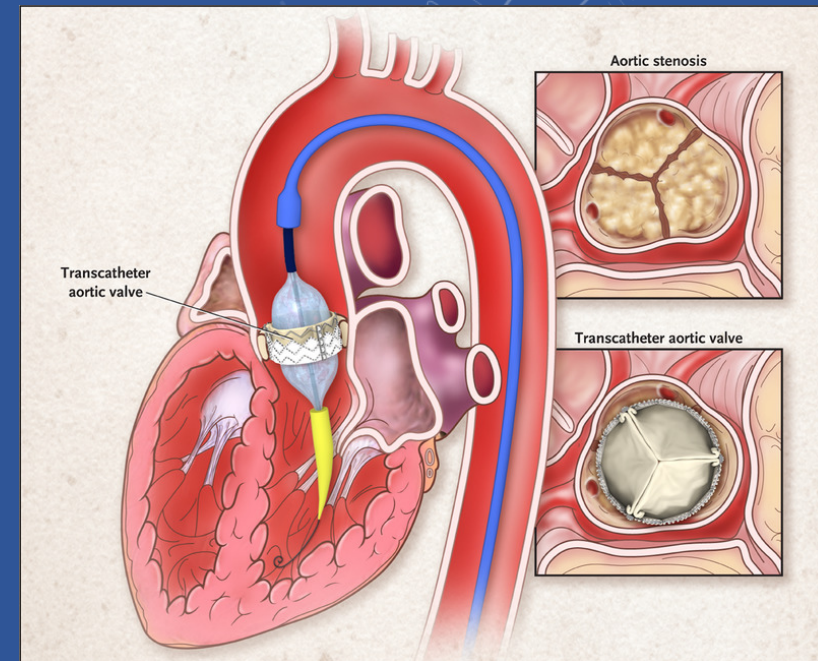
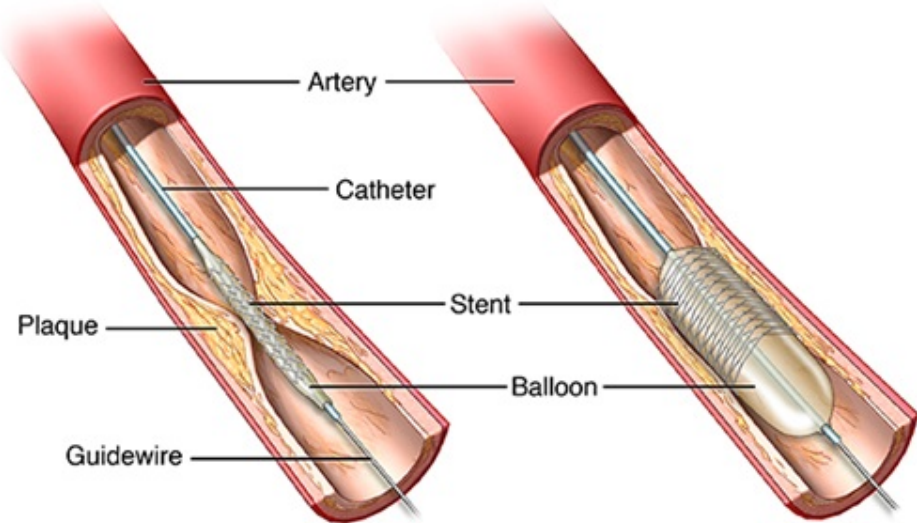
- Specialty Description:
 - Medical and/or Procedural specialty
 - Responsible for treating heart disease
 - Interventional Cardiology:
 - treat heart attacks through coronary artery intervention
 - treat valve problems through minimally invasive methods
- Routes:
 - Internal Medicine -> Cardiology -> Interventional Cardiology



CARDIOLOGY AND INTERVENTIONAL CARDIOLOGY

- Trends:
 - Treatment of more complex cardiac artery lesions
 - Newer generation drug-eluting stents
 - Percutaneous structural abnormalities, such as valve repair

Stent placement



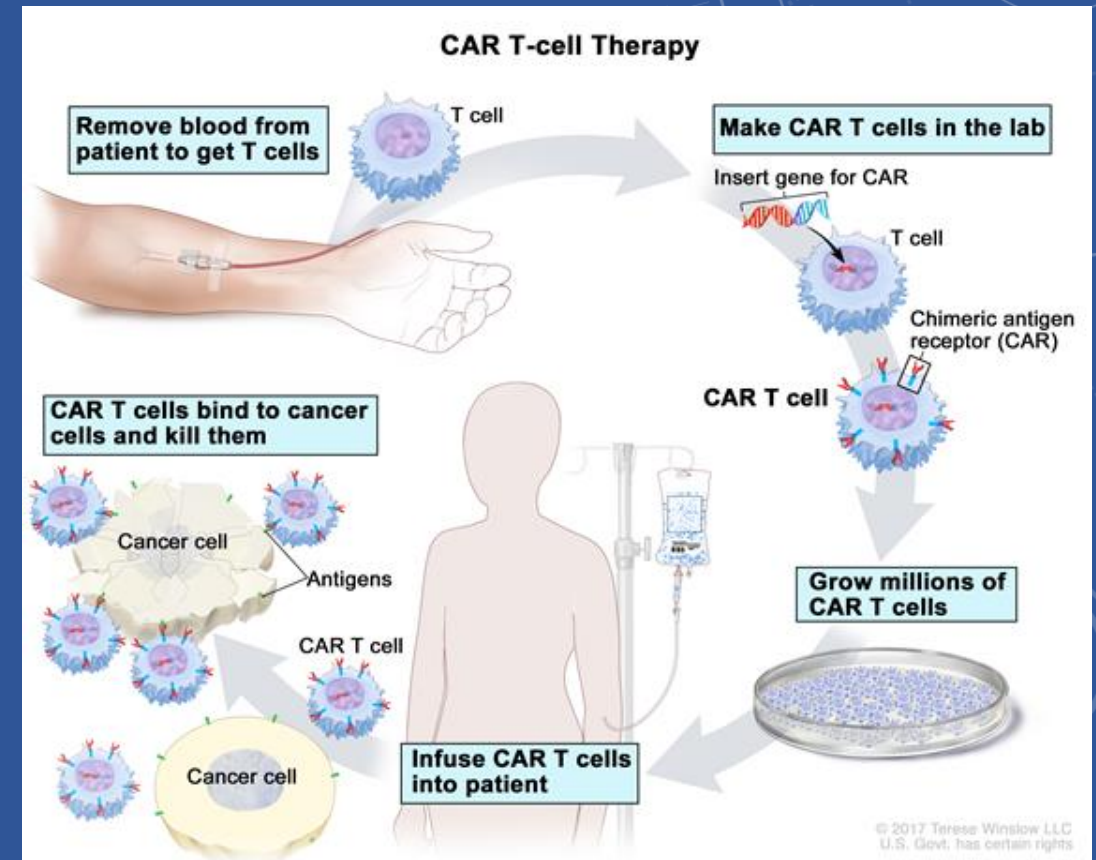
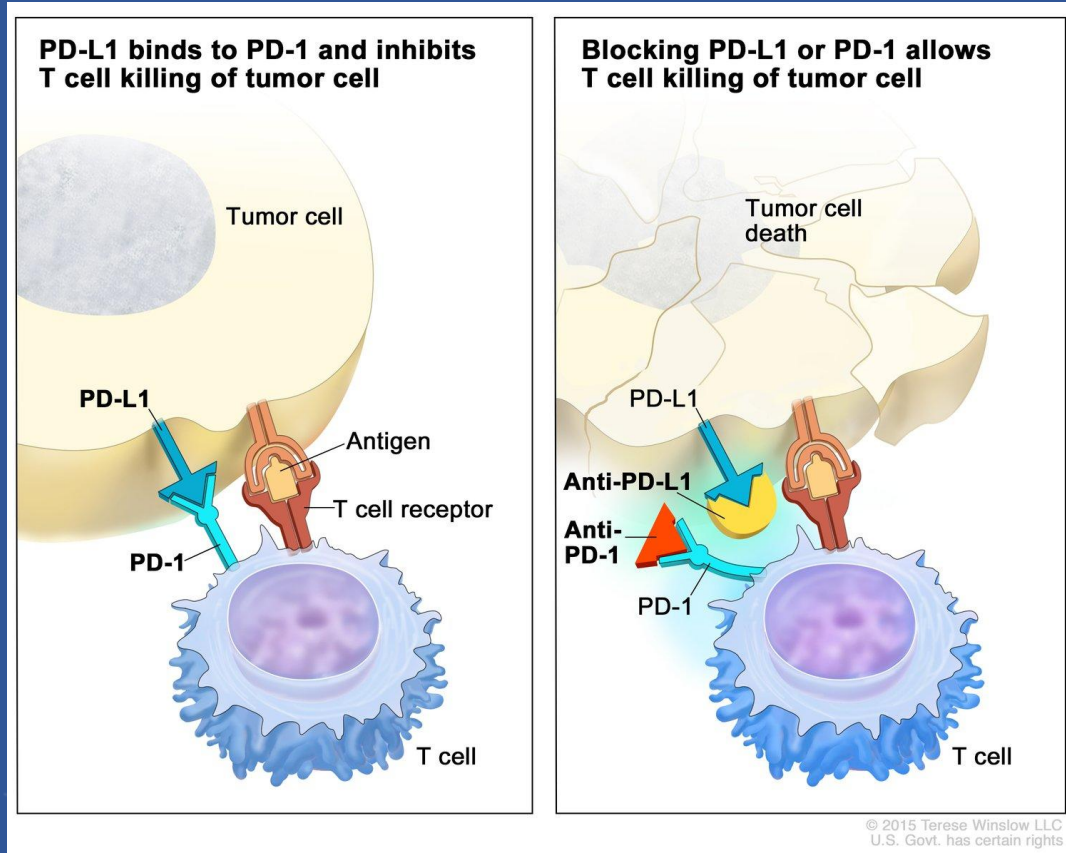
ONCOLOGY

- Specialty Description:
 - Generally medical specialty, with significant outpatient management
 - Treat patients diagnosed with cancer
 - Manage patients with bone marrow transplants
 - Good mix of cutting edge molecular research and patient care
- Routes:
 - Internal Medicine -> Hematology/Oncology
 - General Surgery -> Surgical Oncology
 - Radiation Oncology

ONCOLOGY

- Trends:
 - Newer drugs with improving side effect profiles
 - Next-generation sequencing to identify specific genes and proteins in tumors
 - Immunotherapy/immune checkpoint inhibitors
 - Cell and gene therapy, such as CAR-T therapy
 - AI for identifying complication risk and predicting mortality

ONCOLOGY



SUMMARY

- Rewarding career path
- Intellectually and personally stimulating
- Can tailor your career to your specific interests
- Field always evolving

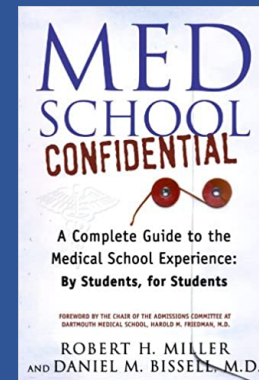
Questions:
zohraprasla@gmail.com

RESOURCES

- Association of American Medical Colleges: <https://students-residents.aamc.org>
- American Association of Colleges of Osteopathic Medicine: <https://www.aacom.org>
- MCAT Prep: Princeton Review or Kaplan Test Prep
- Professional societies and associations



Questions:
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SOCIAL DISTANCING

Only **leave home** for work
or for **essential needs**.



Wash your **hands** and
disinfect **surfaces** regularly.

Maintain **social distancing**
when in **public**.



Cover your face with a **cloth**
face covering when in
public.

Call a **doctor** if you are
feeling unwell.



Call the **ACCESS hotline** at **1-844-55-ACCESS** with any
questions or concerns.

STAY HOME. SAVE LIVES.
1-844-55-ACCESS

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Thank you for attending!

Please complete a brief
evaluation

akebsw.org/feedback



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