

HOW TO PREPARE FOR AN EXAMINATION

Dr Sanjay De Bakshi

MS(Cal); FRCS(Eng; Edin{ad eundem})

➤ Director

Calcutta Chirurgiae Collective

➤ Examiner

Royal College of Surgeons of Edinburgh

➤ Visiting Surgeon;

Dept. of GI Surgery

Calcutta Medical Research Institute
Woodlands Multispecialty Hospital.

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GUIDELINES FOR COMPETENCY BASED POSTGRADUATE SURGICAL TRAINING

- The purpose of PG education is to create specialists who would provide high quality health care and advance the cause of science through research & training.
- The trained surgeon should be able to:-
 - recognize the health needs of the community,
 - should be competent to handle effectively medical / surgical problems and
 - should be aware of the recent advances pertaining to his specialty.
 - Should be able to provide service with **EMPATHY** and with a **HUMANE APPROACH**.

**But to get there--
One has to pass the
Examinations!**

KNOW YOUR BATTLEGROUND

THEORY

PRACTICALS

RESULT

KEY EXAM STRATEGIES:

- **Time Management:**
 - Allocate time for each question and task and avoid getting bogged down on one question.
- **Confidence but not over-confident:**
 - Be confident in your knowledge and skills, and present your answers clearly and concisely.
- **Evidence-Based Answers:**
 - Ensure that your answers are supported by evidence and clinical guidelines.
- **Professionalism:**
 - Maintain a professional demeanor throughout the exam, including your appearance and communication.
- **Accept Mistakes:**
 - Be willing to acknowledge mistakes and learn from them. Don't dig a hole for yourself. **IF YOU HAVE, KNOW HOW TO DIG YOUR SELF OUT!!**



THEORY –GENERAL SURGERY

- MS

- PAPER I
- PAPER II
- PAPER III
- PAPER IV

- DNB

- PAPER I
- PAPER II
- PAPER III
- PAPER IV

THEORY –GENERAL SURGERY

- MS

- PAPER I

- Basic Sciences + (Gen Surgery+ Endocrine)

- PAPER II

- Principles and Practice of Surgery + (Gastro)

- PAPER III

- Principles and practice of Operative Surgery + (Super Specialty)

- PAPER IV

- Recent Advances in Surgery

THEORY –GENERAL SURGERY

- **DNB**

- **PAPER I**

- General part of General surgery – including Metabolic response to Trauma, Nutrition , Fluids, Principles of Oncology etc.

- **PAPER II**

- Endocrine, Head & Neck, Skin and subcutaneous tissue

- **PAPER III**

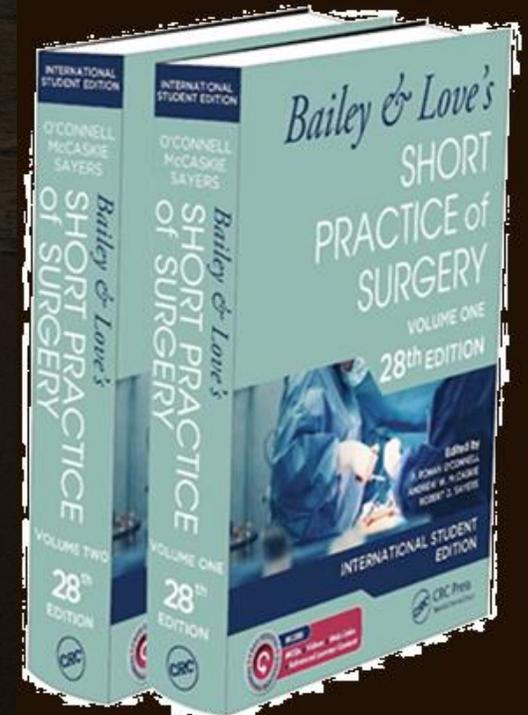
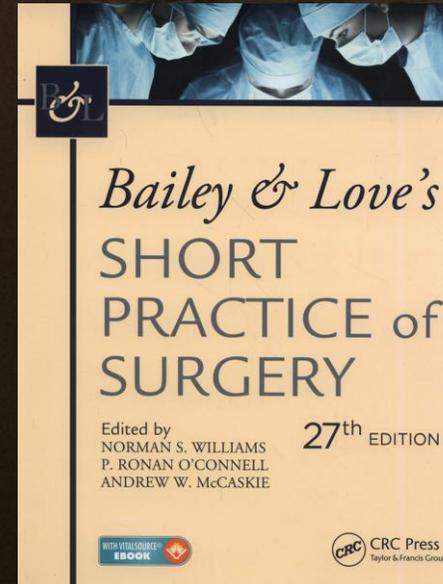
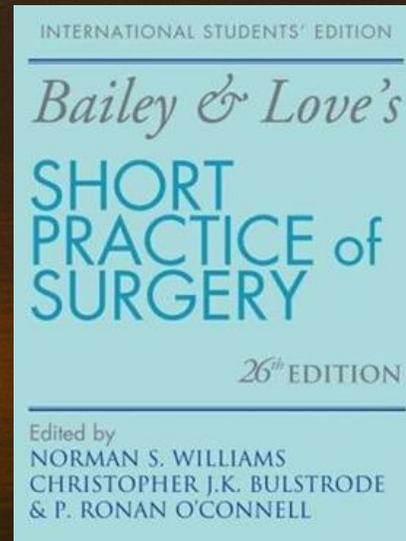
- GI Surgery, Abdomen (All its compartments) hernia, Vascular

- **PAPER IV**

- Recent advances, super-specialty, Transplantation, Metabolic surgery

STUDY SENSIBLY THE HORIZON IS VERY FAR!

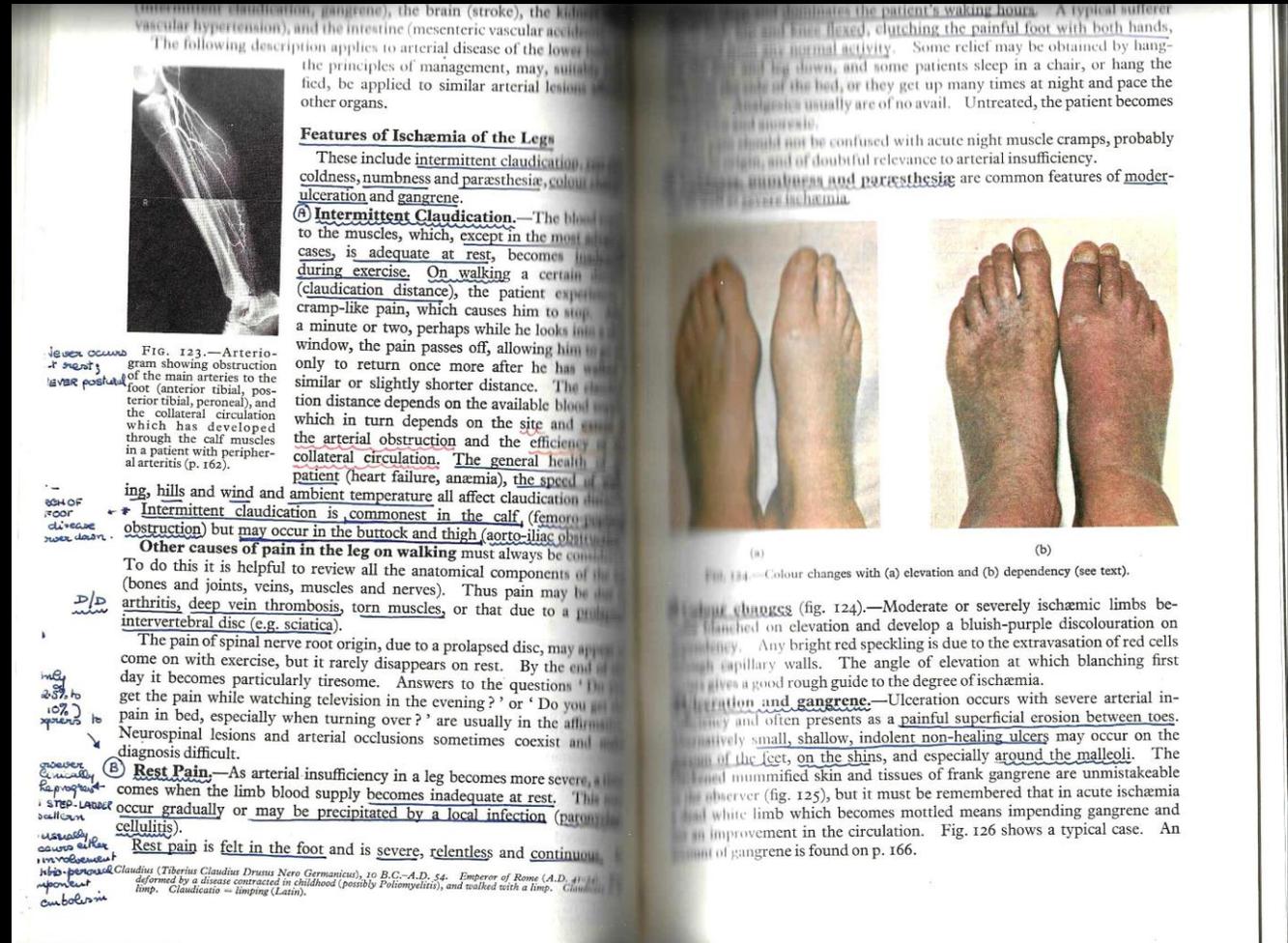
- You have 3 years, you cannot humanly cram 3 years of syllabus into 3 months!!!!
- The syllabus has exploded!!



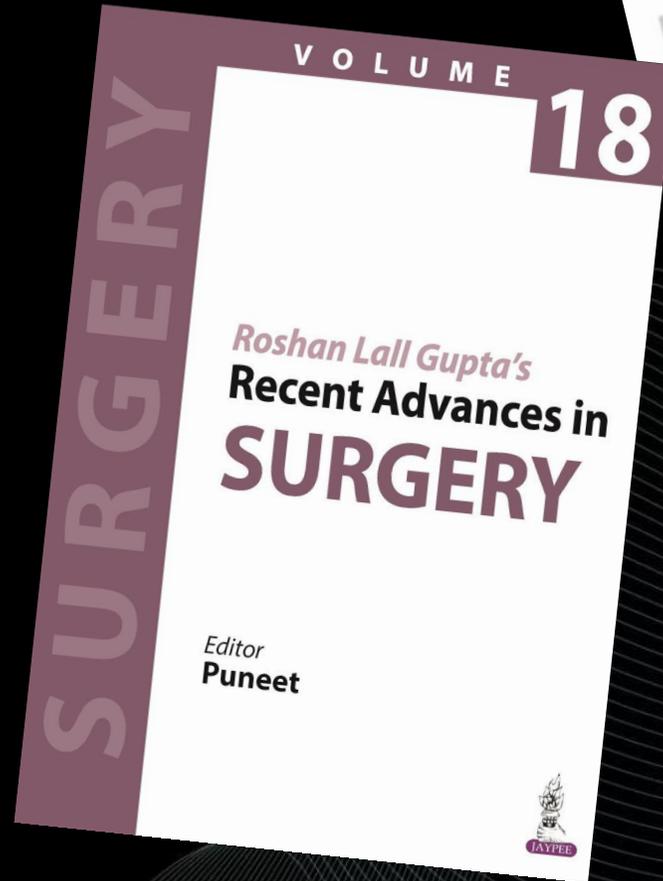
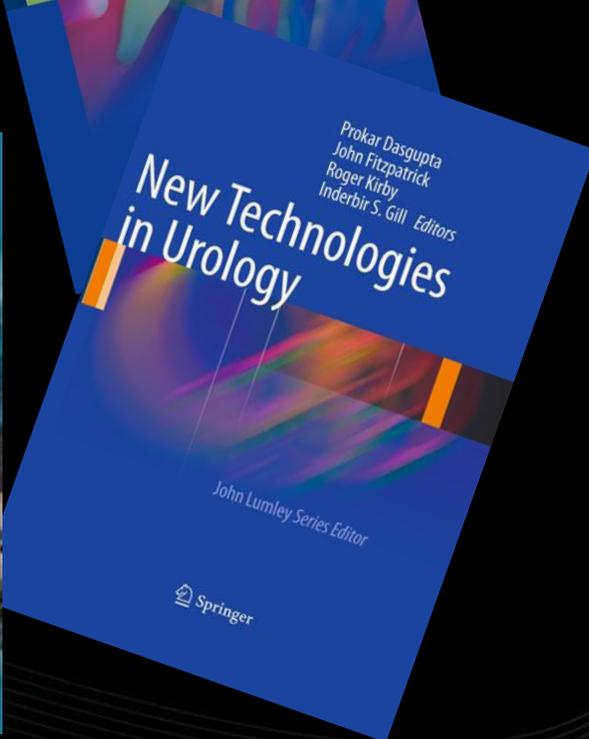
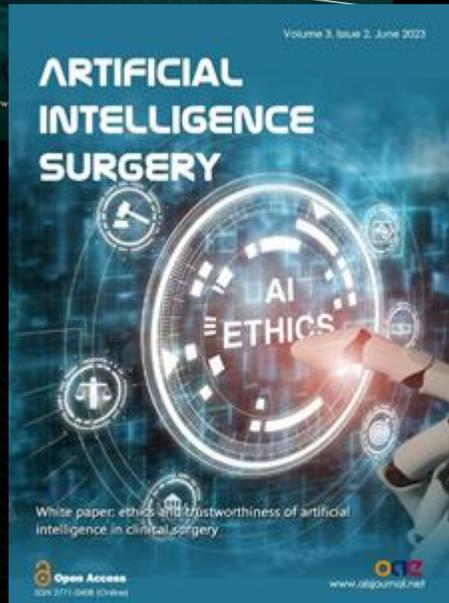
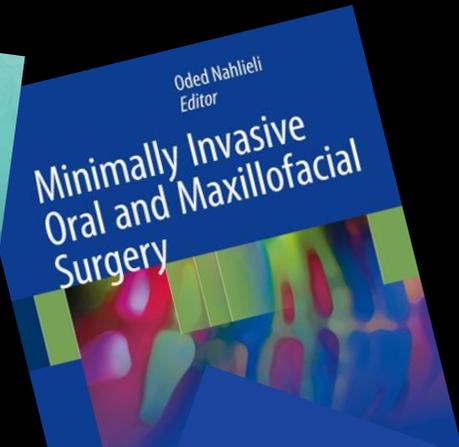
A SUGGESTION

“LEAD” TEXTBOOK

May keep one MAIN text book.
Use the Header or Footer or Margins of the “verso” or the “recto”
Never the gutter—
For references to other books



RECENT ADVANCES



VERY HELPFUL – TO HAVE AN “ACTION SQUAD”

- Make a group of like-minded batchmates, where each reads and presents a “recent advance” topic



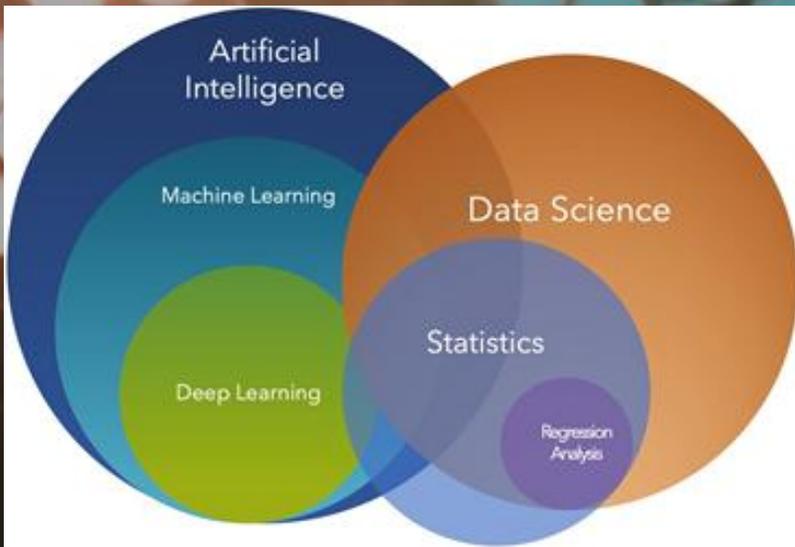
ROLE OF ARTIFICIAL INTELLIGENCE IN SURGERY.



Current and future applications of artificial intelligence in surgery: implications for clinical practice and research. Morris M X et al; REVIEW article. Front. Surg., 09 May 2024.

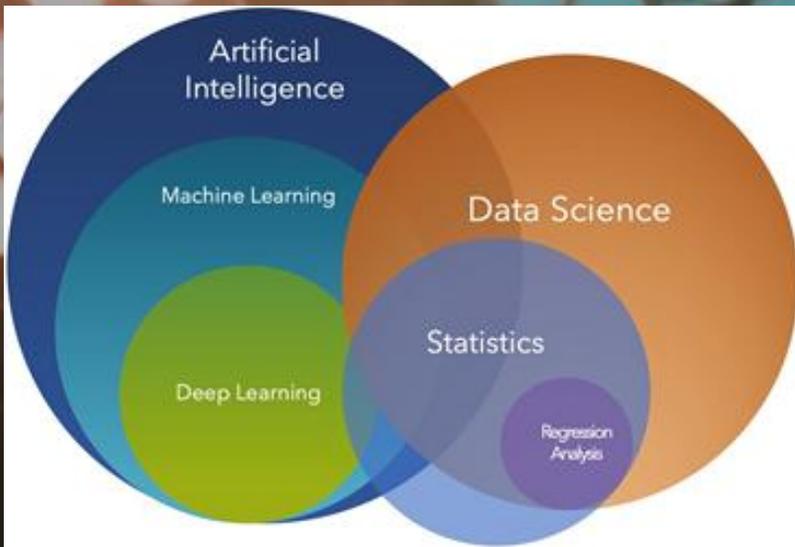
Sec. Reconstructive and Plastic Surgery.

Volume 11 - 2024 | <https://doi.org/10.3389/fsurg.2024.1393898>



ARTIFICIAL INTELLIGENCE IN SURGERY

- Relationship of Artificial Learning and Data Science as a Venn Diagram.
- Machine learning is a subset of AI focused on algorithms and statistical models.
- Deep learning, a subset of machine learning, employs multi-layered neural networks to model complex patterns and decision-making processes.



ARTIFICIAL INTELLIGENCE IN SURGERY

- Relationship of Artificial Learning and Data Science as a Venn Diagram.
- Data science, while related, is a distinct discipline that involves extracting knowledge and insights from structured and unstructured data.
- Regression analysis is a statistical technique used to understand relationships between variables and is often employed to predict outcomes.

AI IN SURGICAL LEARNING

- **AI-driven personalized training modules**
- **ADVANTAGES:-**
- Potential to optimize surgical practice, improve patient outcomes.
- Allows for the development of novel technology-enhanced learning platforms with personalized remote feedback, enhancing the overall learning experience.
- With the proper use of data, surgeons can achieve personalized decision-making for patients undergoing surgical procedures.

AI IN SURGICAL LEARNING

- **Objective assessment of surgical skills using AI analytics**
- **ADVANTAGES:-**
- Utilization of AI algorithms to analyze data collected during surgical simulations or actual procedures.
- Adoption of tools like Objective structured assessment of technical skills (OSATS) for graded evaluation based on specific criteria.
- Overcoming inter-observer bias and limited expert availability

AI IN SURGICAL LEARNING

- **CHALLENGE**

- Ease of access to research on specific topics.
- No way of assessing the true impact – was it a robust RCT or an industry driven exercise?
- Example - ChatGPT as a tool to aid plastic and reconstructive surgery residents for oral board examinations.
- It **CANNOT REPLACE** sitting with your textbooks and taking care of your patients. It can at best supplement it.

“BORROWED INTELLIGENCE” IN INDIA



2003

AI IN SURGICAL LEARNING

- **CHALLENGE IN PUBLISHING DOMAIN**
- AI can be useful to FACILITATE various steps of the evaluation, production and dissemination of scientific articles mediated by publishing houses.
- Editors and peer reviewers continue to play critical roles in evaluating authenticity, contextual accuracy, and the unique perspective an article provides to its readers to ensure the real-world implications of presented data are critically assessed.
- Moreover, emphasis needs to be placed on informing stakeholders about the application and limitations of AI within operational procedures, ensuring transparency and trust in the system.

INTEGRITY & ETHICS

- The worst place for your article.
- Editors know that a number of articles are AI generated!!!!

ORAL & PRACTICALS

- **MS TOTAL (400)**

- 1 Long case (100)
- 2 short case (40+40=80)
- 1 or 2 Ward Round (15+15=30)
- 1 Operative steps (50)
- Dissertation viva (20)
- OSCE (20)
- TABLES-----
 - Instruments 25
 - Specimen 25
 - Radiology 25
 - Problem card 25

- **DNB TOTAL (300)**

- Virtual OSCE 20 5 marks each 4-minute duration (100)
- Clinical Case 2 clinical cases 50 marks each. (100)
- Ward Rounds 4 ward rounds of 10 marks each (40)
- Viva voce 4 tables 15 marks each (60)
- Instruments 15
- Specimen 15
- Radiology 15
- Dissertation 15



**HERE'S
WHERE YOU NEED
YOUR TEAM HUDDLE ---**

CLINICS –is like a grand staircase!!

- A perfect option to build up your presentation without missing any step!!!
- Patients ID and profile. Introducing yourself.
- Detailed history in long case, a less elaborate history in a short case without missing important points.
- Important not to miss steps.
 - General survey – point out the positives, don't miss the important negatives.
 - Clinical examination – still goes through the process of inspection, palpation, percussion and auscultation.

A STRUCTURED APPROACH

- **FIRST STEP:-** A careful history, starting with the patient details..... Must include the Past Medical, Surgical and Drug History. Must include the relevant Social history.
- **When presenting the summary—**
- **Please avoid the following---**
 - **No.....**
 - **No.....**
 - **No.....**
 - **No.....**
 - **No.....**
- **Use the Kuppuswamy Scale if it helps.**



A STRUCTURED APPROACH

- **SECOND STEP:-** A robust clinical examination starting with
- The General Survey – a “Waterloo” moment.
- This is a **MUST KNOW** status that one **CANNOT** afford to get wrong.

Left Supraclavicular Node

GENERAL SURVEY

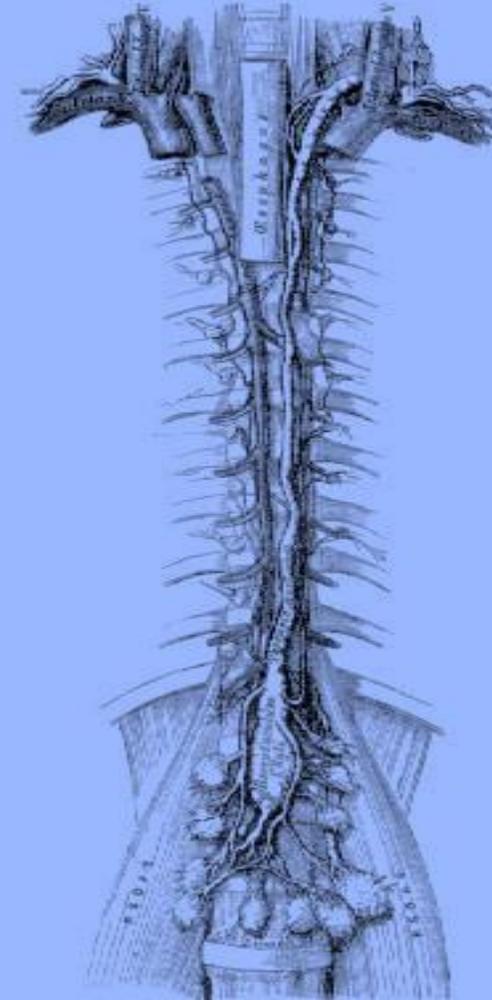
- Examination of the neck.

What node station is it?

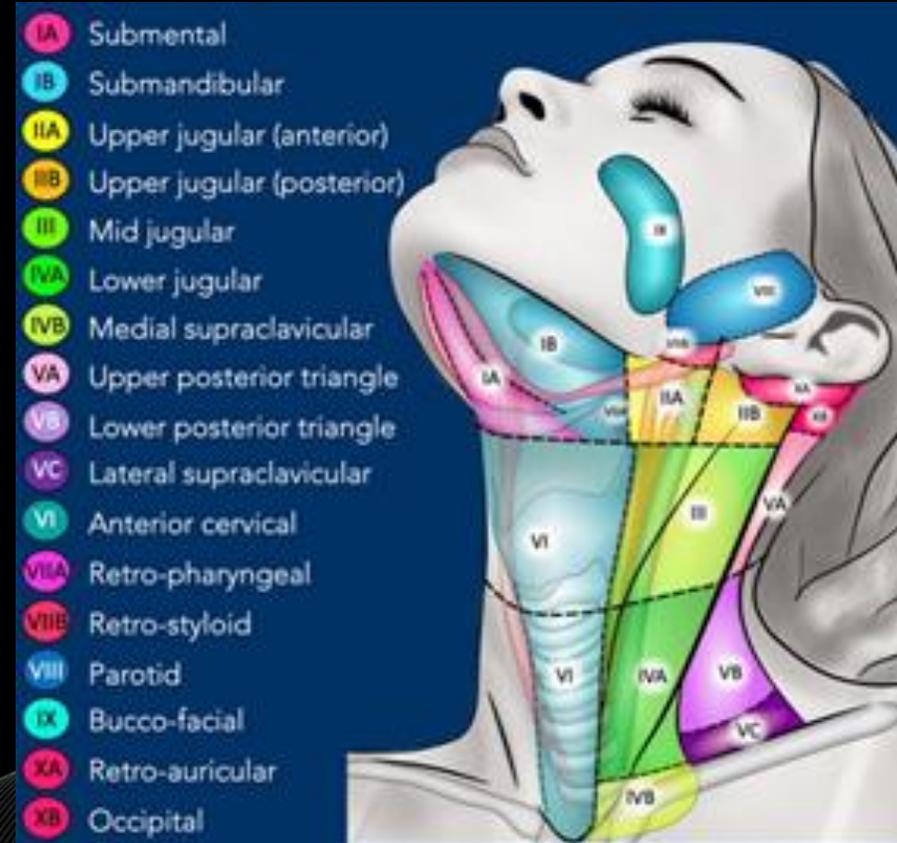
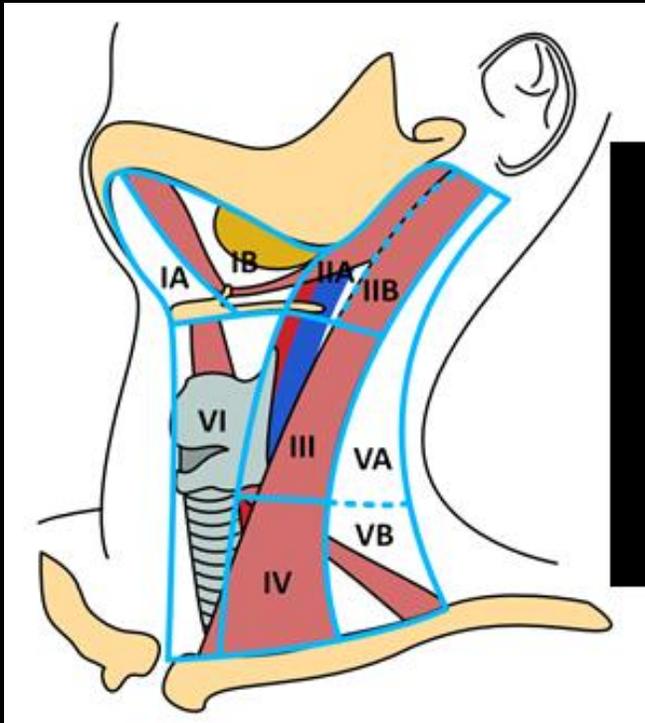
GENERAL SURVEY



The Thoracic and Right Lymphatic Duct



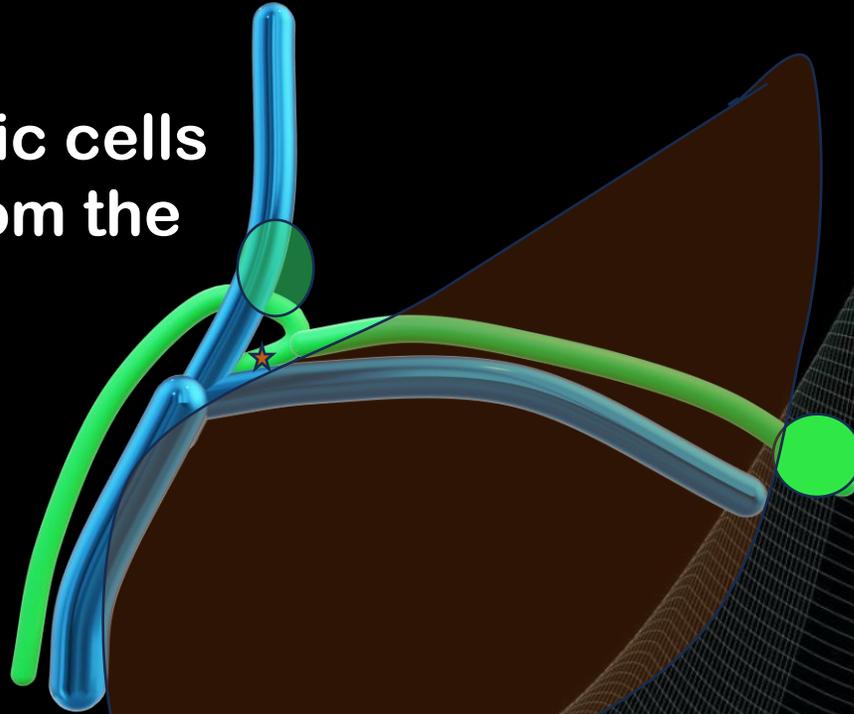
SURGEONS & RADIOLOGISTS NODE STATION OF THE NECK



<https://radiologyassistant.nl/head-neck/cervical-node-mapping/cervical-node-map>

FURTHER QUESTIONS?

Can the reflux of metastatic cells travel further upstream from the Supraclavicular node?



Rudolf Ludwig Karl Virchow (1821-1902) was a German doctor, anthropologist, pathologist, historian, biologist and **politician**, known for his advancement of public health.

Name another condition that Virchow lent his name to?

- Virchow's triad
- Conditions that precipitate venous thrombosis
 - Trauma
 - Stasis
 - Hypercoagulability

YOU ARE NOT EXPECTED TO COME OUT WITH:-----

1. **Virchow's angle**, the angle between the nasobasilar line and the nasosubnasal line.
2. **Virchow's cell**, a macrophage in Hansen's disease.
3. **Virchow's cell theory**, "omnis cellula e cellula" - every living cell comes from another living cell.
4. **Virchow's concept of pathology**, comparison of diseases common to humans and animals.
5. **Virchow's disease**, leontiasis ossea, now recognized as a symptom rather than a disease.
6. **Virchow's gland**, Virchow's node the presence of metastatic cancer in a lymph-node in the supraclavicular fossa (root of the neck left of the midline). Also known as Troisier's sign..
7. **Virchow's Law**, during craniosynostosis, skull growth is restricted to a plane perpendicular to the affected, prematurely fused suture and is enhanced in a plane parallel to it.

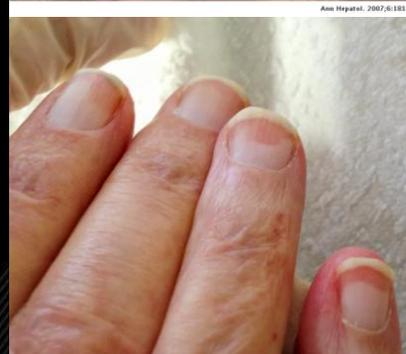


YOU ARE NOT EXPECTED TO COME OUT WITH:-----

8. **Virchow's line**, a line from the root of the nose to the lambda.
9. **Virchow's metamorphosis**, lipomatosis in the heart and salivary glands.
10. **Virchow's method of autopsy**, a method of autopsy where each organ is taken out one by one.
11. **Virchow's psammoma**, psammoma bodies in meningiomas.
12. **Virchow-Robin spaces**, enlarged perivascular spaces (EPVS) (often only potential) that surround blood vessels for a short distance as they enter the brain.
13. **Virchow-Seckel syndrome**, a very rare disease also known as "bird-headed dwarfism".
- ✓ 14. **Virchow's triad**, the classic factors which precipitate venous thrombus formation: trauma, stasis and hypercoaguability.

A STRUCTURED APPROACH

- Stigmata of liver failure



A STRUCTURED APPROACH

- Have the general survey and it's lead questions
- “PICTURE PERFECT”.
- Use KARNOFSKY SCALE if you are diffident about labelling your diagnosis as malignant.
- ECOG is NOT for benign diseases.

CLINICAL EXAMINATION

- The following sequence has stood the test of time, ever since the beginning of medical education:-
 - Inspection
 - Palpation
 - Percussion
 - Auscultation

CLINICAL EXAMINATION

- It is a sensible idea not to spend too much time on the usual litany
- *“I have examined the patient after taking permission in a well lit room, having arranged for chaperone.....”*
- Keep talking while examining.
- It is pointless to spend 7 minutes of your VALUABLE time on trying to demonstrate a “radio-radial delay” and an equal amount of time on nuances of pulse, BP, temperature etc.



CLINICAL EXAMINATION

- What is important however is:-
- **NOT TO MISS**
 - Examining an inguinal hernia standing and lying.
 - Examining a breast lump in lying, propped up and sitting position.
 - Examining a thyroid lump both from the front, side and palpation from the back. Have a glass of water handy.
 - Examining an abdomen from the side, foot end and tangentially.
 - Examination of the external genitalia and hernial sites.

CLINICAL EXAMINATION

value of examining the abdo. tangentially



CLINICAL EXAMINATION

- **SUMMARISE**, the summary must be
 - Succinct.
 - Specific.
 - Suggest your diagnosis.
 - Skimming unimportant negatives.
 -
- **SCREEN YOURSELF!!**
- **Show yourself to your peers!!**



DIAGNOSIS

- PROVISIONAL DIAGNOSIS
 - Give your CLINIC BASED REASONS.
- DIFFERENTIAL DIAGNOSIS
 - Please elucidate CLINICAL REASONS AGAINST THESE.

CLINICS CLINICS ONLY CLINICS

MOST IMPORTANT PHASE OF YOUR EXAMINATION

- Reasoning.
- Rationale.
- Review your exercise.
- Scheme. (springboard).



WHAT WILL YOU DO?

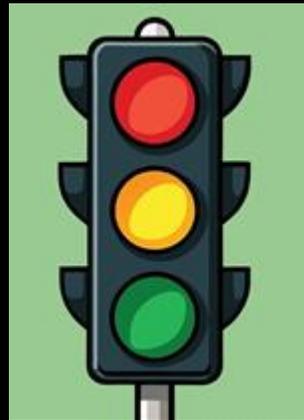
CONFIRM MY
DIAGNOSIS



STAGE THE
DISEASE(?)



INSTITUTE
TREATMENT

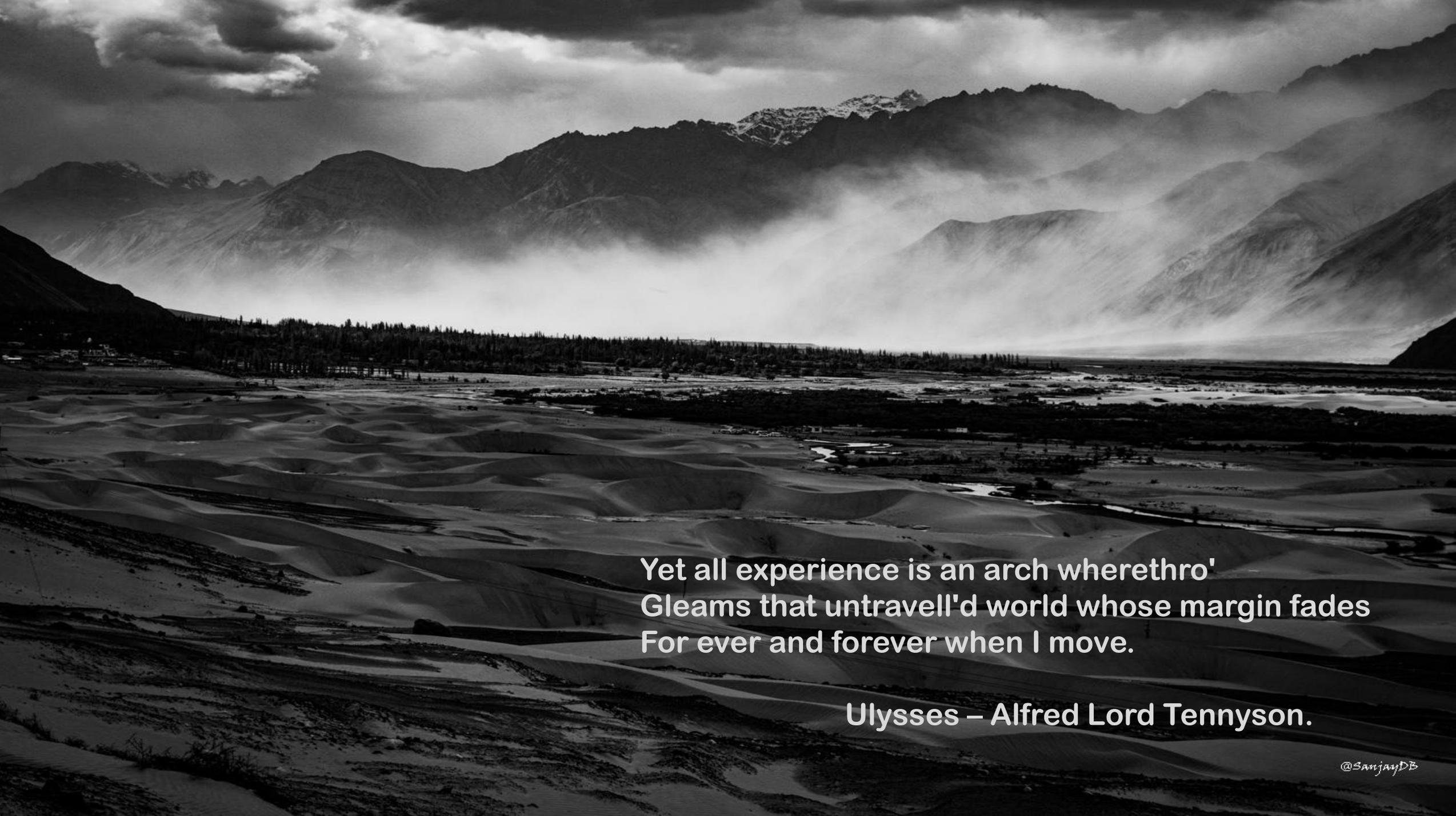


IMRCS EXAMINATION

- 20 OSCE stations – 9 minutes each. Break after 10 bays.
- Applied basic sciences; Anatomy; Physiology; Biochemistry.
- Clinical Bays not allowed to take a history but **MUST INTRODUCE YOURSELF AND KNOW THE PATIENTS NAME.**
- Procedural Bays.
- **COMMUNICATION BAYS.**
 - Communication Gathering
 - Communication Giving.

BEING HUMANE – SOMETHING TOO OFTEN OVERLOOKED!!





Yet all experience is an arch wherethro'
Gleams that untravell'd world whose margin fades
For ever and forever when I move.

Ulysses – Alfred Lord Tennyson.