ONCOANESTHESIA: An emerging sub-speciality

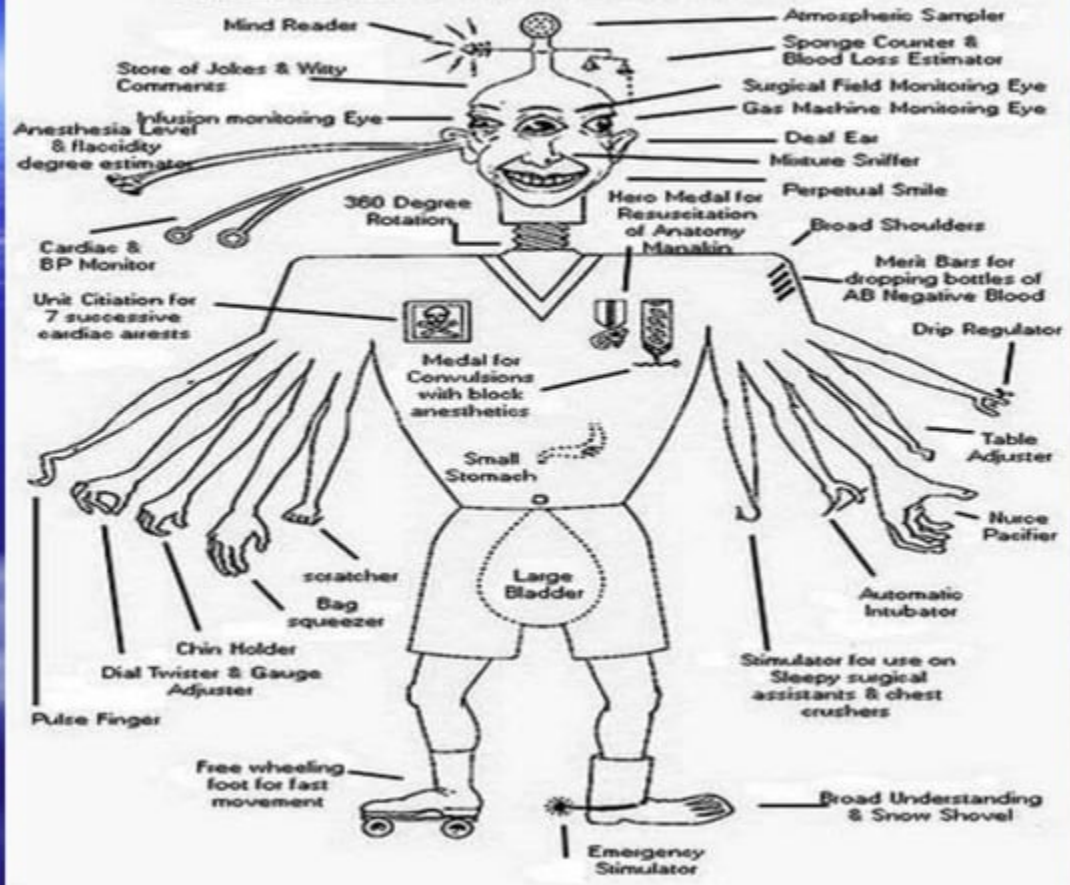
DR. ABHIJIT S. NAIR
Consultant Anesthesiologist
BIACH & RI, Hyderabad


BASAVATARAKAM INDO-AMERICAN CANCER HOSPITAL
AND RESEARCH INSTITUTE

- Anesthesiology: complex speciality
- Anesthesiologist: JACK OF ALL
- Several subfields/ sub-specialities



THE IDEAL ANESTHETIST



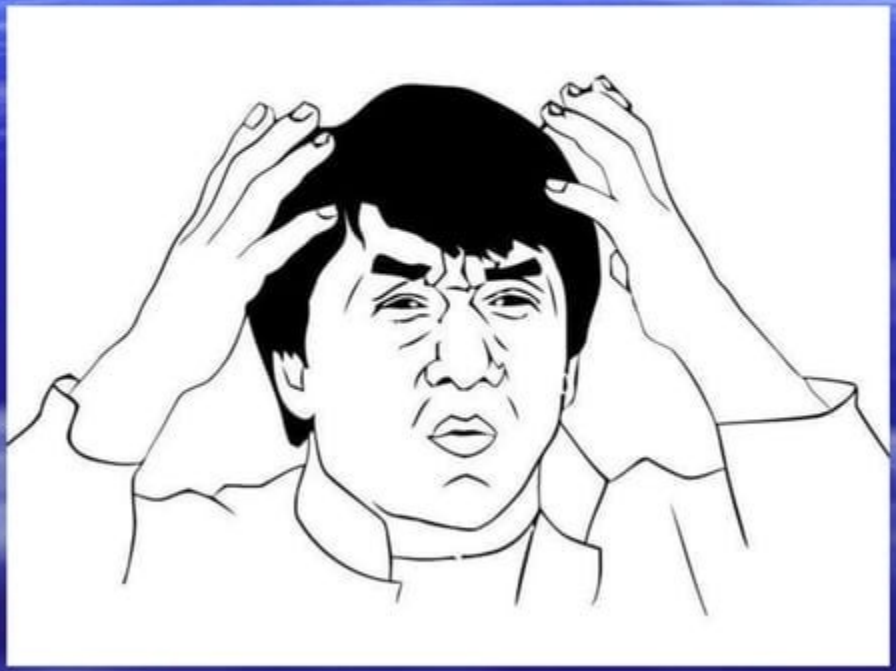
Anesthesiology

- Cardiothoracic (Adult/ Pediatric)
- Neuro-anesthesia
- Obstetric
- Pediatric
- Geriatric
- Regional
- Intensive Care
- Chronic Pain

cont

- Orthopedic
- Transplant (Liver)
- Ophthalmic
- Bariatric
- Ambulatory
- Trauma
- Palliative care
- ***ONCOANESTHESIA***

Around 16 sub-specialties



Sub-specialities involved in Oncoanesthesia

- Cardio-thoracic
- Neuro-anesthesia
- Obstetric
- Pediatric
- Geriatric
- Regional
- Intensive Care
- Chronic Pain
- Orthopedic
- Transplant (Liver)
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- Trauma
- Palliative care

9 1/2 i.e. 60 %



Cancer patient

Needs special consideration

- ✓ Stigma (pain, suffering, **IT'S OVER**)
- ✓ Lack of awareness
- ✓ Isolate themselves socially/ self-imprisonment
- ✓ Anxiety/ lack of interest
- ✓ Absenteeism (work, school)
- ✓ Social support (family, colleagues, friends)

Cont.

- ***Chemotherapy***
- Radiation
- Immunity affected
- Malnourished
- Hemostatic changes
- PONV

Anesthesiologist in cancer hospital

- Involved in patient care in several stages



Diagnostic

Facilitates treatment

- Radiotherapy
- BMT
- I/T injections

Peri-operative

Pain clinic

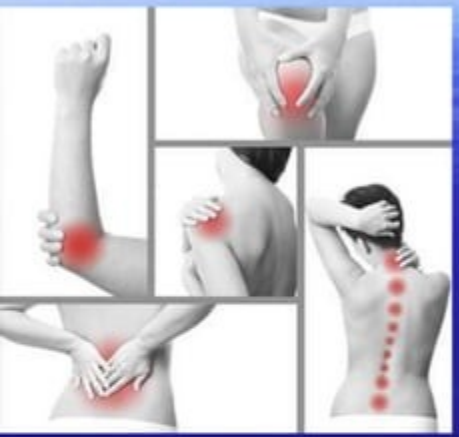
Medical emergency

Palliative care

Why?

- High risk patients (elderly, co-morbidities)
- Sick patients
- Supra major surgeries (***Oesophagectomy***, thoracotomy, laparotomy, mega-prosthesis)
- Major blood loss, massive transfusion
- ***Post chemotherapy status***
- Post radiation status

- Pain management (acute/ chronic)



50-70 % patients experience pain which is sub-optimally treated



DIFFICULT AIRWAY



C-MAC

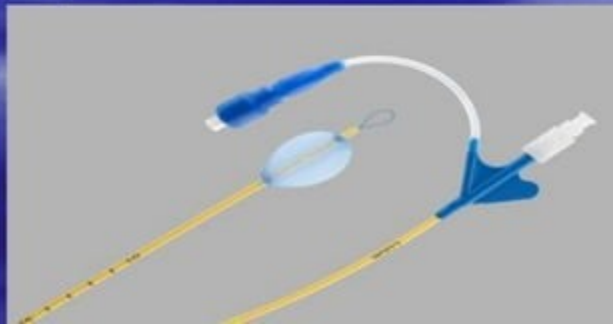


FOB



One lung ventilation

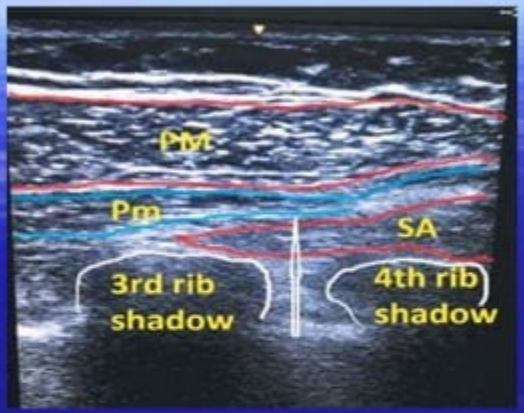




- Regional anesthesia

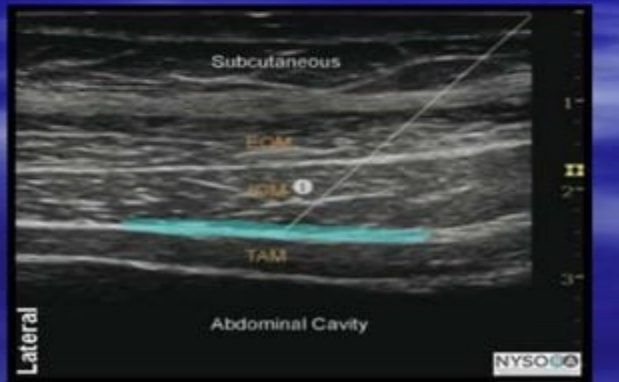





PMt
Pm
SA
3rd rib shadow
4th rib shadow


Skin and subcutaneous tissue
External oblique
Internal Oblique
LA spread
Transversus abdominis
Bowel


Rectus muscle
Transversus muscle
Subcostal TA plane


Subcutaneous
EOM
IOM
TAM
Abdominal Cavity
Lateral

- Nutritional issues peri-operatively
- Electrolyte imbalance
- ***Post-chemotherapy status***

ECOG	Description
0	Fully active, able to carry on all pre-disease performance without restriction.
1	Restricted in physically strenuous activity but ambulatory and able to carry out work of a light or sedentary nature, e.g., light house work, office work.
2	Ambulatory and capable of all selfcare but unable to carry out any work activities. Up and about more than 50% of waking hours.
3	Capable of only limited selfcare, confined to bed or chair more than 50% of waking hours.
4	Completely disabled. Cannot carry on selfcare. Totally confined to bed or chair

Eastern Cooperative Oncology Group

Oken MM, Creech RH, Tormey DC, Horton J, Davis TE, McFadden ET, Carbone PP.Toxicity and response criteria of the Eastern Cooperative Oncology Group.Am J Clin Oncol. 1982 Dec;5(6):649-55.

Subjective Global Assessment

- A: Well nourished
- B: Moderately malnourished (suspected)
- C: Severely malnourished

HISTORY

1. Weight change
2. Dietary intake change
3. GI symptoms > 2 wks
4. Functional capacity
5. Related to disease

PHYSICAL EXAMINATION

1. Loss of fat
2. Muscle wasting
3. Oedema
4. Ascites

Bauer J, Capra S, Ferguson M. Use of the scored Patient-Generated Subjective Global Assessment (PG-SGA) as a nutrition assessment tool in patients with cancer. Eur J Clin Nutr. 2002 Aug;56(8):779-85.

NUTRITIONAL ASSESSMENT AND RISK LEVEL FORM

Date Admitted	Room / Bed No.	File No.	PIN	
Patient's Name (Last, First, Middle Name)			Age	Sex
Height (m)	Weight (kg)	BMI		
Attending Physician	Diagnosis			

Criteria	Normal / Mild	Moderate	Severe
Weight Loss	☐ none	☐ < 10% of usual weight	☐ > 10% of usual weight
Food Intake (last 1-2 months)	☐ no change	☐ suboptimal	☐ starvation
Gastro symptoms (>2 weeks)	☐ none	☐ nausea, vomiting	☐ anorexia, diarrhea severe
Functional Capacity	☐ no change	☐ dysfunction < 3 weeks suboptimal work bedridden < 2 weeks	☐ bedridden > 2 weeks
Disease and relation to nutritional requirements	☐ no or low stress	☐ moderate stress	☐ severe stress
Physical Examination	☐ 0 subcutaneous fat and/or muscle loss	☐ +1 to 2 subcutaneous fat and/or muscle loss	☐ +3 subcutaneous fat and/or muscle loss
Edema / Ascites	☐ none	☐ none	☐ +1 or +2
SGA Grade	A 0 ☐	B 1 ☐	C 3 ☐
BMI	18.5 – 24.9 0 ☐	25 – 29.9 1 ☐	< 18.5 or ≥ 30 2 ☐
Albumin g/dL	> 3.4 0 ☐	2.5 – 3.4 1 ☐	< 2.5 2 ☐
TLC	≥ 1500 0 ☐	900 but < 1500 1 ☐	< 900 2 ☐

TOTAL SCORE ☐

NUTRITION RISK LEVEL

0	☐ Level 1	LOW RISK
1-2	☐ Level 2	MODERATE RISK
≥ 3	☐ Level 3	HIGH RISK

NUTRITIONAL STATUS

- ☐ Normal
- ☐ Moderate malnutrition
- ☐ Severe malnutrition

☐ **Risk Level 1 or 2**

Would you like to refer your patient to the Clinical Nutrition Dietitian for follow-up?

☐ Yes ☐ No

Name and Signature of Attending Physician

Date

☐ **Risk Level 3**

Required to be followed up by the Clinical Nutrition Physician

Assessed by:

- Critical care issues
- Vascular access
- USG (lines, blocks, airway, Neuraxial)





Learning opportunities:

- Airway skills (gadgets, FOB, Em. tracheostomy, airway USG)
- USG (regional anesthesia, ICU)
- Hemodynamic monitoring
- ICDs
- Peri-operative nutrition

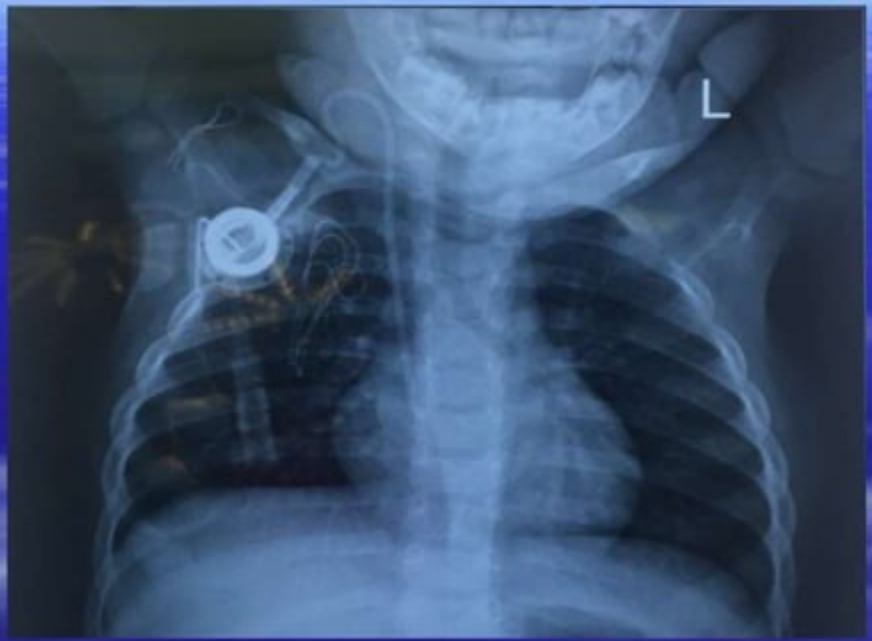
Advanced vascular access (Chemoport, Hickman, PICC: Groshong, Broviac)









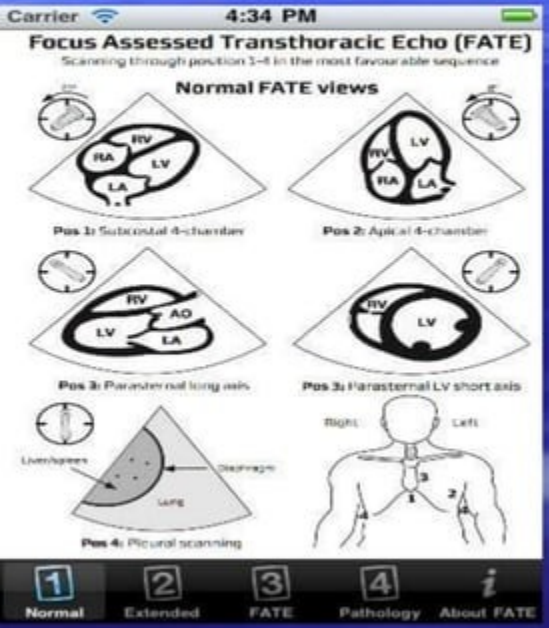

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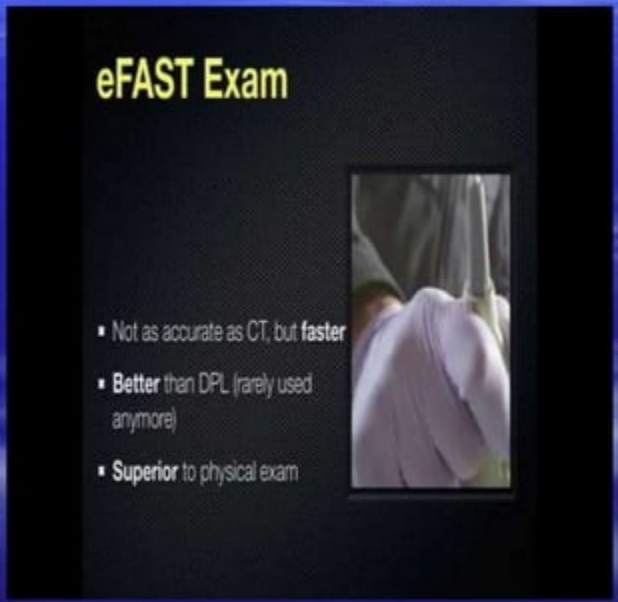
Intensive care



- Rationale use of vasopressor
- Ventilation strategies (invasive/ non-invasive)
- Difficult weaning
- Percutaneous tracheostomy

FATE/ FAST applications





ct

- Evidence based antibiotic use
- Resuscitation
- Palliative care
- Communication skills
- Documentation

Other advantages:

- Single specialty centers
- High volume centre
- Teaching hospital
- Research
- Retrospective data
- RCTs, case series
- COHORT's

Fellowships :

- TMH, Mumbai
- TMH, Calcutta
- HCG Cancer Centre, Ahmedabad
- Max Hospitals, New Delhi

DM Oncoanesthesia

- Dr. Bhimrao Ambedkar Institute-Rotary Cancer Hospital, under the aegis of AIIMS, New Delhi



Onco-centres In India:

- TMH (Mumbai, Kolkata)
- Adyar CI
- Kidwai Memorial Institute of Oncology
- GCRI
- MGCH & RI, Vizag
- RGCI & RC, Indraprashtha
- Chittaranjan National CI, Kolkata
- Dharamshila Hospital, Delhi NCR

etc

In Hyderabad

- **BIACH & RI**
- MNJ
- AOI/ Citizens Hospital
- Apollo
- Yashoda Hospitals
- Care Hospitals, Gachibowli !!

SCOPE

- Cancer hospitals on the rise
- Cancer incidence more
- Separate cancer blocks in several corporate hospitals
- Anesthesiologists trained in oncoanesthesia: an asset

- Can manage OT, SICU, Oncology medical ICU
- Pain clinics
- Perioperative physicians
- Team leaders, educators
- Trained in procedures :

  Vascular access (routine and advanced), IT injections, PCDT

Conclusion

- Anesthesiologists working in oncology centers are exposed to all aspects and almost all sub-specialties of Anesthesiology
- Onco-anesthesia is not a sub-speciality; it's a super-speciality


20 min


THANK YOU FOR
LISTENING
TO MY PRESENTATION