PRINCIPLES IN MANAGEMENT

GIT CANCER

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Dr. S.G. Balamurugan

M.S , M. Ch, FRCS., Ph.D.,

Dr. S.G. Balamurugan

M.S , M. Ch, FRCS., Ph.D.,

- **SURGICAL ONCOLOGIST** - GURU HOSPITAL, MADURAI,
- **ADJUNCT PROFESSOR** - THE TN DR M.G.R MEDICAL UNIVERSITY, CHENNAI,
- **EC MEMBER** , ASSOCIATION SURGEONS OF INDIA
- **PAST SECRETARY**, ASSOCIATION SURGEONS OF INDIA, TAMILNADU 2018- 2022
- **PAST SECRETARY**, IMA HOSPITAL BOARD, TAMILNADU 2020 -2021
- **NABH ASSESSOR**

GOVT RAJAJI HOSPITAL - MADURAI

GOVT ROYAPETTAH HOSPITAL - CHENNAI

IT IS DESIGNED FOR PG TO UNDERSTAND

- PRINCIPLES IN MANAGEMENT

GIT CANCER

- **Clearance**
- **Margin**
- **Plane**
- **Principle of Lymphadenectomy**
- **Extend of the disease - Locoregional VS Metastasis**

Fact should know FIRST

FIGHTING AGAINST CANCER

- I am a ONCO SURGEON
- When treating the GIT cancer what should I know?

ONCOLOGICAL NORMS IN CANCER CURE

Adequate Surgery + Adjuvant therapy is the Standard treatment

Adjuvant treatment is not an answer to incomplete surgery

WHERE SHOULD ONE FOCUS

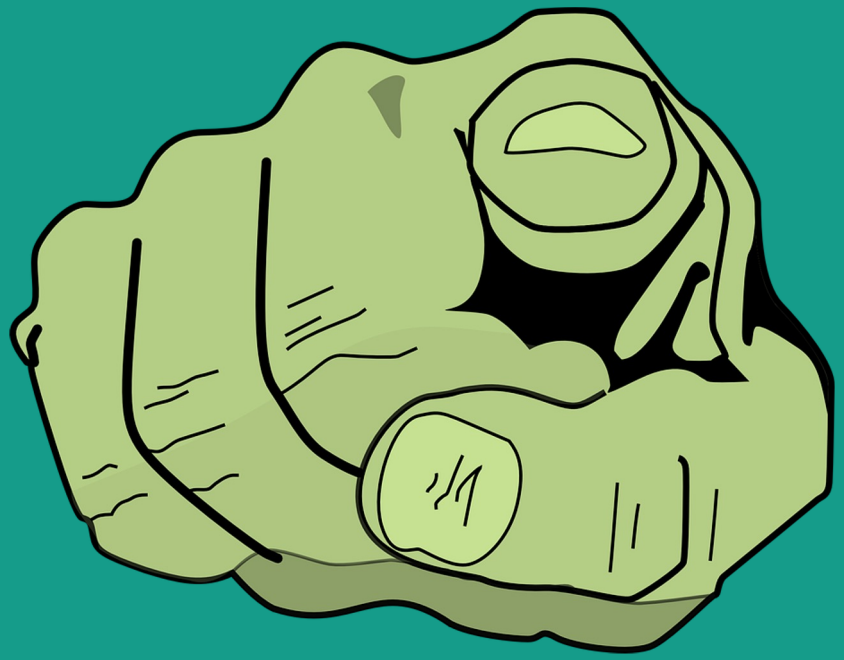
- 1 linear margin
- 2 lateral margin

WHICH MARGIN TO BE FOCUSED?

- G I T CANCER FAILS MORE AT RADIAL MARGINS

Radial Margin
MORE IMPORTANT THAN
linear margin

YOU



OPERATING SURGEON – YOUR RESPONSIBILITY

BEST OUTCOME

simultaneous achievement of the

- cure of the cancer
- Quality of life

RADICAL SURGERY - SAFETY MARGIN IS NARROW

RESPONSIBLE SURGERY?

- Achieving R0 Resection –

- Excision of tumor with wide clearance & lymphadenectomy

With - restoration of function

WHY R0 RECESCTION

WHY R0 RESECTION?

- Complete surgery (margin negative) only has survival advantage
- Not all patients who undergo surgery with curative intent have their tumor successfully removed
- On table- inoperable, who undergo surgical exploration had no survival advantage but had morbidity,

OPERABILITY?

- Operability to be decided before surgery

DO'S & DONT'S

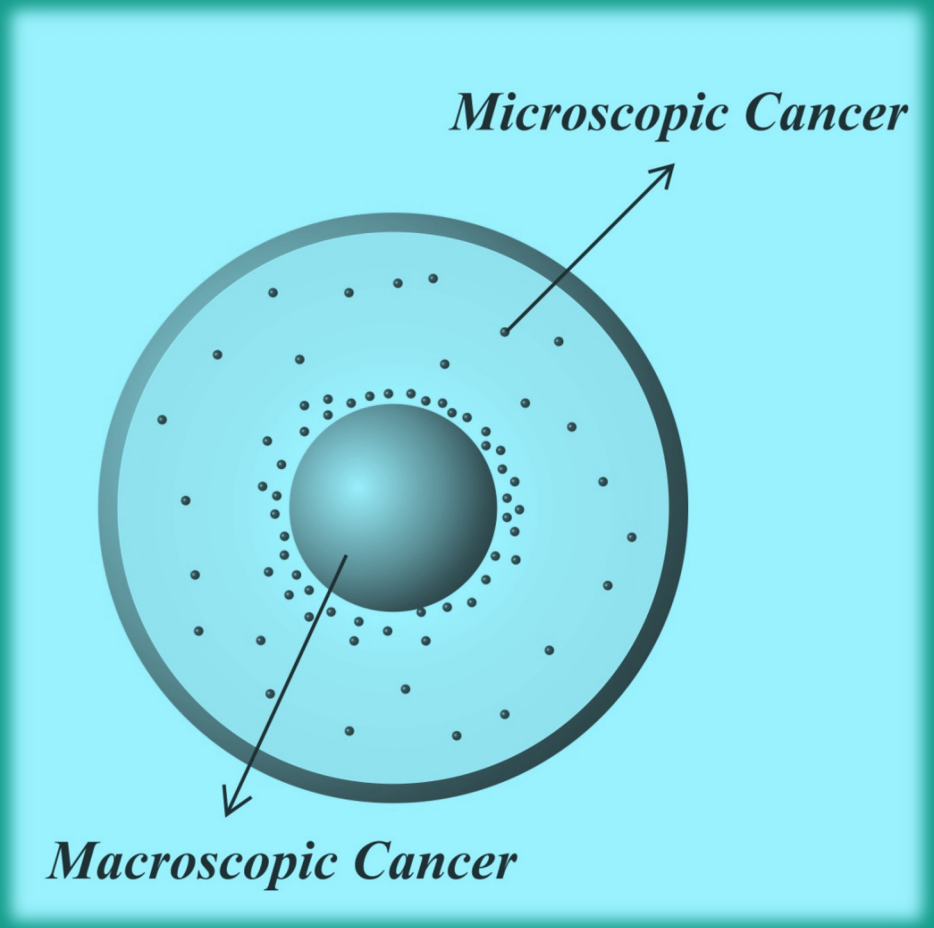
DO'S

- Surgical planes
- Tumor handling
- Tumor margins
- Node count
- Ligating artery at its origin

DONT'S

- Tumor spill
- Crushing of lymph node

MARGIN


Microscopic Cancer
Macroscopic Cancer

LINEAR MARGINS

- Mucasal margin- vertically

- Proximal
- Distal

ADEQUATE SURGERY- HOW MUCH CLEARENCE?

- Esophagus - 10 cm
- Stomach - 5 cm
- Hepatobiliary - 1 cm
- Pancreas - 1 cm
- Colon - 5 cm

LATERAL MARGINS

1 –Lymphadenectomy

2 –Periluminal tissue
Mesorectal excision
Adjacent organs

ADEQUATE LYMPHADENECTOMY
HOW MANY NODES?

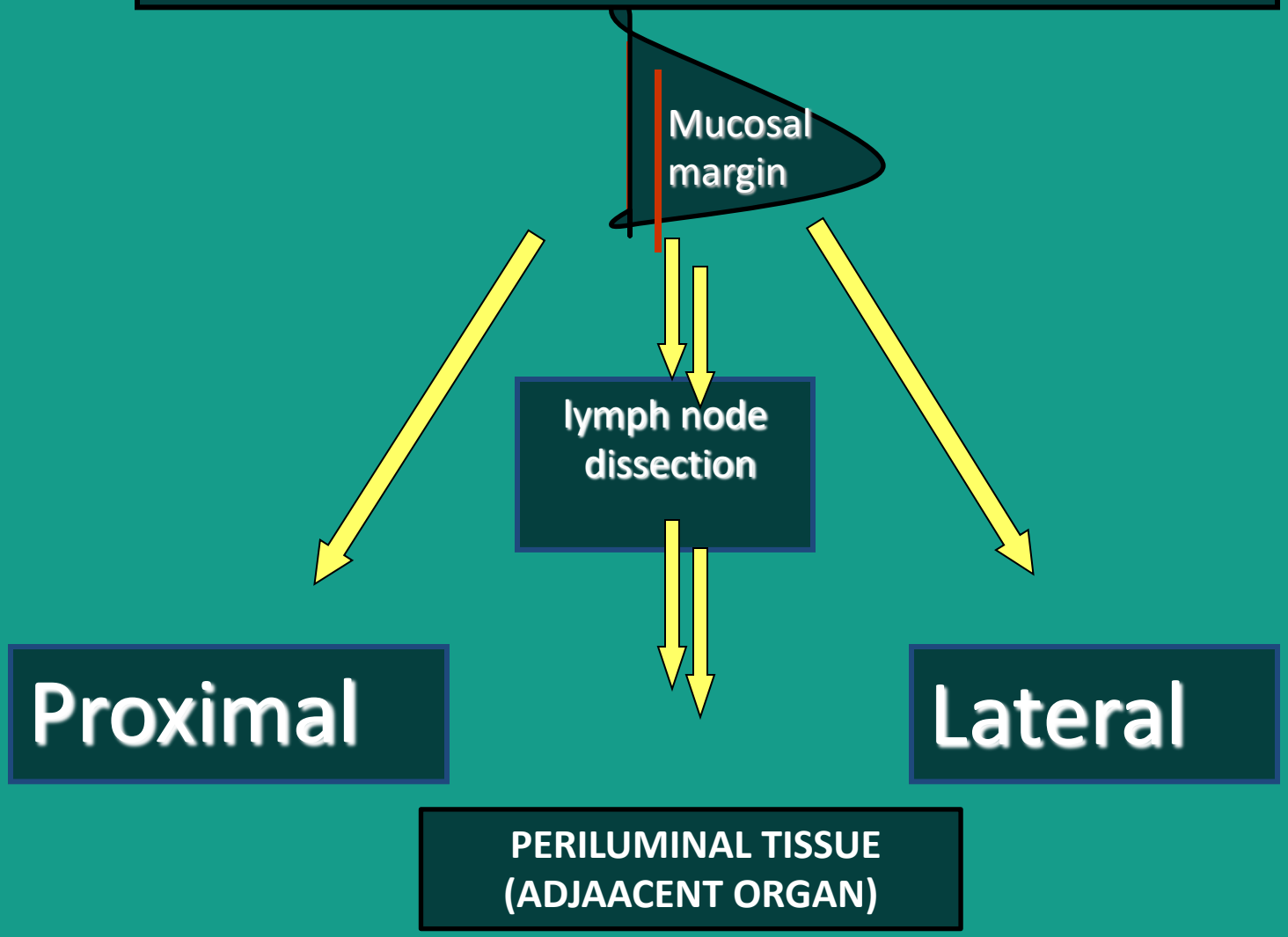
Number of resected node

Number of positive node

ADEQUATE LYMPHADENECTOMY HOW MANY NODES?

- Esophagus - 25 nodes
- Stomach - 15 nodes
- Hepatobiliary - 3 nodes
- Pancreas - 10 nodes
- Colon - 12-15 nodes

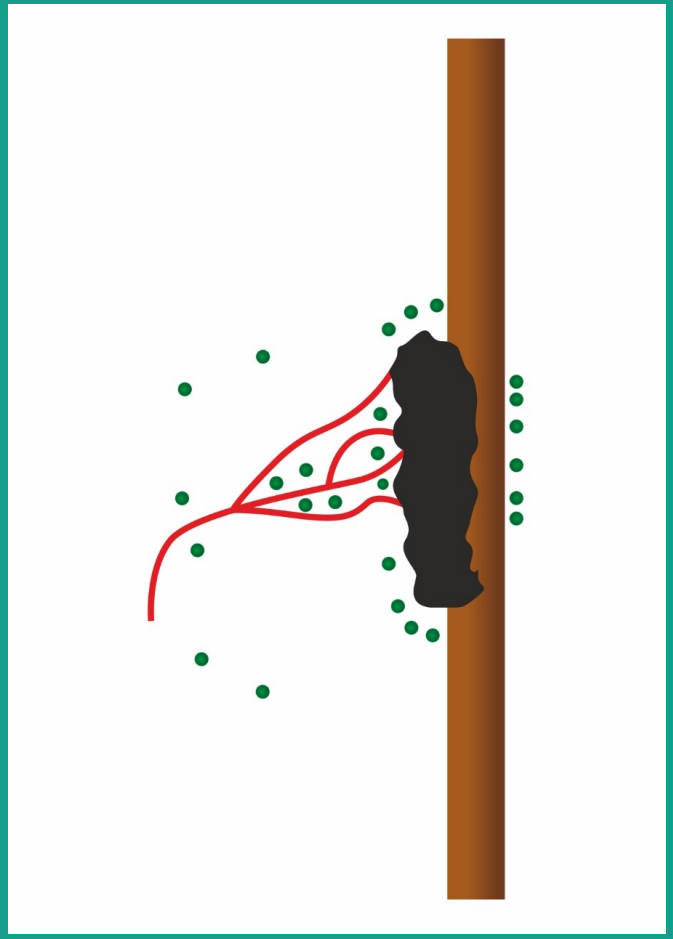
What follows is…….



LATERAL DISSECTION

EXTEND OF SURGERY

NODES



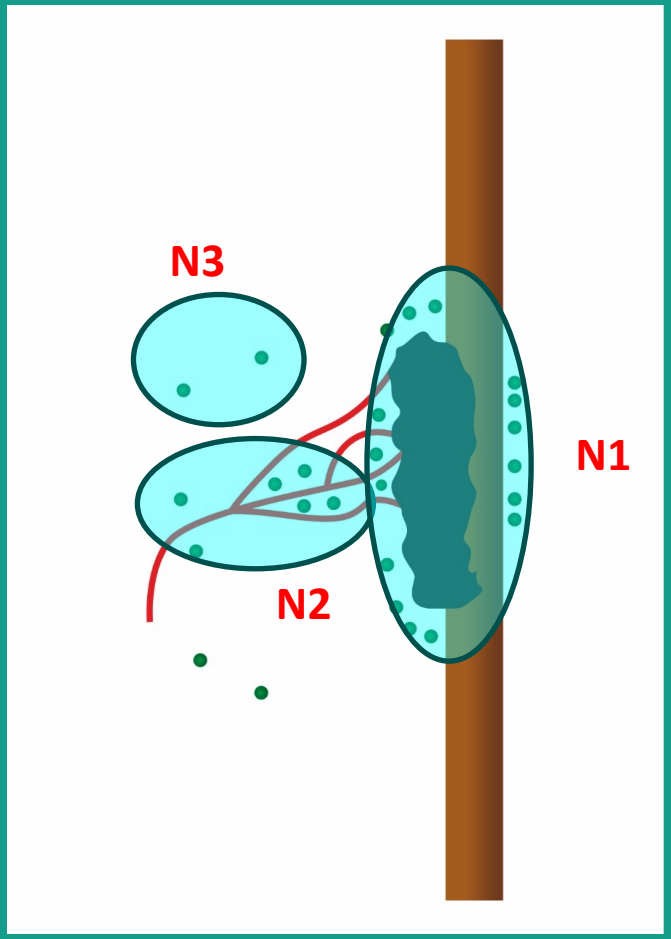
LYMPHATIC DRINAGE

- N1, N2 nodes are Regional nodes and N3 nodes are Metastasis

  Involvement of N3 nodes is a contraindication for radical surgery

- N1, N2 nodes are should be removed to achieve cure

N1, N2, N3 NODES

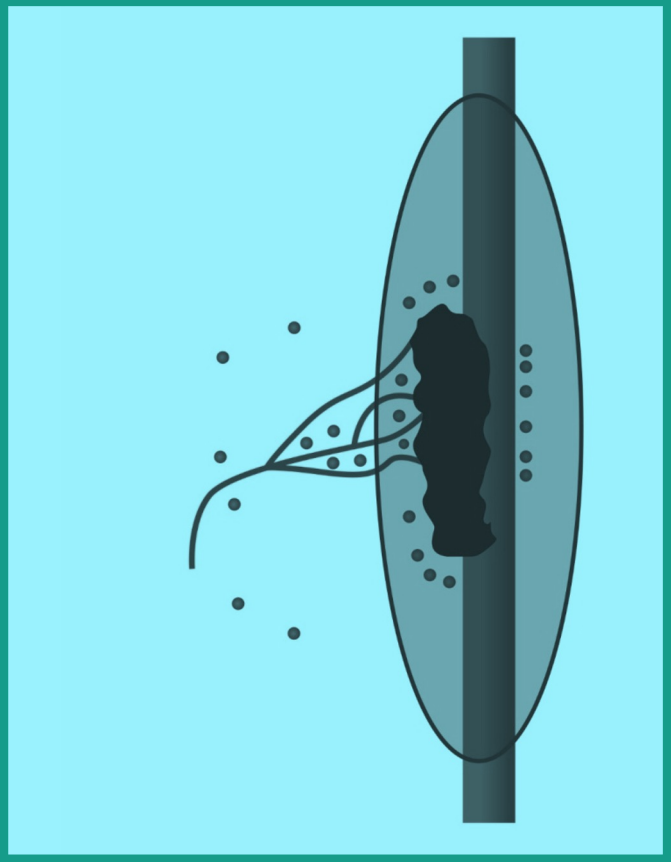


N1, Periluminal Nodes

N2, Nodes along the Vessels

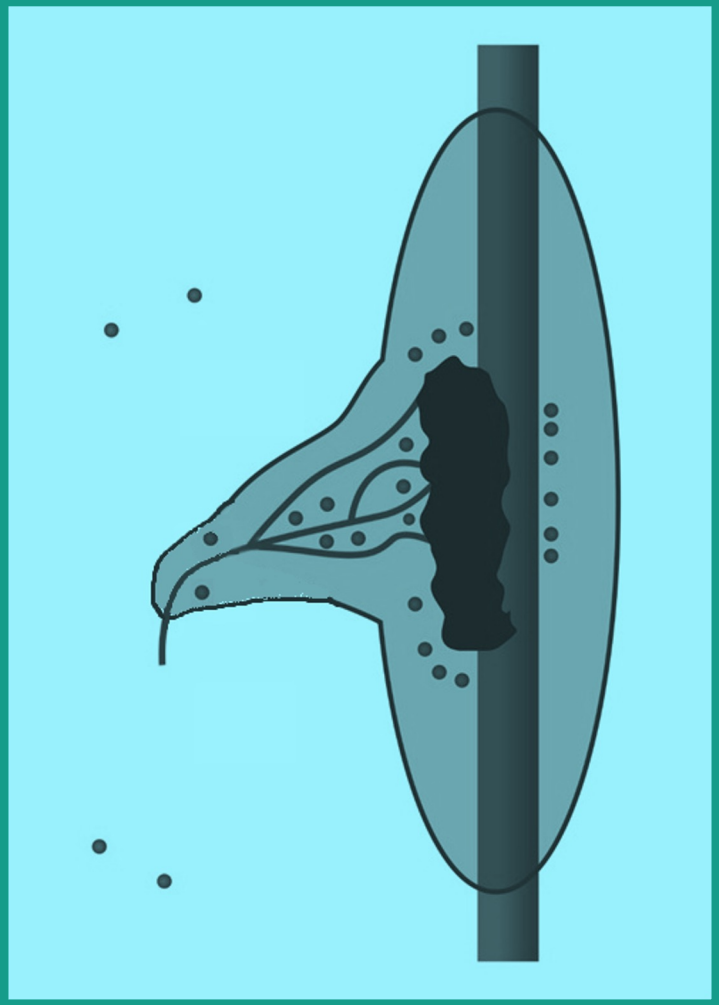
N3 Nodes in the Peritonium

IS IT A ADEQUATE SURGERY ?



Ro RESECTION

- **WHAT IS ADEQUATE SURGERY ?**



N3 (NON-REGIONAL NODE) METASTASIS?

- Esophagus - celiac nodes/supraclivicular node
- Stomach - N3- nodes (Para aortic nodes)
- Pancreas - celiac nodes
- Colon - S.M.A / I.M.A nodes
- Rectum - Common iliac nodes

WHEN SURGERY TO BE DONE?

CURE IN ONCOLOGY

By doing R0 resection

cure is only possible in loco regional disease

Disease confined to

Primary Tumor

Regional Node

WHEN SURGERY SHOULD NOT BE BE DONE?

CURE NOT POSSIBLE

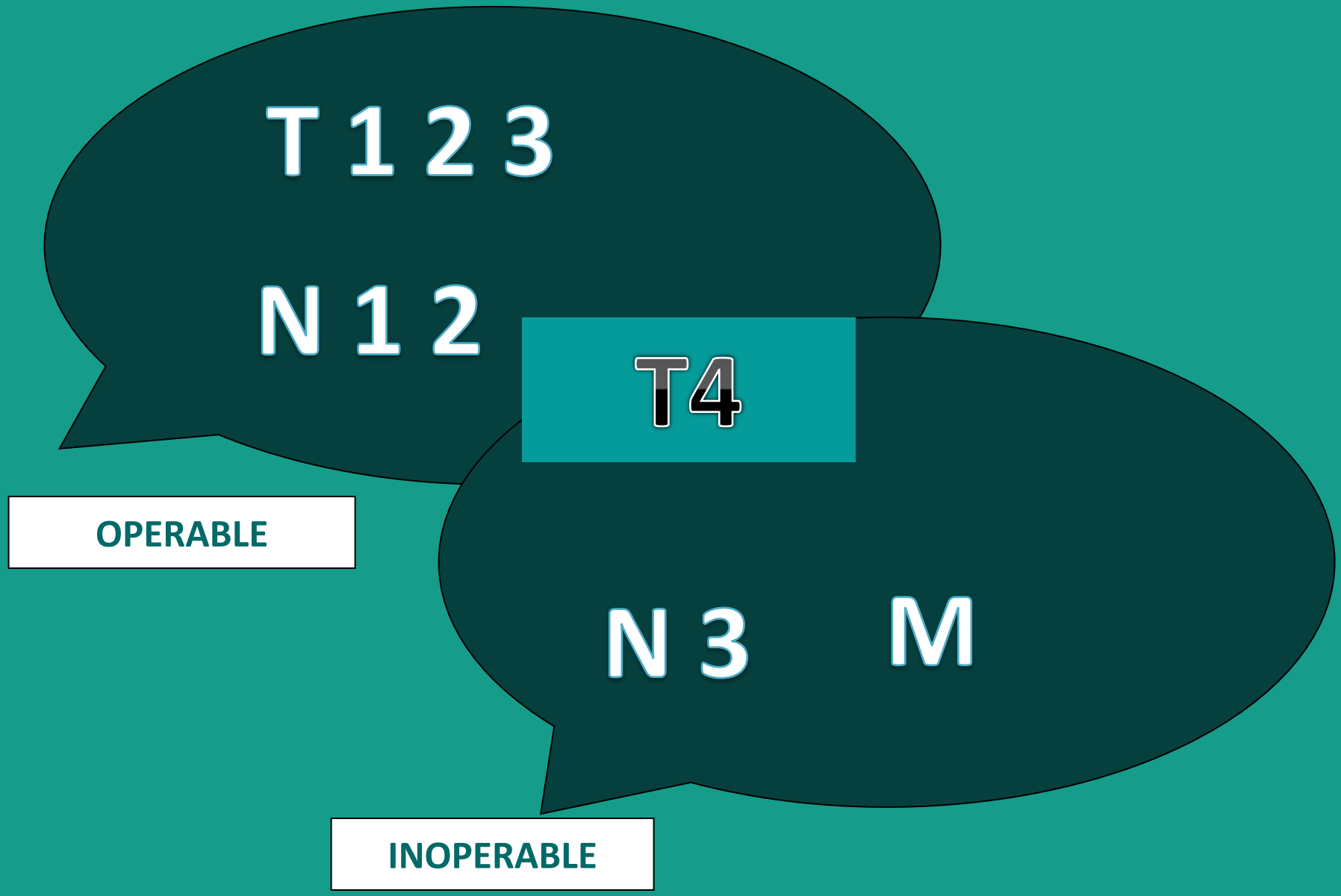
By doing Surgery

cure is not possible in extended disease

Disease extend into

Non-Regional Node

Distal metastasis


T 1 2 3
N 1 2
T4
OPERABLE
N 3 M
INOPERABLE

RESECTABILITY RATE

- Esophagus - 20%
- Stomach
  - Proximal - 20%
  - Distal - 35%
- Hepatobiliary - 15%
- Pancreas - 20%
- Colon - 95%

NODAL ANATOMY

OESOPHAGUS

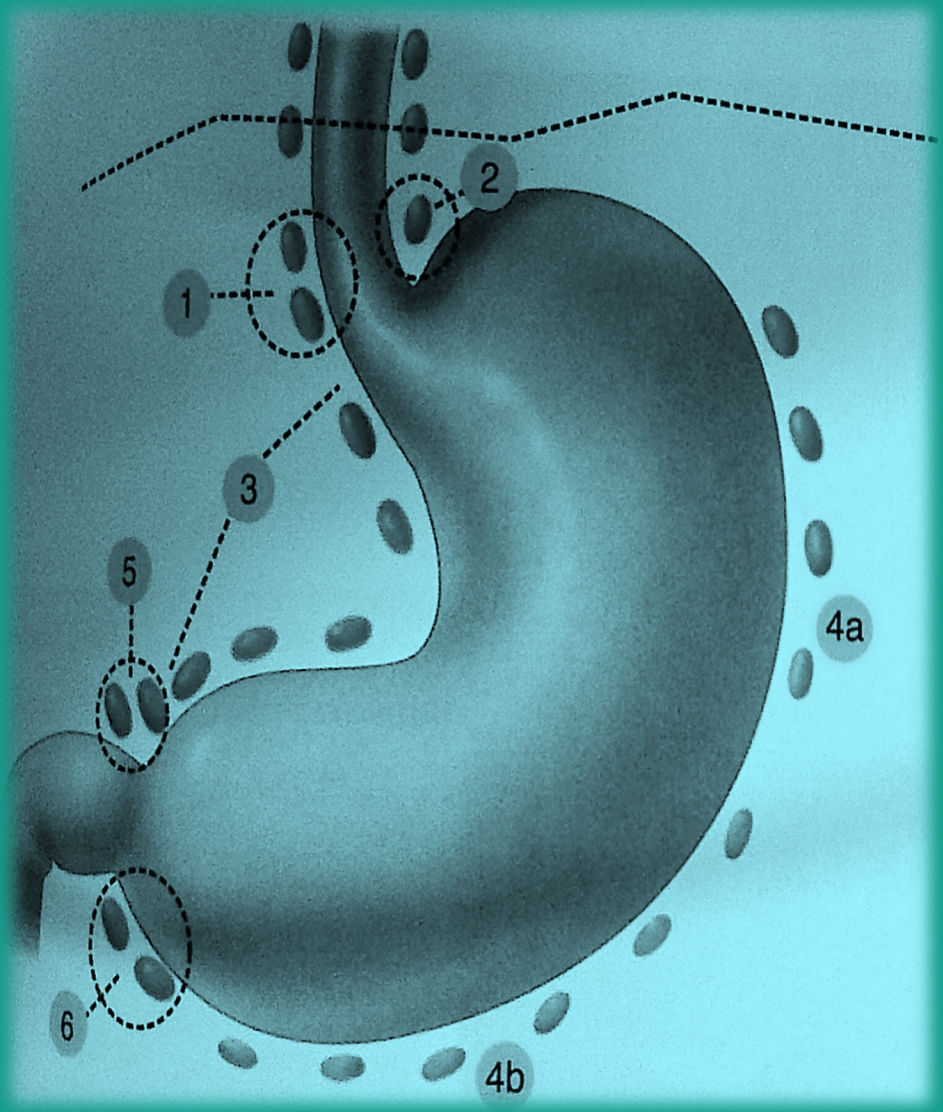
THREE FIELD LYMPHADENECTOMY

- **40 % of middle third and 20 % of lower third cancers have metastases** in neck nodes
- 20 % of upper third cancers have metastases in celiac nodes

T.H.E VS 3 FIELD ESOPHAGECTOMY

	THE (Orringer et al.,)	3 FIELD (Akiyama et al.,)
5 Yr Survival	27%	41%
Local recurrence	60%	10%

STOMACH

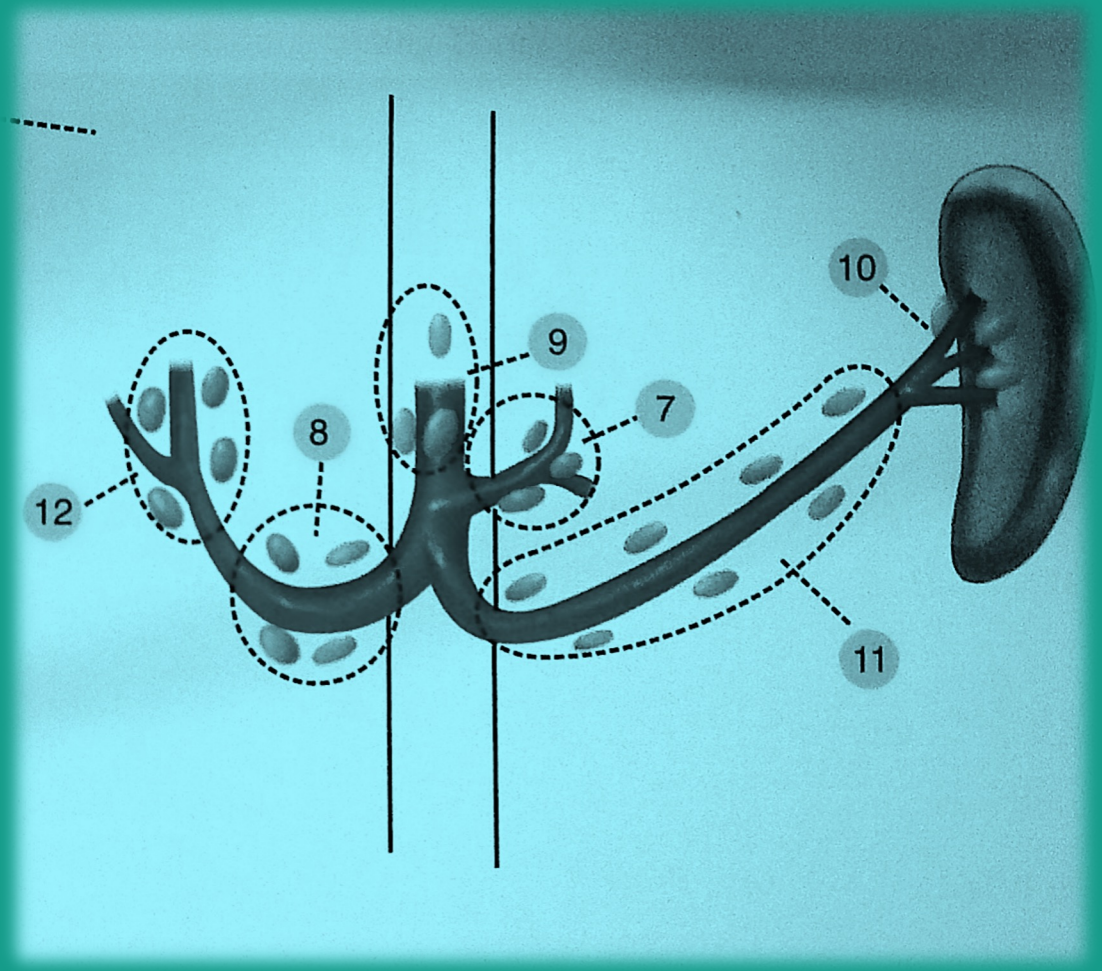


N1 NODES Along the Curvatures

1. Rt. cardiac node
2. Lt. cardiac node
3. Lesser curvature node
4. Greater curvature node
5. Supra pyloric node
6. Infra pyloric node

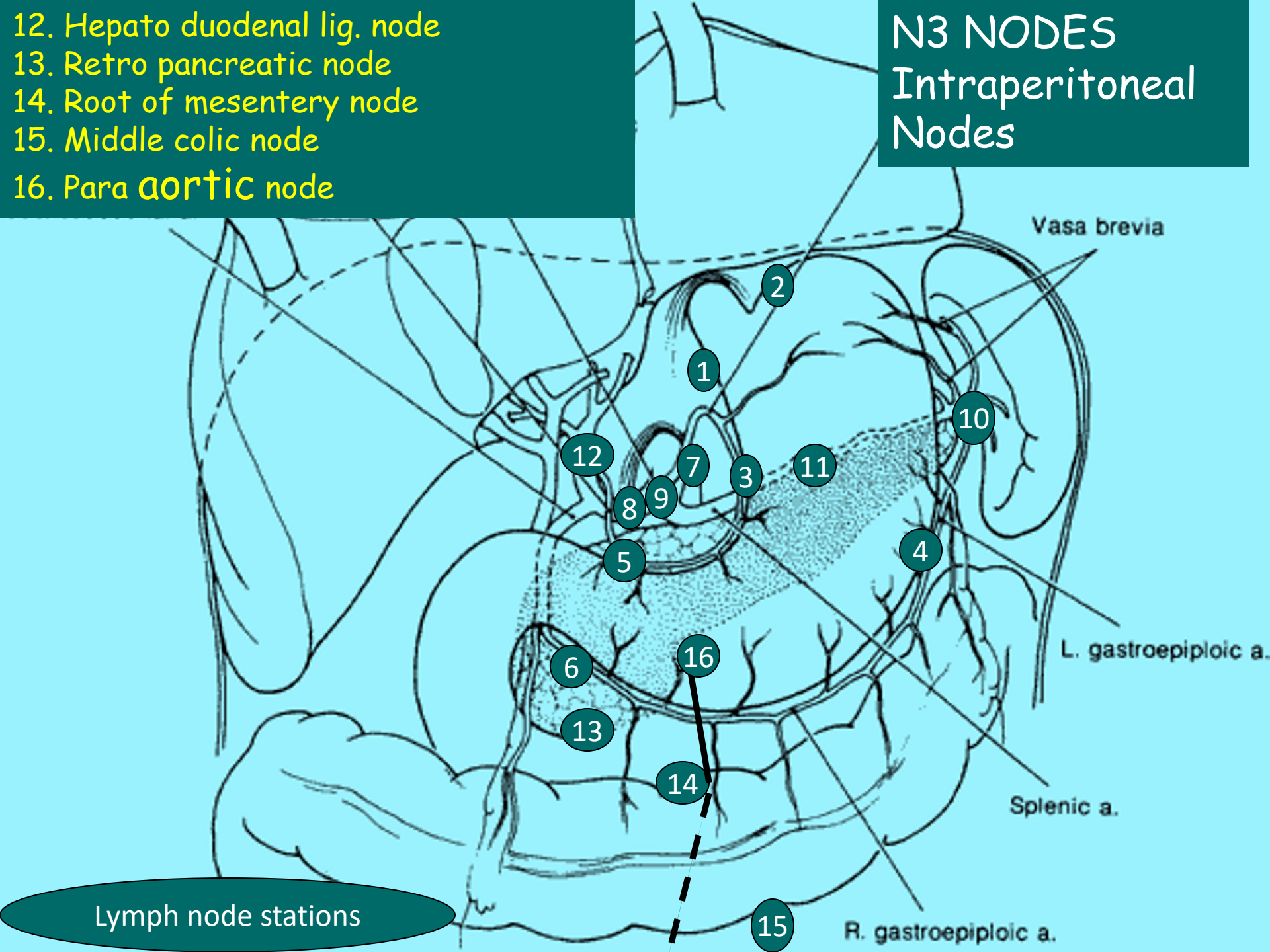
N2 NODES
Along the
Named vessels

7. Lt. Gastric node
8. Common hepatic node
9. Celiac node
10. Splenic hilar node
11. Splenic A. node



N3 NODES
Intraperitoneal Nodes

12. Hepato duodenal lig. node
13. Retro pancreatic node
14. Root of mesentery node
15. Middle colic node
16. Para aortic node



Lymph node stations

LYMPHATIC DRINAGE

- N1, N2 nodes are Regional nodes and N3 nodes are Metastasis

  Involvement of N3 nodes is a contraindication for radical surgery

- In D2 lymphadenectomy the minimum number of nodes to be resected is 15

D2 GASTRECTOMY

- Removal of the stomach along with omental bursa
  - Greater omentum
  - Lesser omentum
  - Anterior layer of mesocolon
  - Anterior pancreatic capsule

Lymphadenectomy upto D2 station

COLON & RECTUM

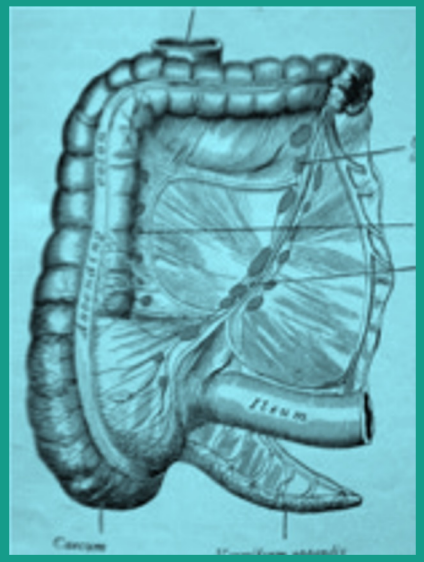
COLON LYMPHATIC DRAINAGE

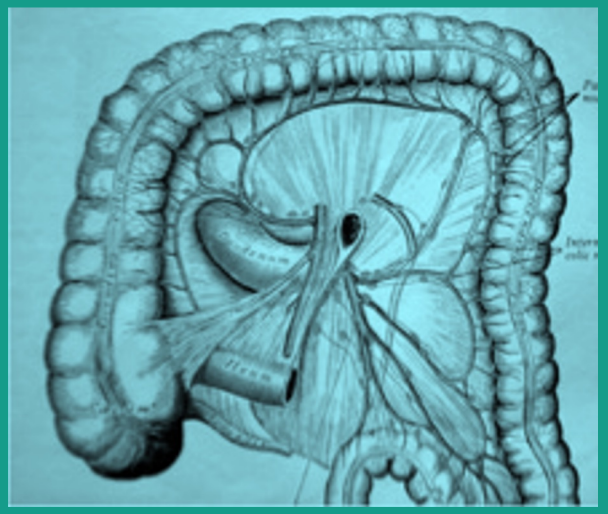
First tier -Epicolic nodes
adjacent to colon

Second tier – Para colic
along the marginal vessels

Third tier – intermediate nodes
along the named branch

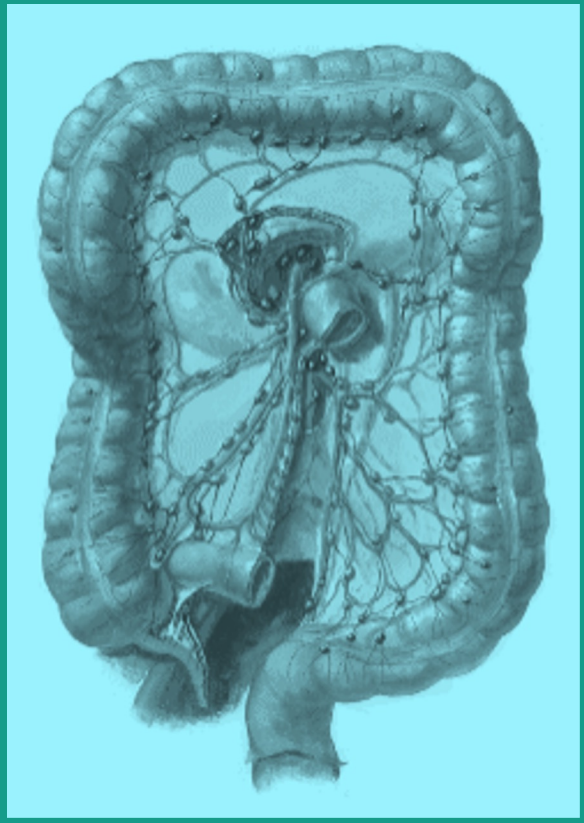
Fourth tier – Principle node
along the S.M.A, I.M.A





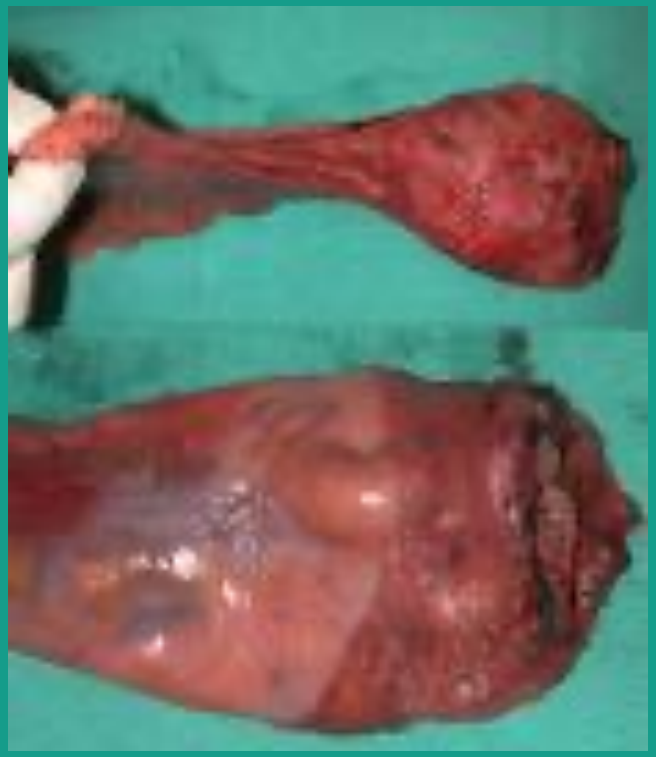
COLON EXTENT OF RESECTION

- 5cm. of normal bowel proximal and distal to the tumor
- Determined by the blood vessels that must be divided to remove the lymphatic drainage of the tumor bearing portion of the colon with tumor free margins



MESORECTUM

- Describes by Heald
- It is a cushion of fatty tissue,that surrounds the rectum posterolaterally and is covered by a membrane called fascia propria
- Majority of + ve lymph nodes present here



TOTAL MESORECTAL EXCISION

- Total mesorectal excision [TME] with circumferential clearance of rectal cancer is the procedure of choice
- TME is mandatory in lower and middle third rectal cancer
- In upper third cancer, 5cm clearance of mesorectum from lower margin of the cancer is enough

PROXIMAL LYMPH NODE DISSECTION

- Follow the arterial supply
- Proximal extent :
  left colic
  inferior mesenteric

ANATOMICAL PLANES

WHAT IS PLANE

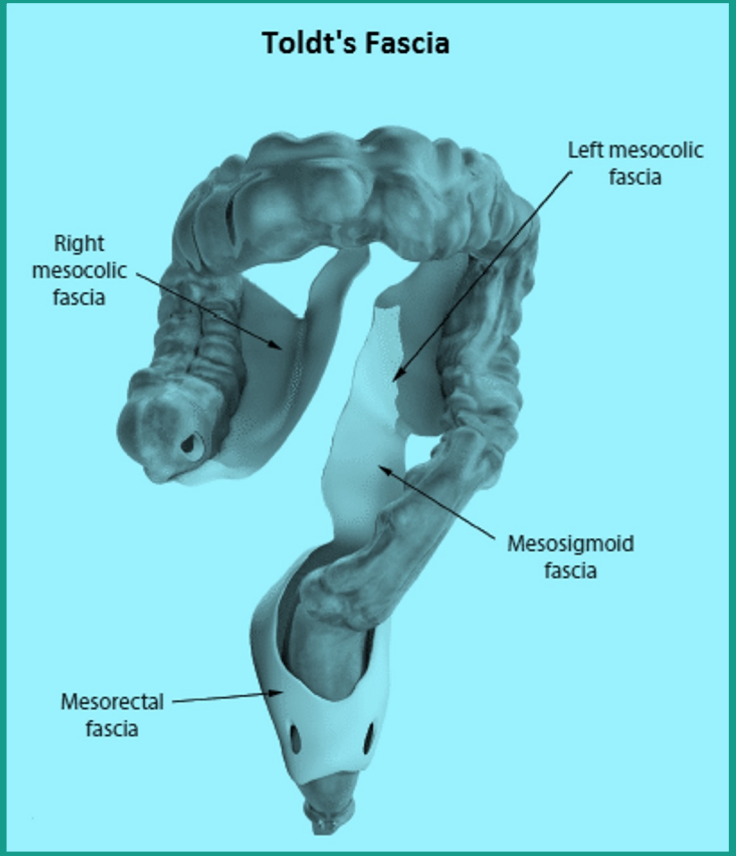
It is a avascular area

Dissection of this plane resulted in Good oncological clearance

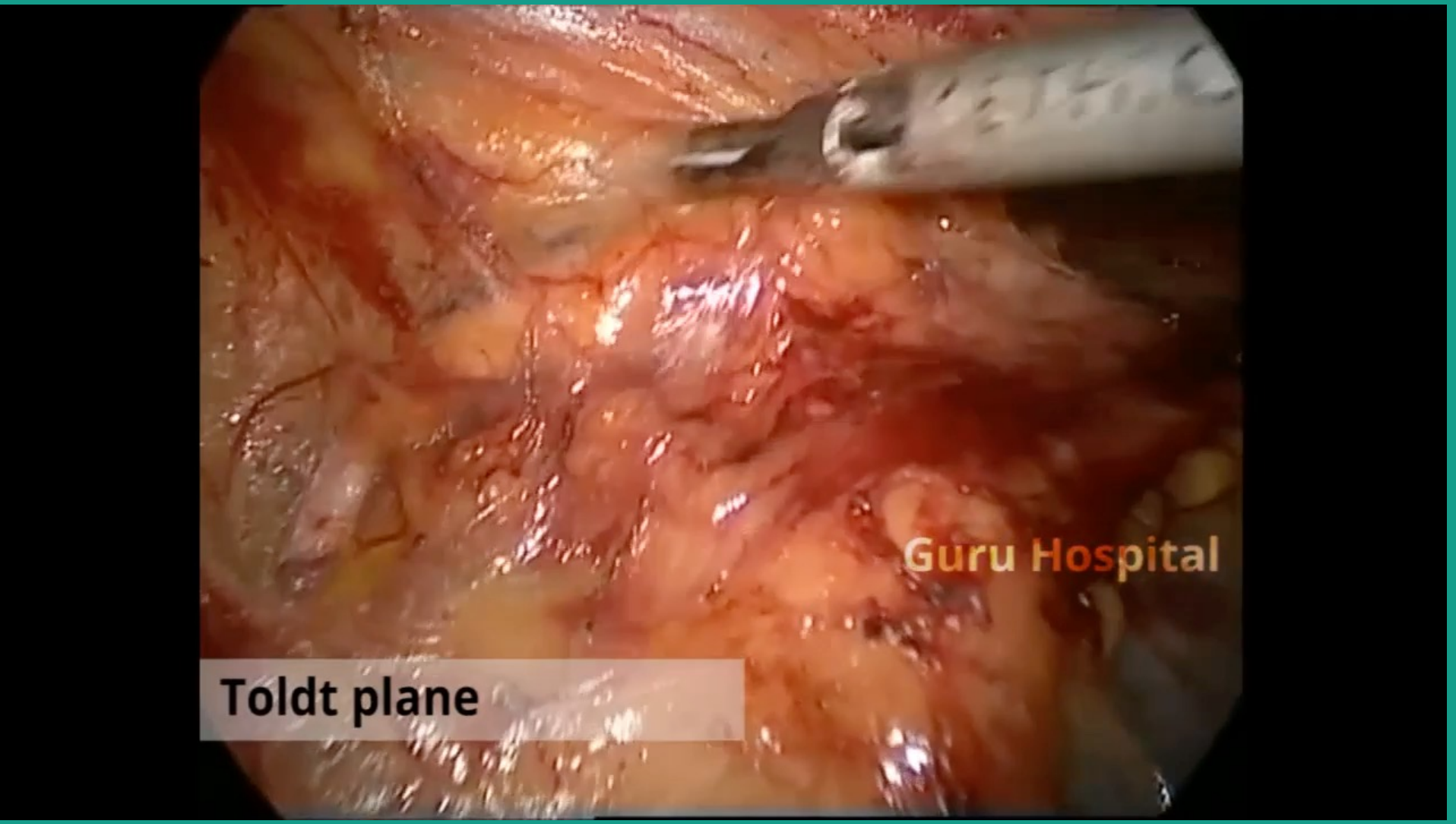
There is no bleeding in this plane.

PLANE 1 - TOLDTS FASCIA PLANE

It is found between the two mesothelial layers that separate the mesocolon from the underlying retroperitoneum.



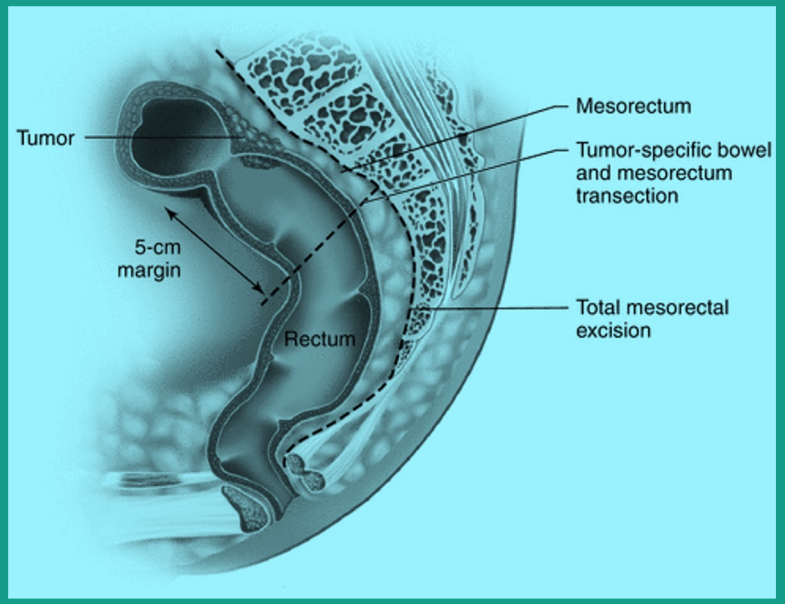
TOLDTS FASCIA & PARIETAL PERITONEUM



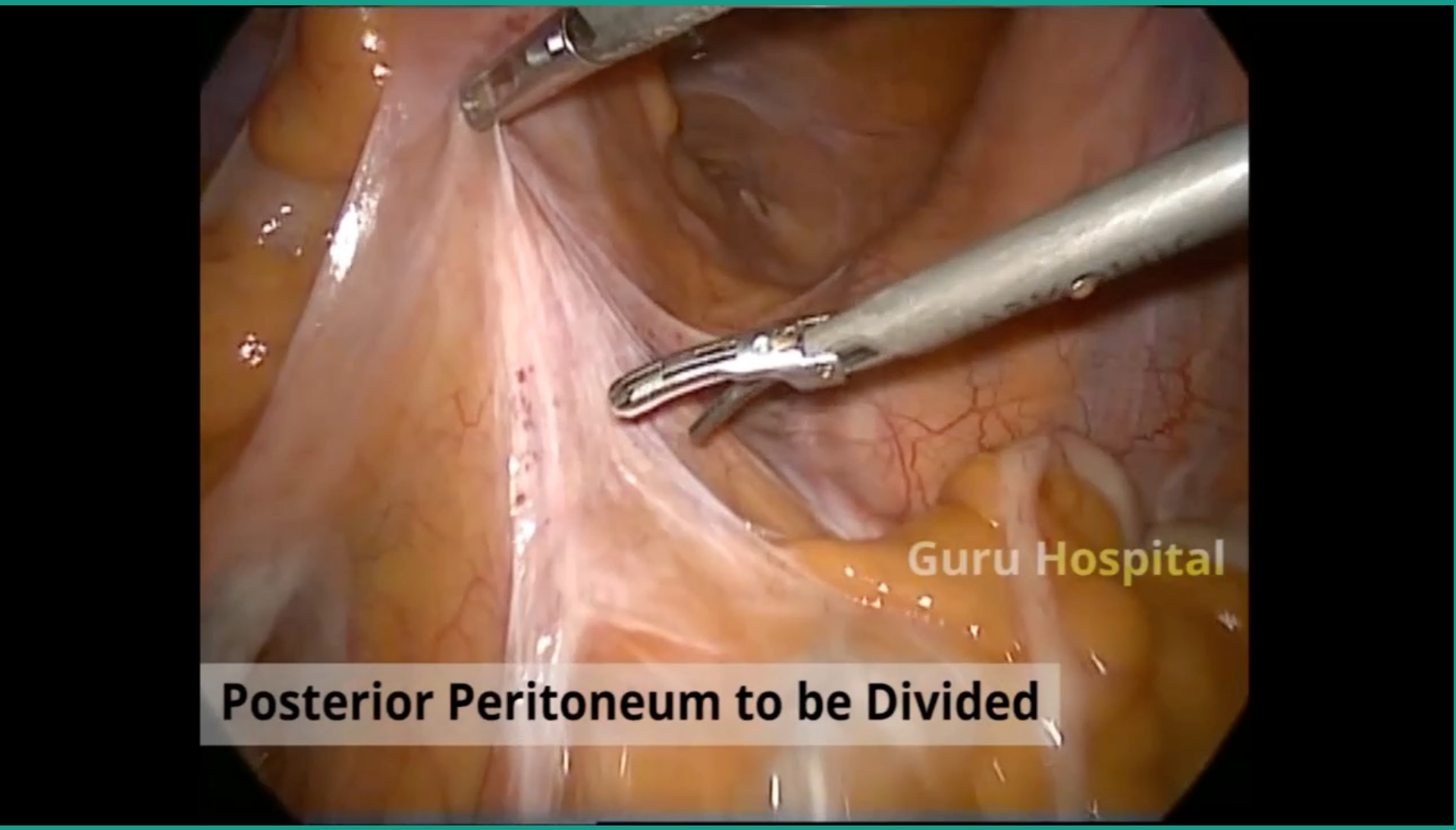
PLANE 2 - HEALD PLANE

THE ‘HOLY PLANE’ OF RECTAL SURGERY

TOLDTS FASCIA
& WALDEYERS FASCIA

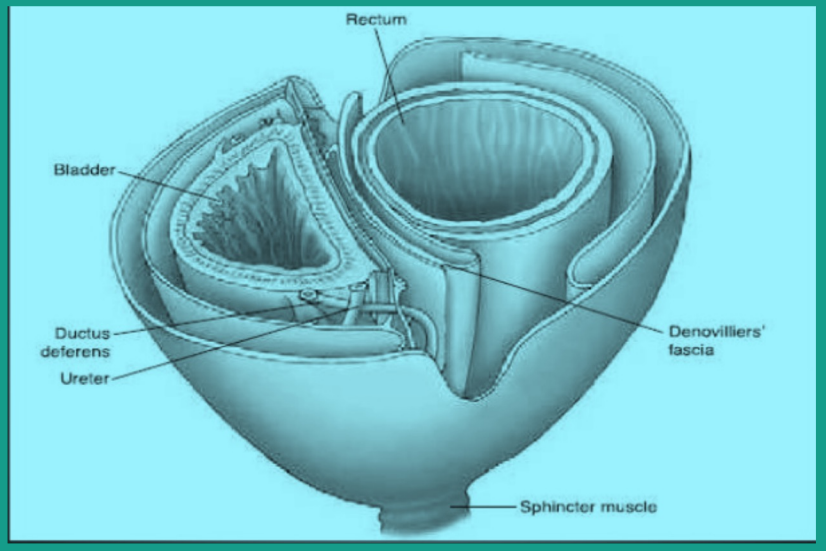


TOLDTS FASCIA & WALDEYERS FASCIA



PLANE 3. - ANTERIOR PLANE

ANT . DENOVILLIERS. &
POST . DENOVILLIERS.



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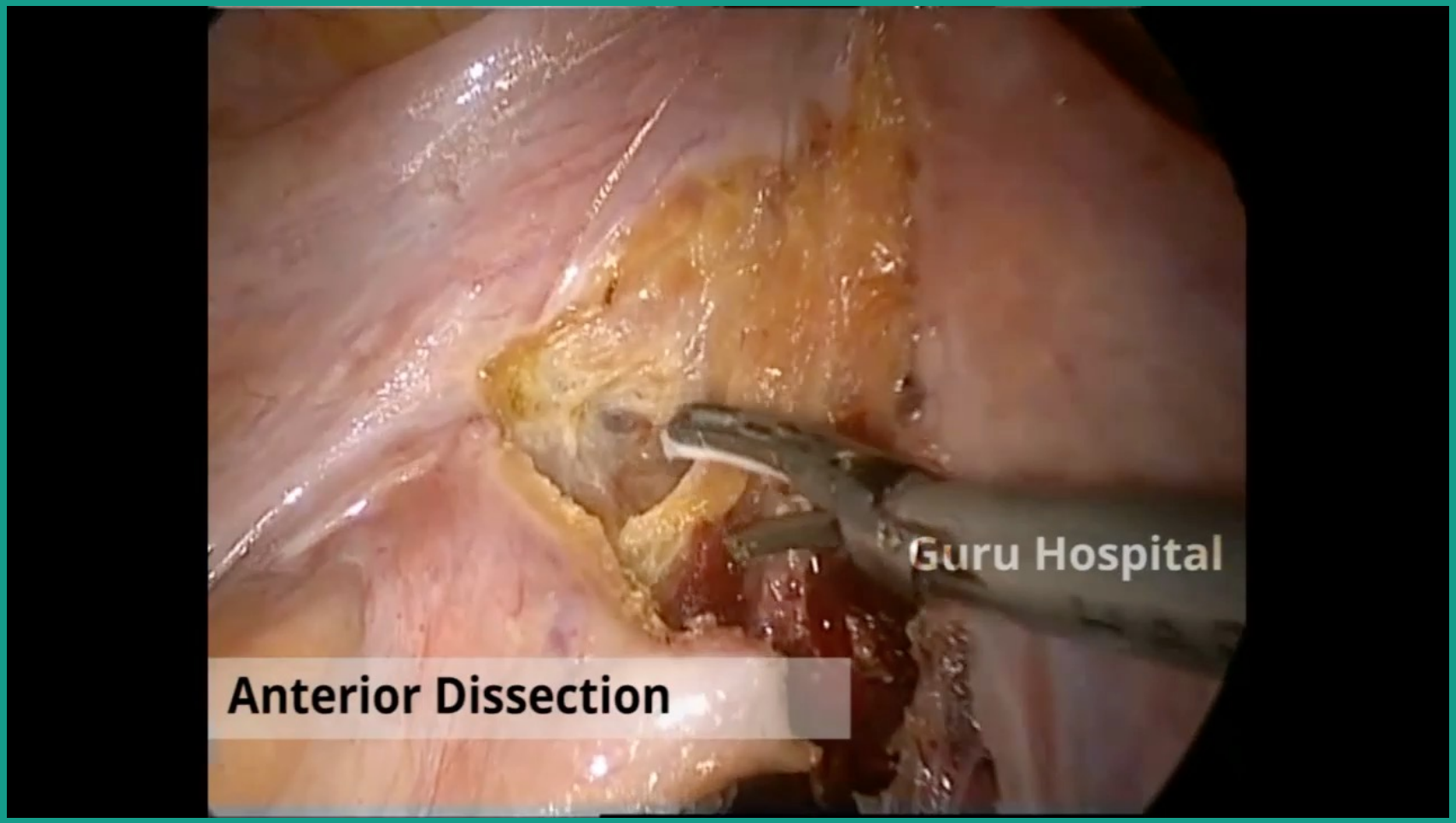


ADJACENT ORGAN INVOLVEMENT

ADJACENT ORGAN INVOLVEMENT

UPPER GIT VS. LOWER GIT

RECTUM ADJACENT ORGAN INVOLVEMENT IS IT A ADVANCED STAGE ?

NO

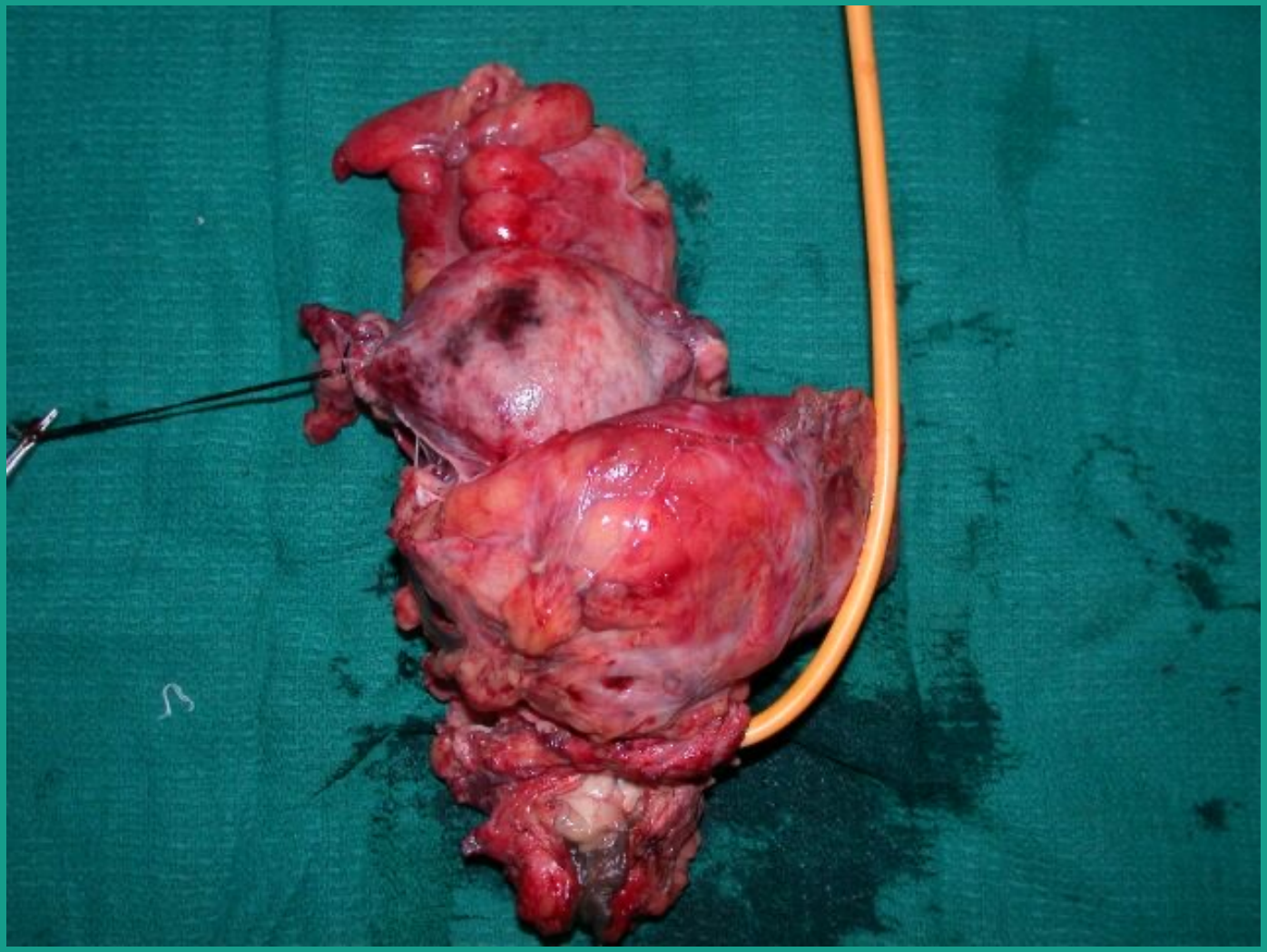
- Extraperitoneal adjacent organ involvement is T4 and is still staged as IIB(T4 N0M0). Not a advanced stage.
- Ultra Radical procedures with curative intent is a worthwhile option

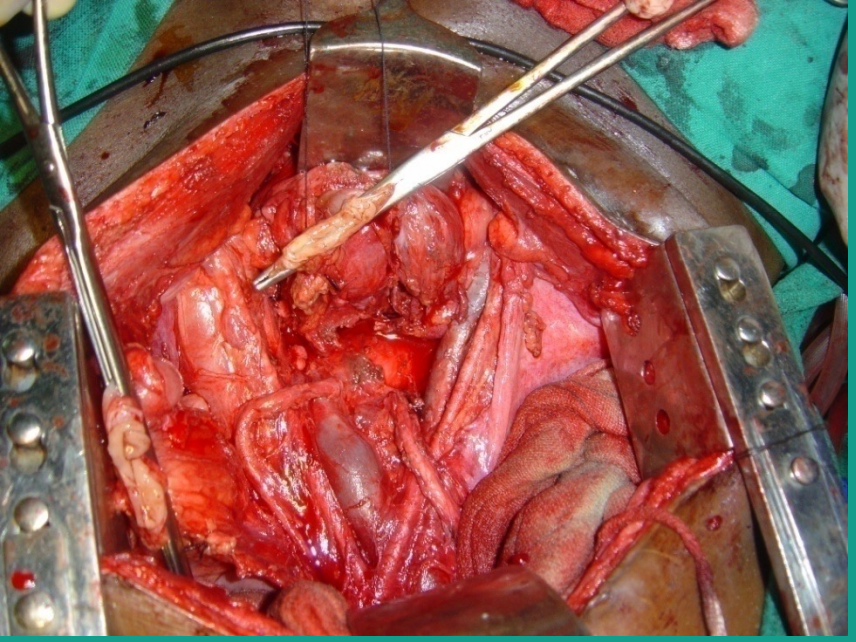
PELVIC EXENTRATION

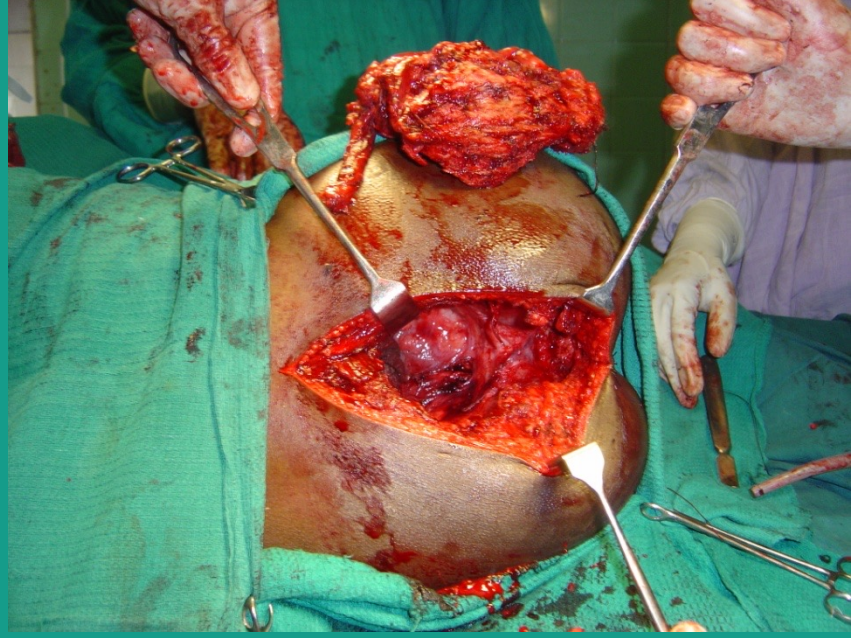
- Still the only option available for
  - Locally advanced and
  - Recurrent pelvic visceral cancer in the absence of distant disease

- Provides an opportunity for long term survival in select group of patients

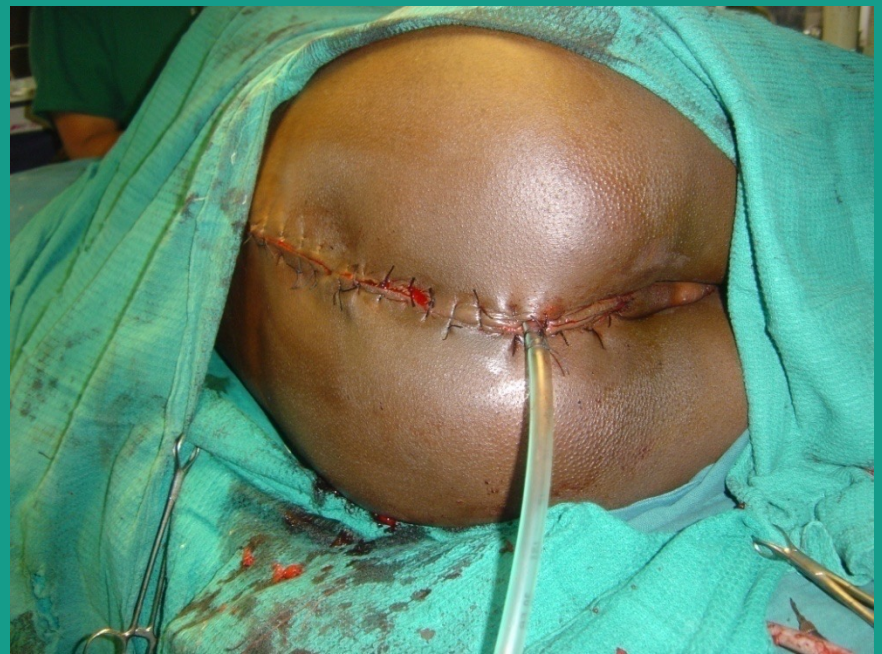
POSTERIOR PELVIC EXENTERATION







Rectal cancer enbloc sacral resection



OPERATING SURGEON- PROGNOSTIC FACTOR?

IS OPERATING SURGEON REALLY A PROGNOSTIC FACTOR?

there is a difference….

ONCOLOGICAL OUTCOME

Fact, always known but scientifically and statistically accepted only recently

PANCREATIC CANCER

Surgeon as a prognostic factor in the management of pancreatic cancer

Surgeon's skill and expertise matters not hospital volume

Elizabeth Saettler *et al* Surg. Oncol. Clin. N. Am. 2003 Jan. 9(1) 133-142

Surgical skill and specialisation as a prognostic factor

TAKE HOME MESSAGE

WHY FAILURE?

TUMOR BIOLOGY?
OR
INADEQUATE TREATMENT?

BEST OUTCOME

- What is the winning strategy

Radicality of resection

‘To the best of one’s ability’

WORD FOR A SURGEON

In all the moments of a surgeon there should be neither haste nor waste. It matters less how quickly an operation is done than how accurately it is done. Speed should result from the method and practical facility of the operation and should not be his first and formal intention.

WORD FOR A SURGEON

It should be an accomplishment and not an aim and every movement should tell and every action should achieve something.

A manipulation if it requires to be carried out should not be half done and hesitatingly done. It should be deliberate, firm, intentional and final.

WORD FOR A SURGEON

Infinite gentleness, scrupulous care, light handling and purposeful, effective and quest movement which are not more than a caress are all necessary if an operation is to be the work of an artist and not merely a hewer of flesh.

Lord Moynihan

THANK YOU