
Gastrointestinal
Stromal
Tumor(GIST)
vydyaloka.in
healthvision.in

Surgery Department

Case presentation

Mr Nowsher Mollah, 52 years old, normotensive, non diabetic and non asthmatic male patient hailing from Gopalganj got admitted into ASWMCH on 05/02/2025 with the complains of abdominal pain, nausea and vomiting for 1 year. Additionally he also complained of abdominal lump for 6 months which was increasing in size gradually.

On physical examination, we found that patient was cachectic and anemic.

Per abdominal examination revealed a firm, irregular lump in the mid abdomen which was freely moveable.

After that we ordered all routine investigations along with Endoscopy of upper GIT. His USG of W/A and Endoscopy of upper GIT both were not conclusive for diagnosis. So Barium meal X ray was done which was revealed filling defect in distal jejunal part. Furthermore, we were decided to perform CT scan of abdomen. The CT scan result was conclusive for diagnosis. So, our surgerical team prepared him for surgery.

Rational explanation for GIST:

- Favouring points for GIST:

>Middle age

>Less aggresive nature

>Arises from mesenchymal cells particularly the interstitial cells of Cajal of any part of GIT.

>Rare type

>Often associated with genetic mutations

Why not Gastric cancer:

> Elder age

>More aggressive nature

>Common type

>Arises from epithelial cell of stomach.

>Risk factors: Smoking, Alcohol, Japanese population, spicy food, obese etc.

Why not Gastric lymphoma:

>Arises from lymphocytes

>Strongly linked to H. pylori infection.

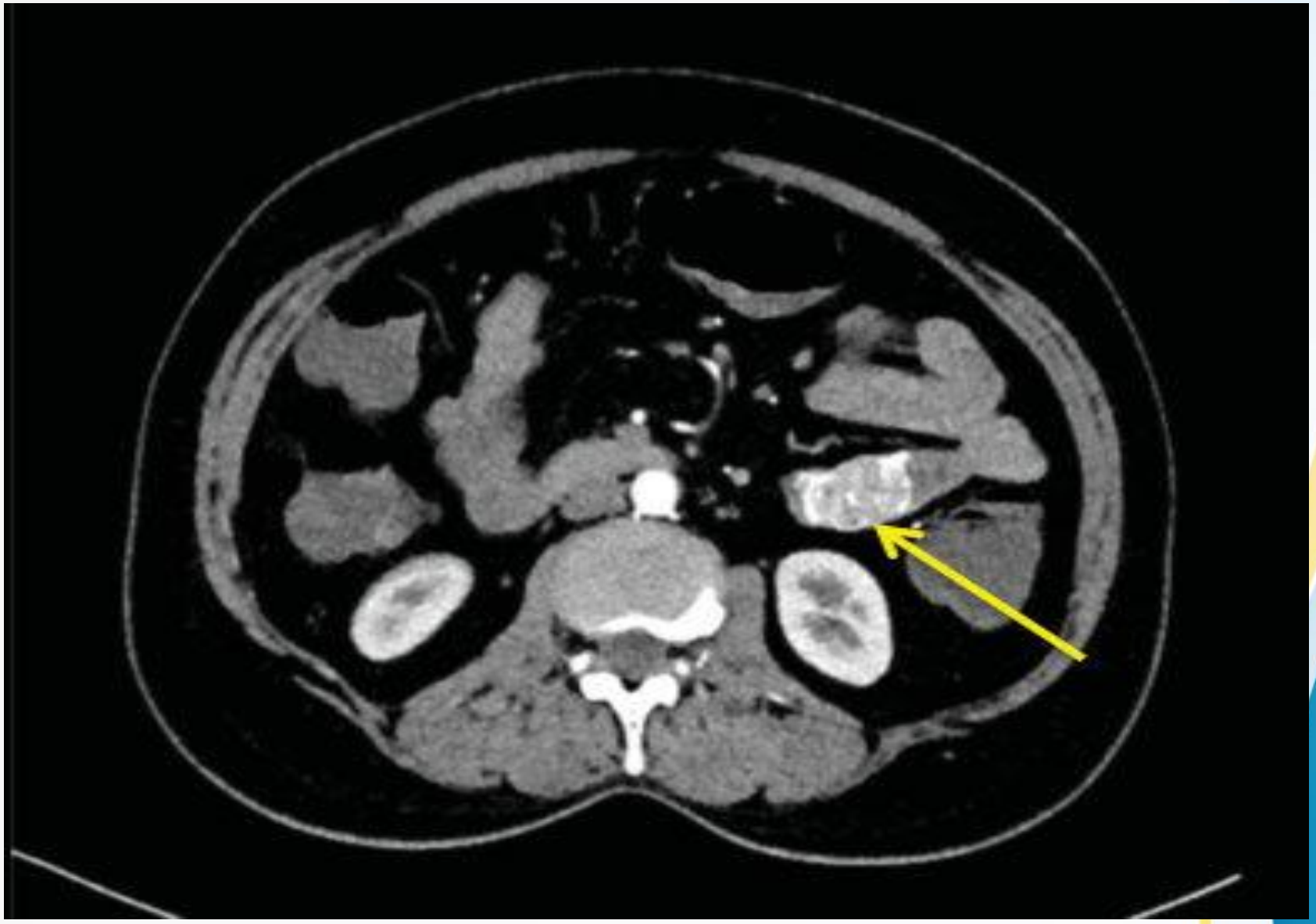
Positive investigation findings of my patient:

Barium meal X-ray:

Filling defect present

CT scan of abdomen:

Well defined soft tissue mass exhibiting heterogeneous enhancement.



Tumor marker:

CD117 (+Ve)

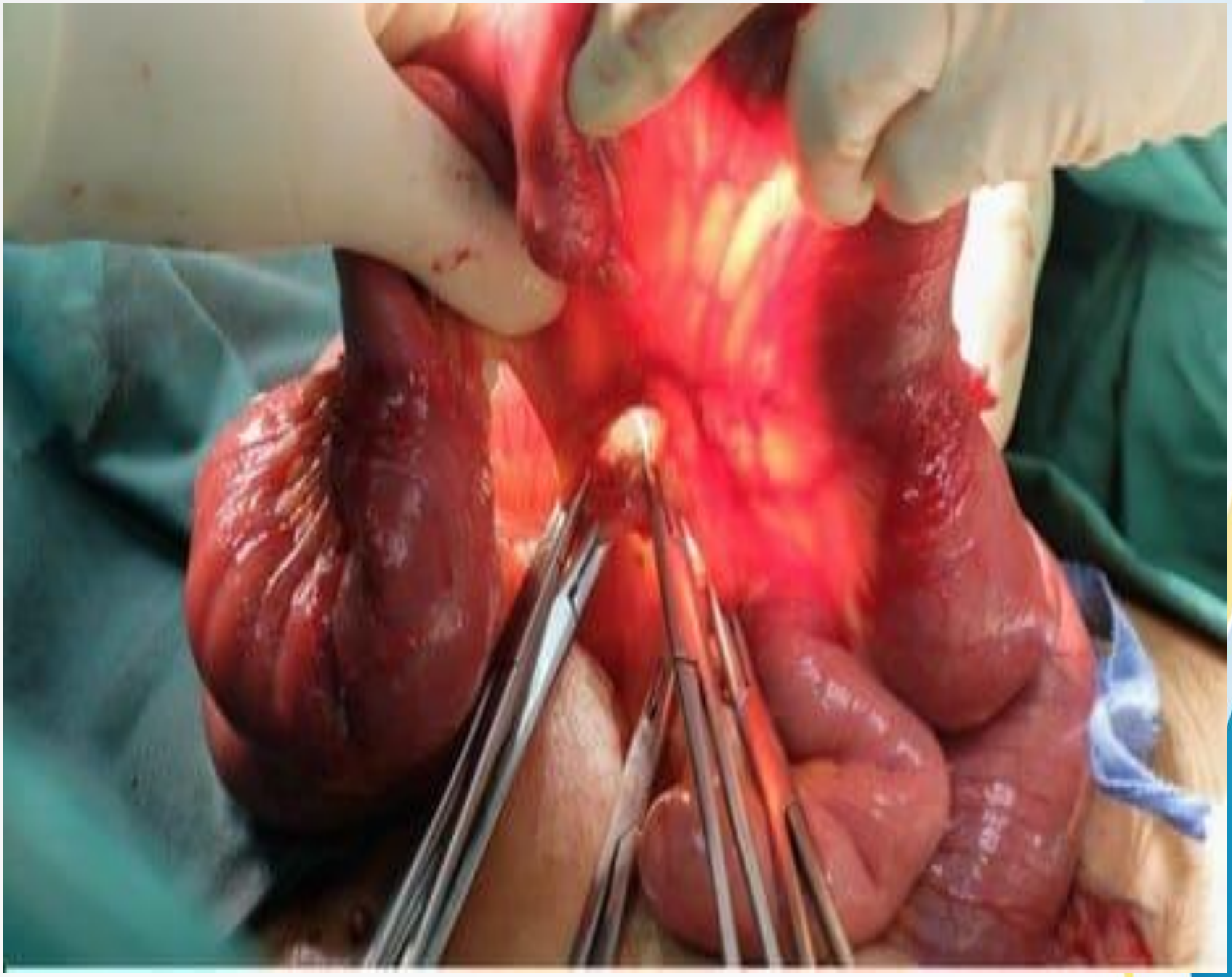
CD34 (-Ve)

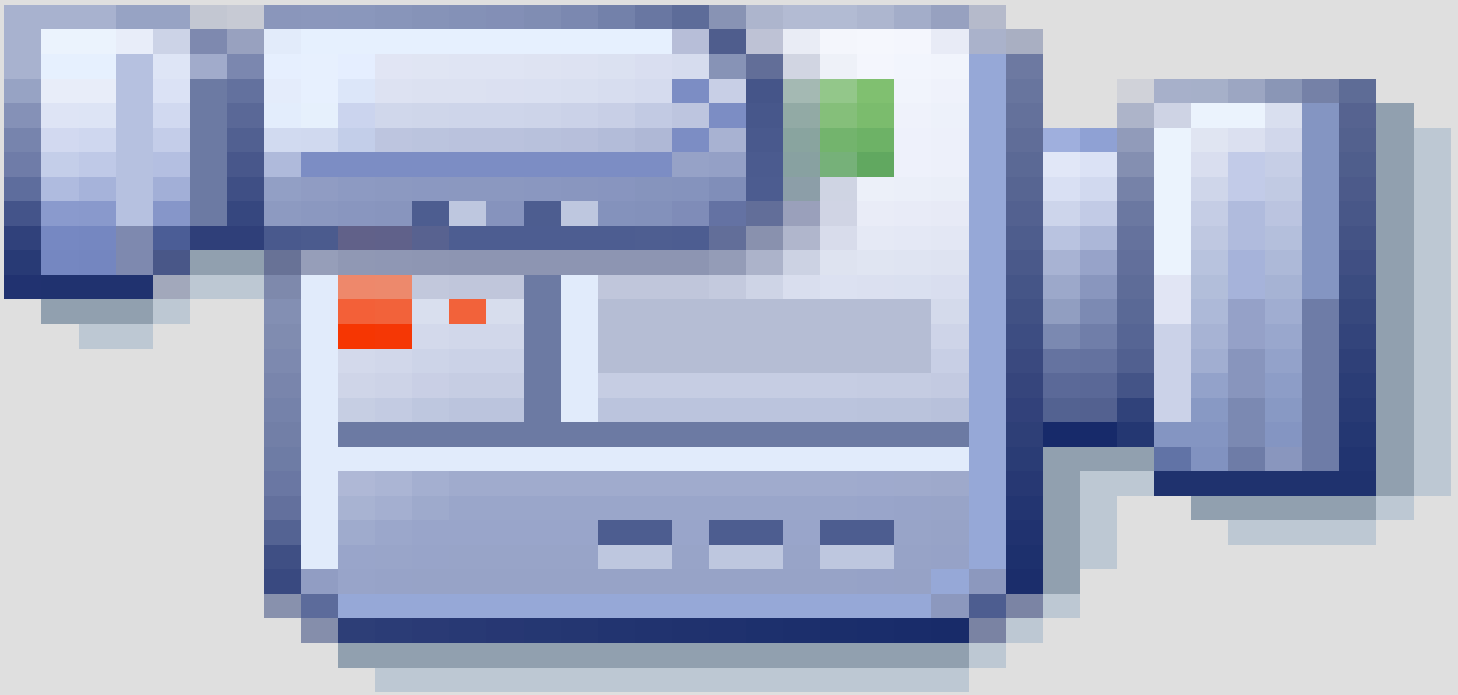
On 06/02/2025, laparotomy was done at nignt 10 pm. We found a firm mass which was about 8 x10 cm2 in size in the distal part of jejunum and also lumen of gut was patent. Then resection of GIST lump with keeping the free surgical margin atleast 5cm of both side. After that end to end anastomis was done. Finally, abdomen was closed layer by layer with keeping a drain tube in situ.

Post-operative recovery was fine and uneventful. On 6th post operative day, he was discharged and made a pending scheduled review visit 1 week later.

On follow-up visit, he was assessed by our surgerical team and then stitches were removed. Again he was recommended for a review visit 1 month later.

On 12/03/2025, in his review visit, he is completely fine and leads a healthy life.






Successful operation
cartoon box 198

Definition

- A gastrointestinal stromal tumor, also called a GIST, is a type of cancer which is mesenchymal origin that may arise in any part of the GIT.
- Previous name- Leiomyoma and Leiomyosarcoma.

Nature:

- GIST is a very rare type of tumor of the GIT. It constitutes 1-3% of all gastrointestinal neoplasia.
- Usually smaller GIST is benign in nature and larger GIST is malignant in nature.

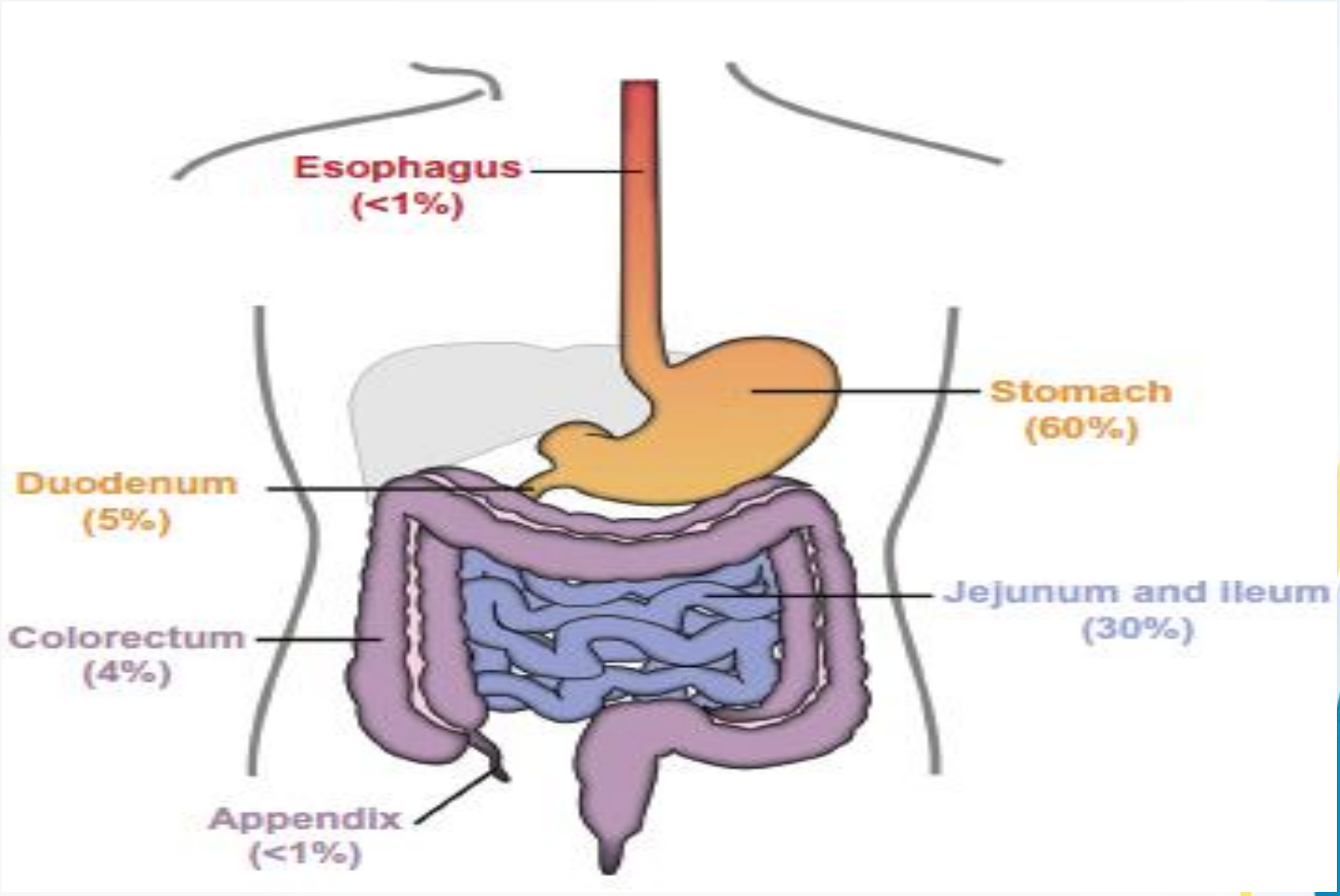
Incidence:

- Approximately 10-15 per million population per year worldwide.
- Incidence of GIST in Bangladesh is about less than 1%.

Age and Sex

- Common age : (50-60 years)
- Both male and female equal distribution.

Site

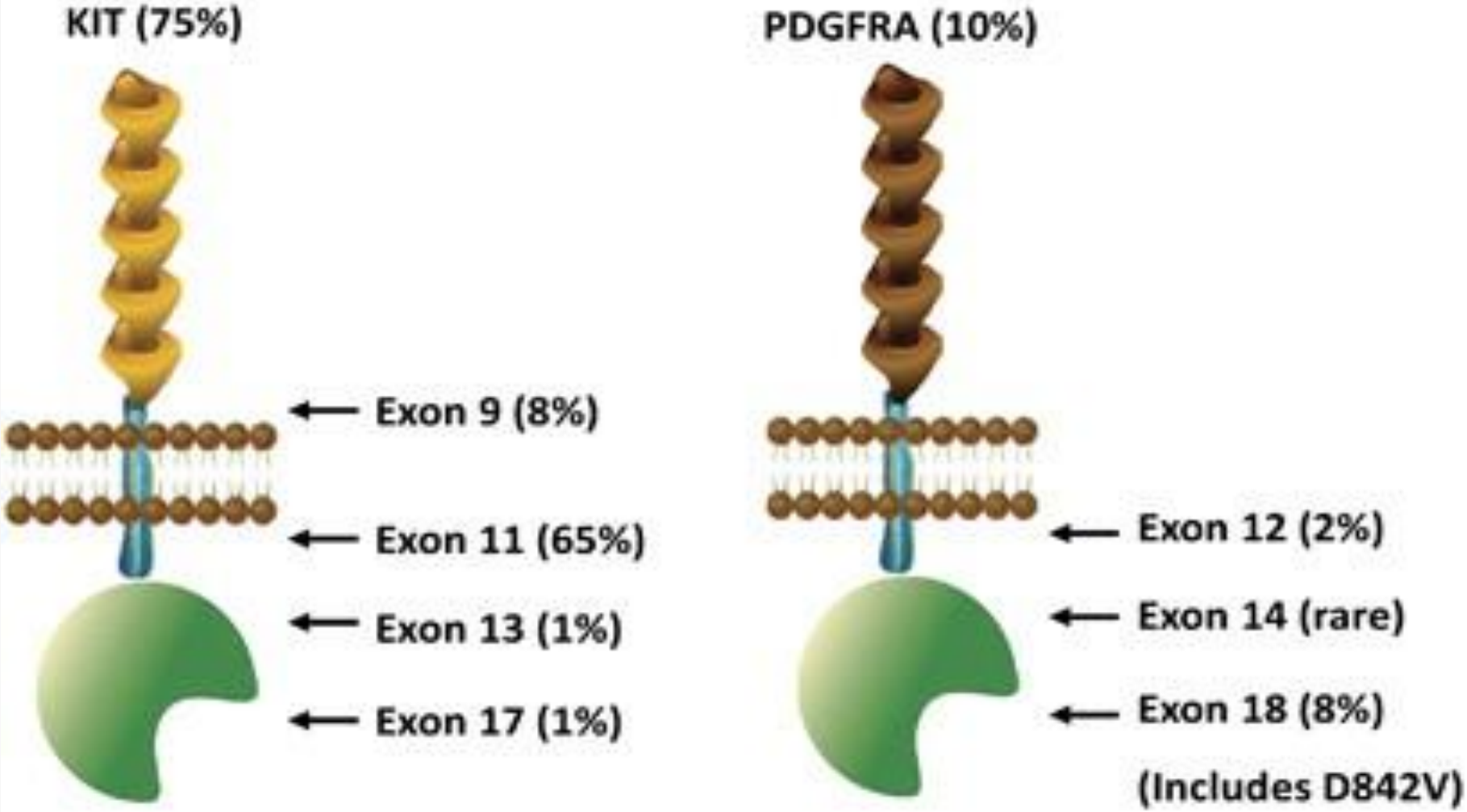

Esophagus
(<1%)
Stomach
(60%)
Duodenum
(5%)
Jejunum and Ileum
(30%)
Colorectum
(4%)
Appendix
(<1%)

Pathogenesis

- Within recent years, discovered that most GIST had mutation in *c-kit* proto-oncogene
- Most of them are mutations of exon 11
- Results in activation of KIT receptor tyrosine kinase and an unopposed stimulus of cell growth

KIT and *PDGFRA* Mutations in GIST

'Wild-type' tumors: 15%



Metastasis

- Peritonium, liver, lungs and bone metastases are most common.
- Lymph node metastases is extremely rare.

Symptoms

MAKNA
A Meaning to Life

GASTROINTESTINAL STROMAL TUMOUR (GIST) SYMPTOMS

Pain or discomfort in the abdomen

A mass in the abdomen that you can feel with your hand

Bowel obstruction

Nausea and vomiting

Vomiting blood

Blood in the stool

Fatigue due to anaemia

Signs

> Abdominal tenderness

>Anemia

>Jaundice (if liver metastases)

>Abdominal lymphadenopathy like celiac, hepatic, mesenteric etc.

Differential diagnosis

>Gastric cancer

>Gastrointestinal lymphoma

>Gastrointestinal neuroendocrine tumors

>Metastatic melanoma

Investigation tools

For diagnosis:

- Endoscopy of upper GIT and biopsy
- Barium meal x-ray of stomach
- Endoscopic Ultrasonography
- Tumor marker like CD117, CD34 etc
- CT scan of abdomen

Routine investigations:

>CBC with ESR

>RBS

>S. creatinine

>S. electrolyte

>Blood grouping, Rh typing and cross matching

>HbsAg

>Urine R/M/E

>CXR

>ECG

Treatment options

Medical treatment:

First line :

> Imatinib

>Avapritinib

Second line:

>Sunitinib

>Regorafenib

>Ripretinib

- All drugs are tyrosin kinase antagonist.
- 80% responses can be observed.
- Prior to operation, imatinib radically reduce the size and vascularity of the tumor.

The prognosis of GIST with imatinib has been dramatically improved.

Side effects of these drugs

>Haematuria

>Jaundice

>Blurred vision

>Diarrhoea

>Bleeding gum

>Muscle cramps

>Nausea etc

Twist

>Imatinib drug can cause jaundice.

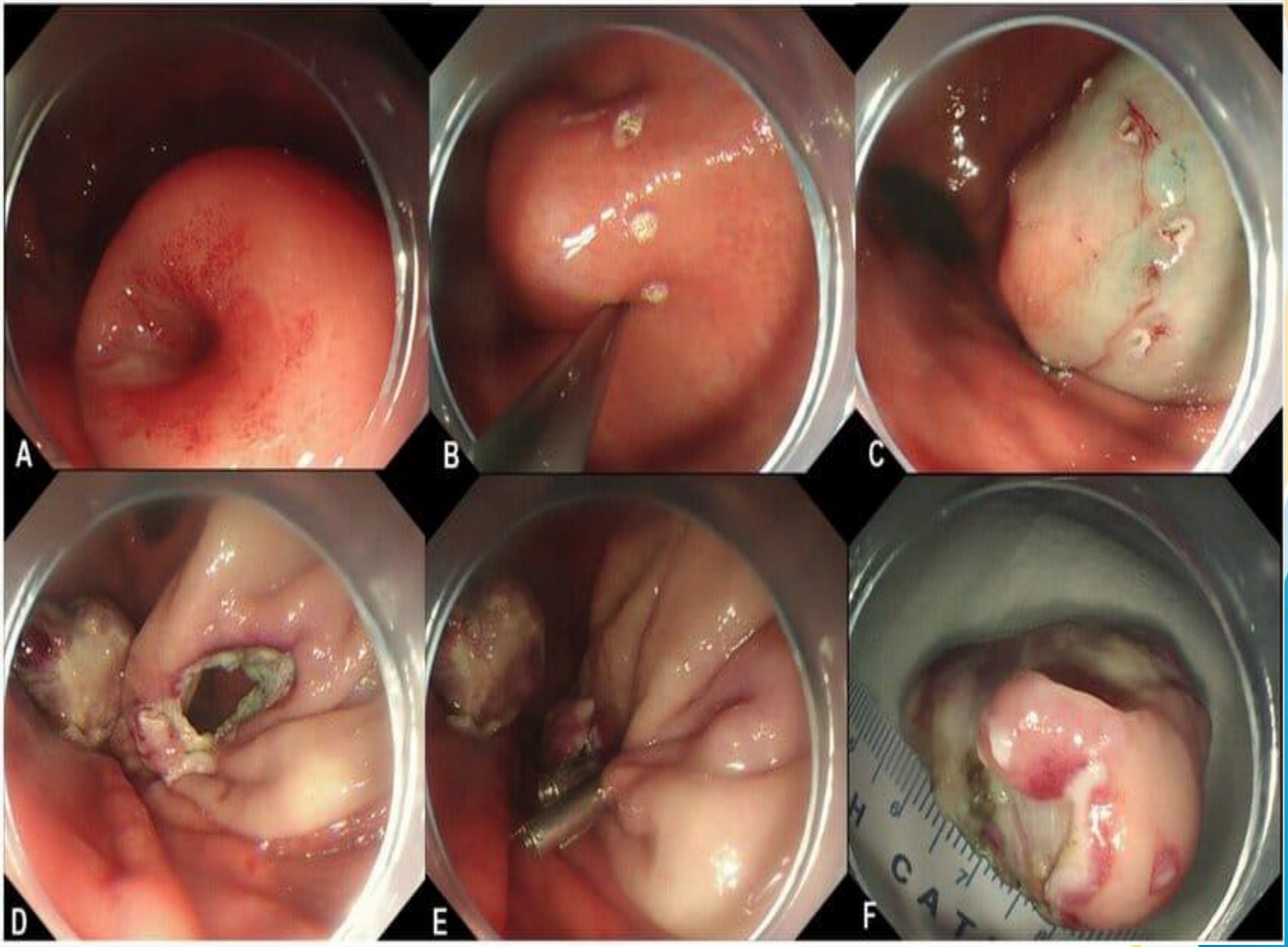
>Advance GIST metastases to the liver and causes jaundice.

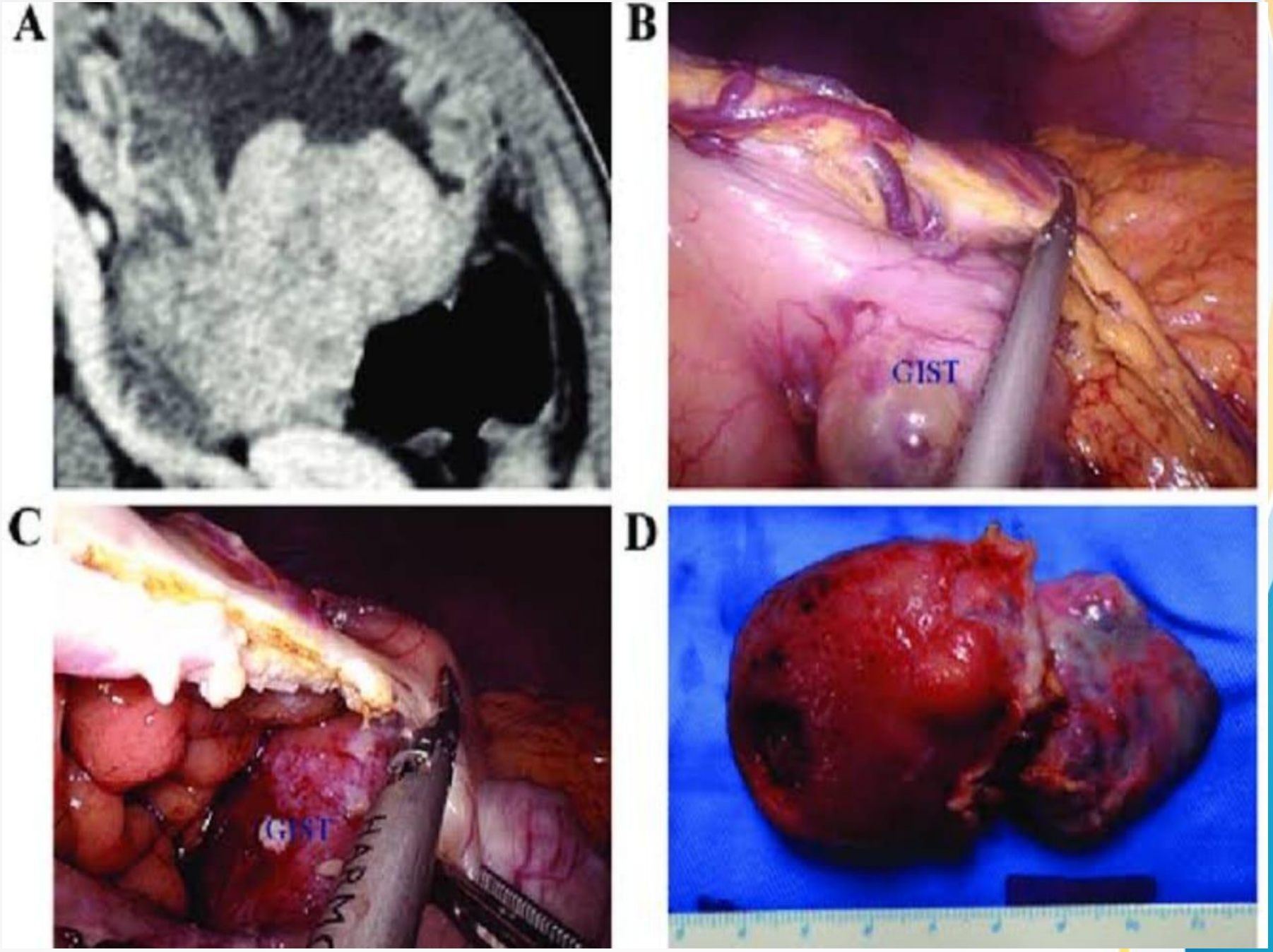
Surgery:

> Small GIST:

Endoscopic resection

laparoscopic surgery


A
B
C
D
E
F


A
B
GIST
C
GIST
D

> Large GIST:

Resection of GIST and end to end anastomosis .

But lymphadenectomy is not required.

Extensive surgery depends on tumor site involvement like gastrectomy or deudenectomy etc.

Latest surgerical option

Robotic surgery

Complications

Preoperative:

>Haematemesis or melena

>Intestinal obstruction

>Bowel perforation with peritonitis

Peroperative:

>Surrounding structures injury

>Anesthetic hazards

Postoperative:

>Incisional infection

>Wound dehiscence

>Anastomotic leakage or stricture


GASTROINTESTINAL STROMAL
TUMOR GIST
JULY 13
rabinhossain
shutterstock
IMAGE ID: 2314505585
www.shutterstock.com


GoodBye
shutterstock
www.shutterstock.com · 696250138