



SNS COLLEGE OF ALLIED HEALTH SCIENCES
SNS Kalvi Nagar, Coimbatore - 35
Affiliated to Dr MGR Medical University, Chennai



DEPARTMENT: ALLIED HEALTH SCIENCES
COURSE NAME: SURGERY

Topic: Gall bladder carcinoma



CASE SCENARIO



- A 51 year old female presented with a complaints of abdominal pain persisting for 3months, on examination a lump on the right abdomen was found and the usg showed gall bladder mass and MRI showed infiltrates gallbladder mass suggestive of segment VI liver malignancy
- How will you manage this patient?

Introduction

DEFINITION-The gallbladder is a pear-shaped organ that lies just under the liver in the upper abdomen.

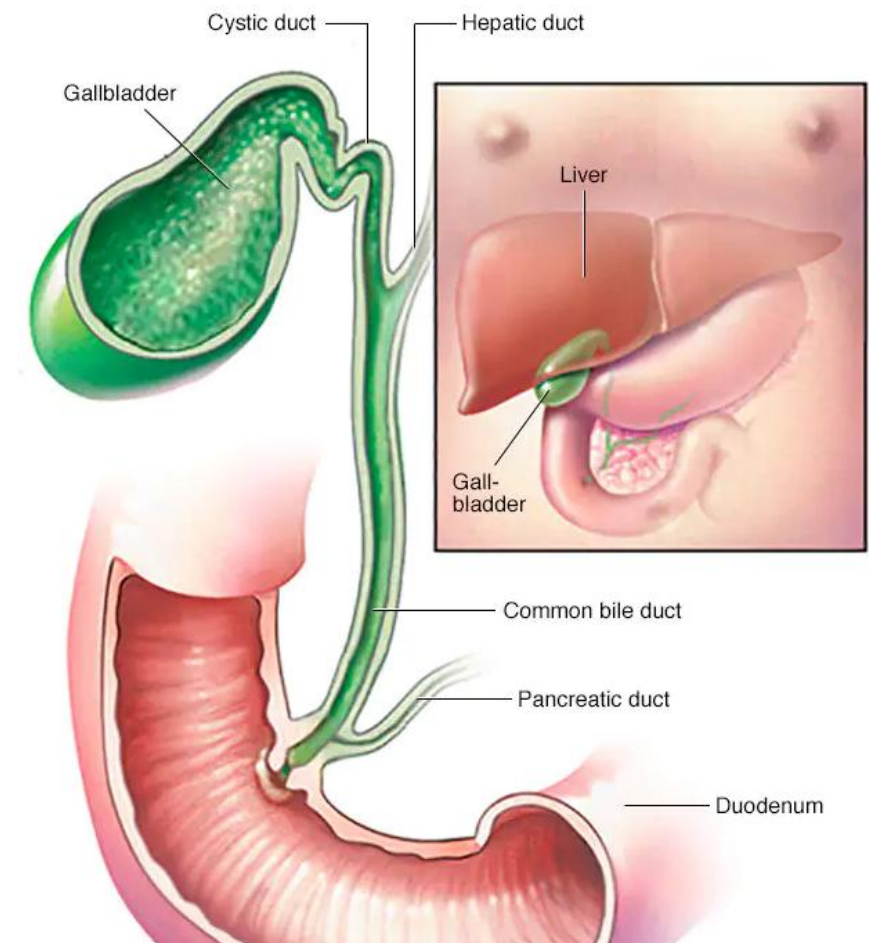
Gallbladder cancer occurs when malignant (cancer) cells grow in the gallbladder

The outside of the gallbladder is made up of four layers of tissue:

- The inner layer (mucosal layer).
- The muscle layer.
- The connective tissue layer.
- The outer layer (serosal layer).
- Gallbladder cancer is **an abnormal growth of cells that begins in the** gallbladder.

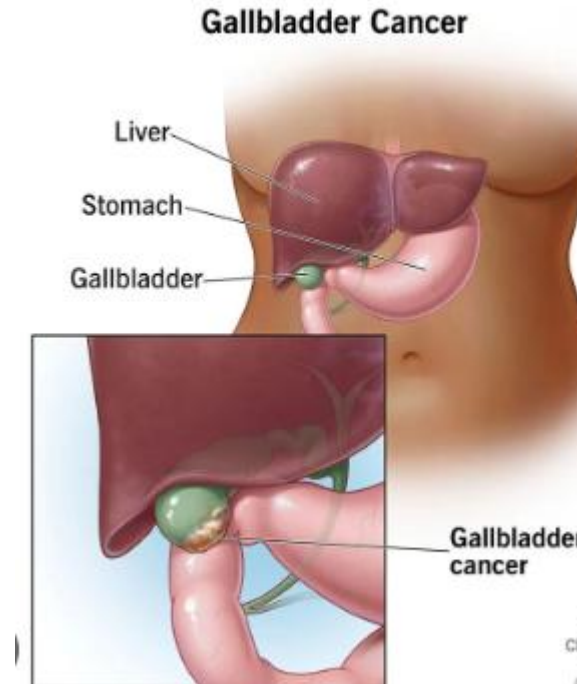
Incidence

Gallbladder cancer is rare. Each year from 2007 through 2011, around 3,700 individuals in the United States were diagnosed with it, and about 2,000 people died.



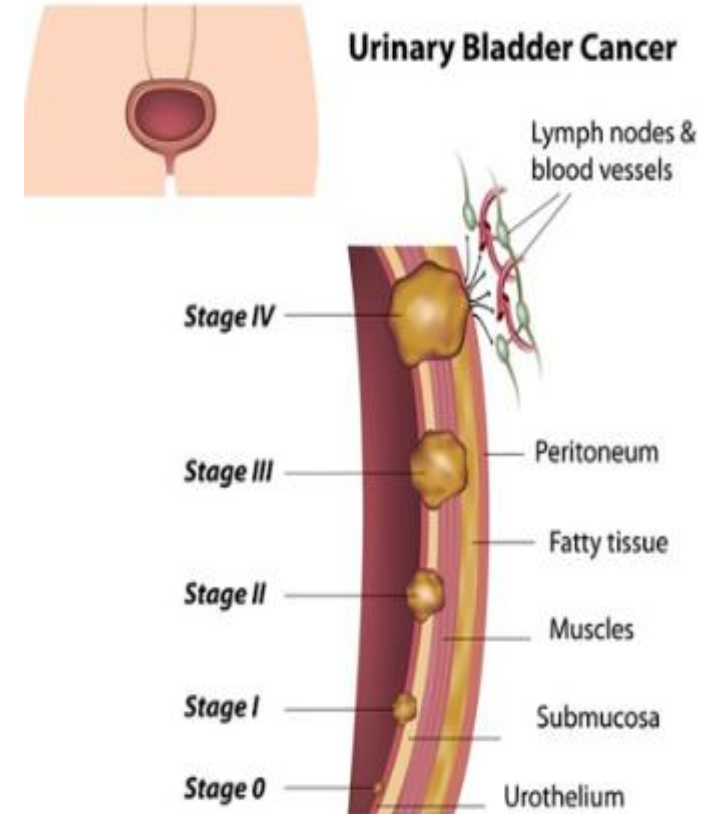
Etiology & Risk factors of Gall bladder CA

- Gallstones are the most common risk factor for gallbladder cancer. Gallstones are pebble-like collections of cholesterol and other substances that form in the gallbladder and can cause chronic inflammation.
- Age: Gallbladder cancer is more common in people over the age of 70
- Sex: It is more common in women
- Being obese
- Smoking
- Family history of gall bladder carcinoma
- Having gallbladder conditions such as cholecystitis, gallstones, porcelain gallbladder or polyps in gallbladder



Stages of Gall bladder carcinoma

- **Stage 0:** Describes cancer in situ (Tis, N0, M0).
- **Stage I:** A tumor is only in the gallbladder and has not spread (T1, N0, M0).
- **Stage II:** A tumor has extended to the perimuscular connective tissue but has not spread elsewhere (T2, N0, M0).
- **Stage IIIA:** A tumor has spread beyond the gallbladder but not to nearby arteries or veins. It has not spread to any lymph nodes or other parts of the body (T3, N0, M0).
- **Stage IIIB:** A tumor of any size has spread to nearby lymph nodes but not to nearby arteries and/or veins or to other parts of the body (T1, T2, T3; N1; M0).
- **Stage IVA:** A tumor has spread to nearby arteries, veins, and/or nearby lymph nodes, but it has not spread to other parts of the body (T4, N0 or N1, M0).
- **Stage IVB:** Describes any tumor that has spread to other parts of the body (any T, any N, M1) or any tumor that has distant lymph node spread, even if it has not spread to distant organs (any T, N2, M0).





Assessment 1



1. What is the Gall bladder carcinoma?
2. What are the Causes of Gall bladder carcinoma?
3. How many stages of Gall bladder carcinoma?



Signs & Symptoms of Gall bladder CA



- Gallbladder cancers usually don't cause any signs or symptoms, until the disease has reached an advanced stage. Some of the most common **symptoms of gallbladder cancer** are:
- Abdominal Pain
- Nausea or vomiting
- Jaundice
- Lumps in belly
- Loss of appetite
- Weight loss
- Dark urine
- Swelling in abdomen
- Light colored or greasy stool

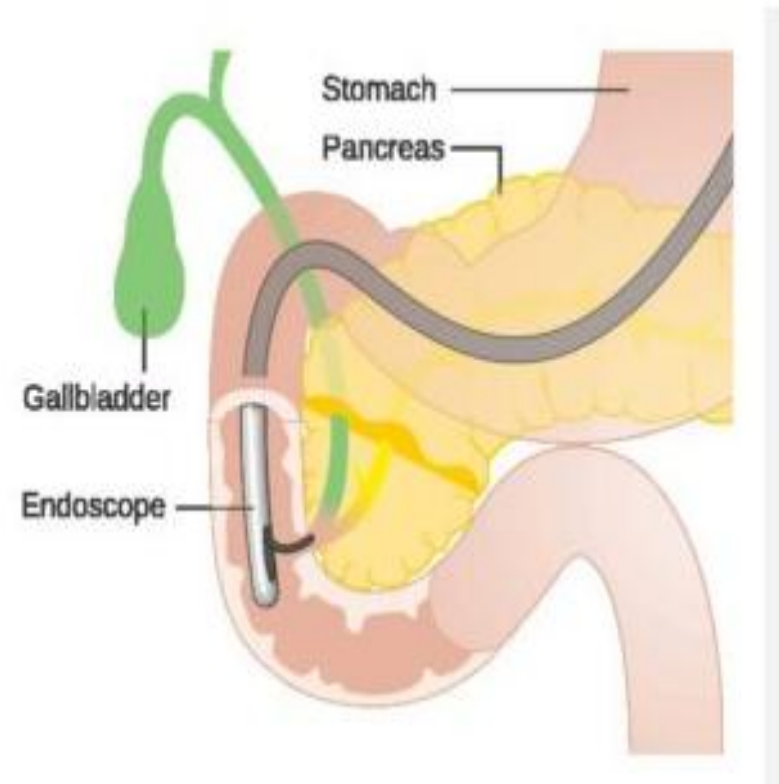




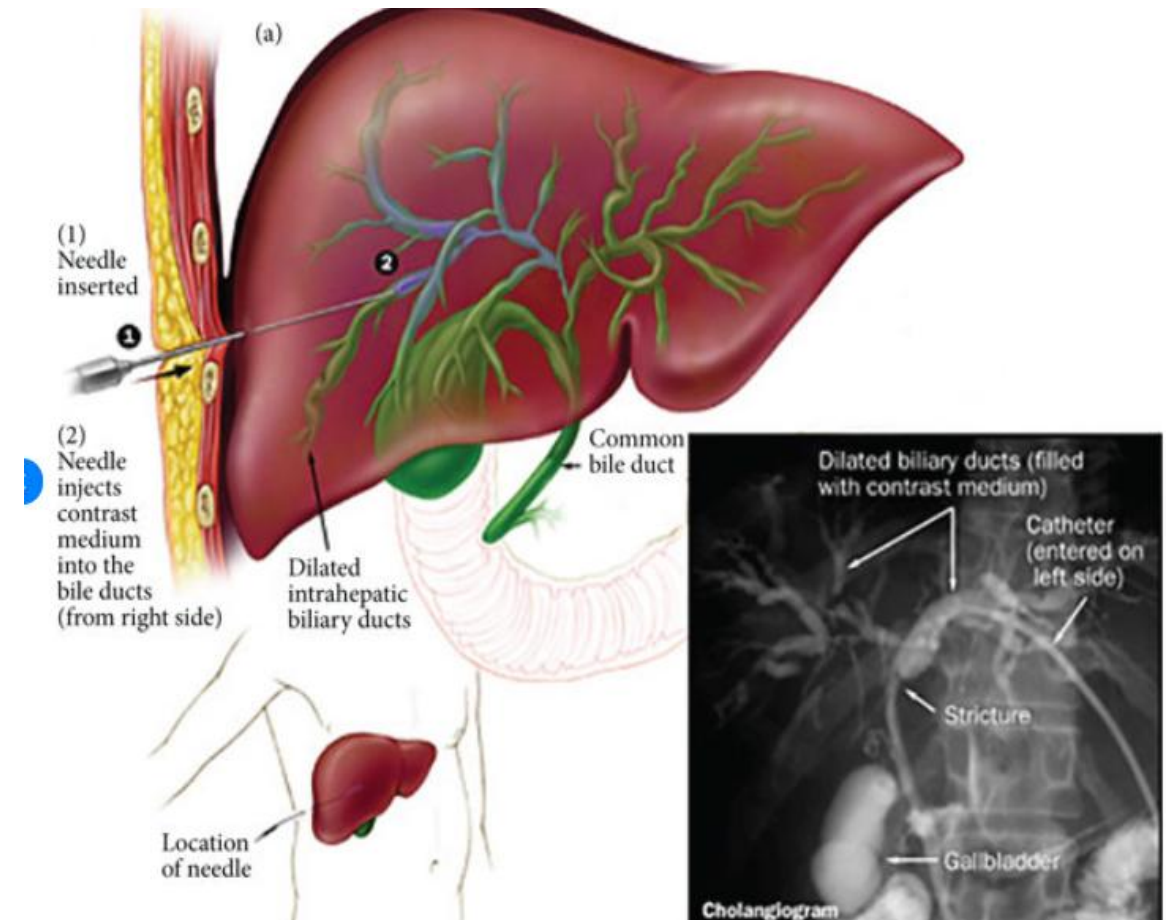
Diagnosis of Gall bladder CA



- History collection
- Physical examination
- Blood investigation-Bilirubin & Carbohydrate antigen 19-9 (CA19-9) is a tumor marker level will be elevated
- **Carcinoembryonic antigen (CEA) assay:** Measures the levels of CEA (a tumor marker released by both healthy and cancerous cells).
- Biopsy
- Endoscopy
- **Laparoscopy-** uses an endoscope to look at the gallbladder and other internal organs
- **MRCP / ERCP :**Tests to examine the bile duct which helps to find out the blockages in the bile duct.
- **Endoscopic retrograde cholangiopancreatography (ERCP).**- to rule out bile duct cancer and also find out the spreading and blockage of bile duct



- **Percutaneous cholangiography**-cholangiography provides images of the bile ducts, and it may not show a tumor in the gallbladder. However, the procedure is excellent in detecting the site of a blocked bile duct.
- **CT scan** can be used to measure the tumor's size.
- **MRI**- location & % of tumor spreading to the other parts
- **Endoscopic Ultrasonography**- A special endoscope, which is a long, flexible scope, is inserted through the mouth after sedation. It can reach the stomach and some of the intestine. It has an ultrasound probe at the end that can be used to look for tumors and guide biopsy with a small needle.
- **Positron emission tomography (PET) or PET-CT scan.** A PET scan is usually combined with a CT scan (see above), called a PET-CT scan





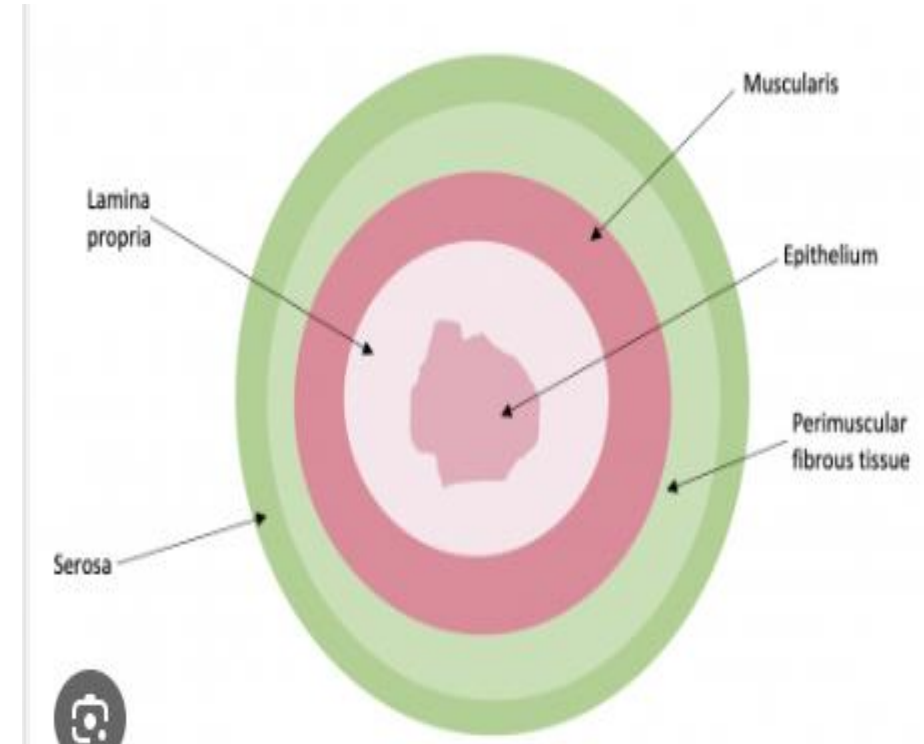
Assessment 2



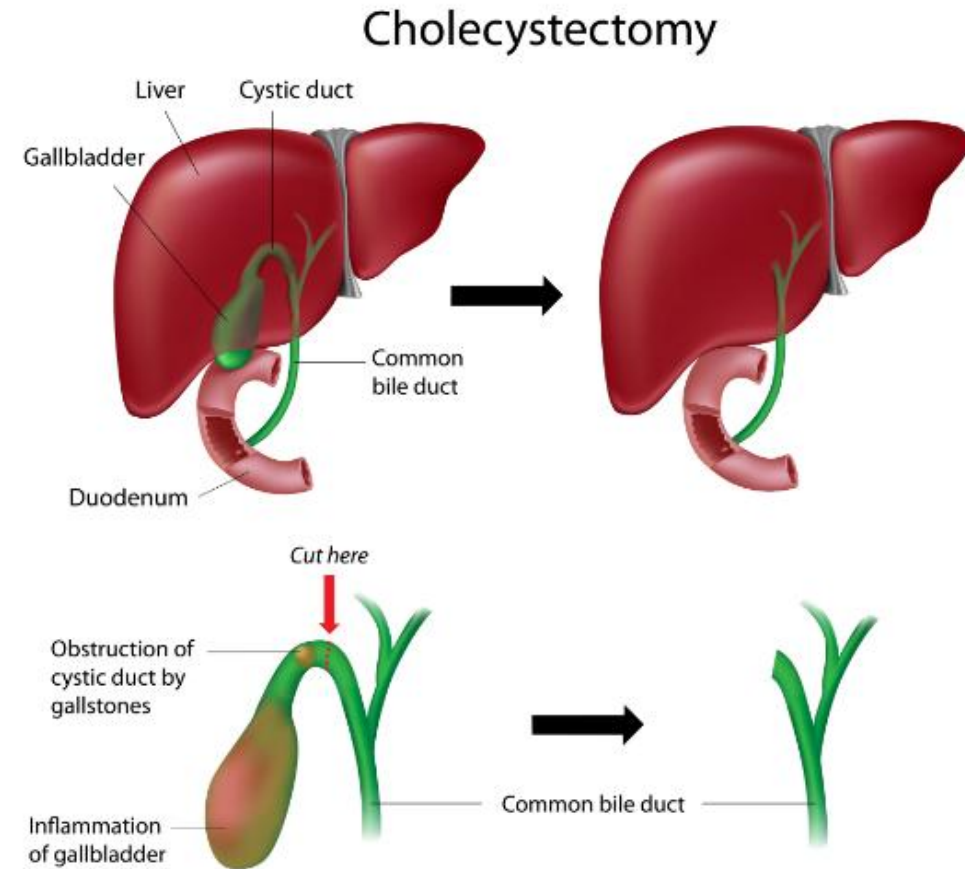
- 1. Group discussion about stages of gall bladder carcinoma

Surgical procedures of gallbladder carcinoma

- **Cholecystectomy**- Surgery to remove gallbladder : it will be done during the early stages of gallbladder cancer
- **Radical gallbladder resection** -Surgery to remove gallbladder and a portion of liver; it will be done when the cancer extends beyond the gallbladder into the liver.
- **Chemotherapy**: It is a drug treatment that uses chemicals to kill cancer cells eg.Gemcitabine (Gemzar®)
- **Radiation Therapy**: Radiation make use of hi-powered energy beams like X rays and protons to kill the cancer cells
- Palliative care
- Immunotherapy

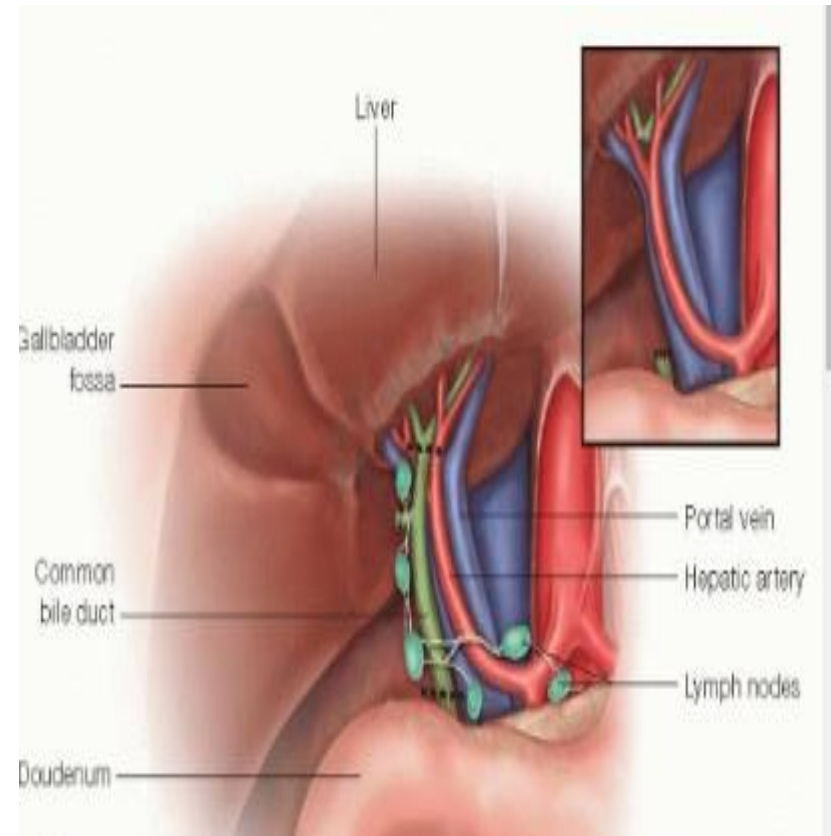


- **Cholecystectomy**- Also called a simple cholecystectomy, this procedure involves the removal of the gallbladder. An extended cholecystectomy is the removal of the gallbladder, 1 inch or more of liver tissue located next to the gallbladder, and all of the lymph nodes in the region.



Cont....

- **Radical gallbladder resection.** This procedure involves the removal of the gallbladder, a wedge-shaped section of the liver near the gallbladder, the common bile duct, part or all of the ligaments between the liver and intestines, and the lymph nodes around the pancreas and nearby blood vessels. This surgery may be recommended even if a simple cholecystectomy was already done for a more complete resection to remove potentially cancerous cells.





Assessment 3



1. List down the clinical manifestation of gall bladder carcinoma
2. What is ERCP
3. What are the surgical management of gall bladder carcinoma



Reference



- The Text Book of Pathology author Nithin chawla
- For further reference –
- <https://youtu.be/ffoKThdgo4I?si=YzsmilB9qRQVSdZG>