

T3 Cancer of the Stomach

1

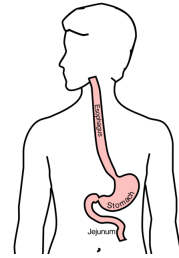
Anatomy

Food moves from the throat

→ esophagus

→ stomach

→ small bowel (jejunum)



2

Cancer Staging

Staging refers to the tests to determine

- How large is the tumor?
- Has there been spread to lymph nodes?
- Has it spread to other parts of the body?

Treatment options depend upon the cancer stage

3

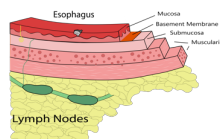
Cancer Staging

- **T** = Tumor - Depth of growth into the wall
- **N** = Nodes - Spread to the lymph nodes
- **M** = Metastasis - Spread to liver, lungs, or bone

4

Early Stage Cancers

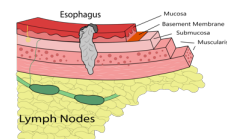
Cancers start on the very inside layer called the mucosa



5

Locally-advanced Cancers

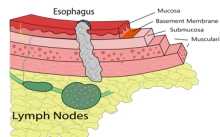
Over time, cancers can grow into the muscular wall



6

Lymph Nodes

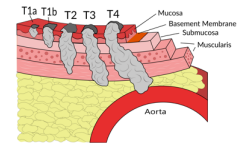
In some cases, cancer cells can break off from the main tumor and spread to lymph nodes



7

T Stage

Cancers are categorized based upon the thickness of the tumor, known as the T stage

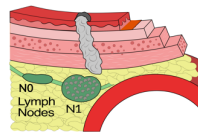


8

N Stage

Cancers are categorized by whether there is spread to the nodes.

- **N0** cancers have not spread to the nodes
- **N1** cancers have spread to the nodes.

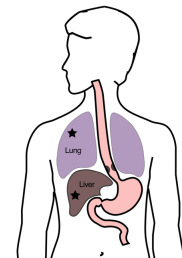


9

M Stage

Some cancers spread to other parts of the body

- **M0** cancers have not spread to other parts of the body
- **M1** cancers have spread to lungs, liver, or bone

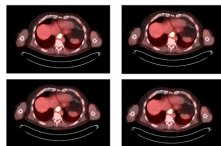


10

PET scan

Similar to CT scan

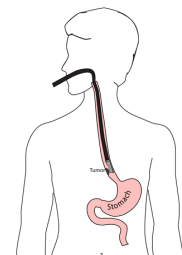
- Tracer shows 'hot spots'
 - Cancer
 - Inflammation or infection
 - Normal organs (heart)



11

Endoscopic Ultrasound

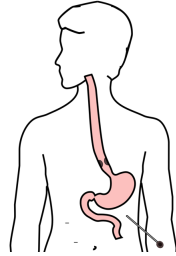
- Similar to upper endoscopy (EGD)
- Ultrasound in scope
- Evaluates T stage



12

Laparoscopy

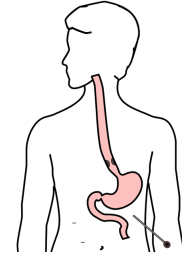
- Some stomach cancers can spread inside the abdomen
- Areas of spread can be very small (grain of rice)
- Laparoscopy can detect spread inside the abdomen



13

Laparoscopy

- General anesthetic
- Several 1/4" incisions
- Telescope examines the abdomen
- Biopsies can be performed.



14

Treatment Plan

Superficial (T1) ⇒ Endoscopic Therapy

Localized (T1b/T2) ⇒ Surgery

Locally-advanced (T3/N1) ⇒ Chemo → Surgery → Chemo

Metastatic (M1) ⇒ Chemotherapy

15

Locally-advanced Adenocarcinoma

"Sandwich" chemotherapy before + after surgery:

Chemo (8 wks) → Surgery → Chemo (8 wks)

Two different drug combinations:

- FLOT (more effective)
- FOLFOX (better tolerated)

16

"Sandwich" Chemotherapy Drugs

FLOT

- 5-FU
- Leucovorin
- Oxaliplatin
- Taxotere

FOLFOX

- 5-FU
- Leucovorin
- Oxaliplatin

17

Tumor Biomarkers

Pathology tests show whether other drugs may be helpful:

- HER-2 → Herceptin can be helpful
- PD-L1 → Immunotherapy can be helpful
- MMR → Immunotherapy can be helpful

Biomarkers reported in a separate pathology report

Your medical oncologist will review these with you

18

Chemotherapy Administration

- Most chemotherapy is administered by vein.
Several options exist to administer chemotherapy:
- Intravenous catheter in peripheral veins
 - Peripheral Intravenous Central Catheter (PICC)
 - Central Venous port

19

Intravenous Catheter in Peripheral Vein ("IV")

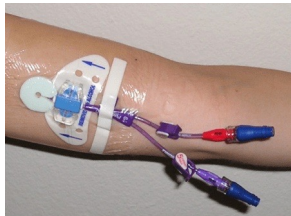
- IV catheter placed in vein of hand or arm
- Allows administration of chemo and fluids
- Placed for each dose
- Removed that day
- Not suitable for FLOT chemo



20

PICC Lines

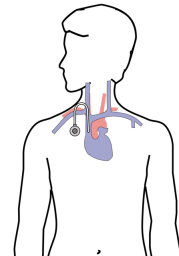
- Placed in Radiology
- Stay in place during all of treatment
- Needs to be kept clean and dry
- Suitable for FLOT chemotherapy



21

Central Venous Port

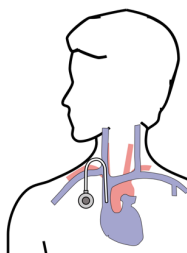
- Implantable device makes chemo easier
- May shower in 24 hrs
- No special care at home
- OK for FLOT chemo
- Allows for blood draws



22

Central Venous Port

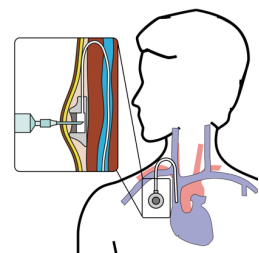
- Implanted under skin
- Neck incision (1/4")
- Incision below the collarbone
- Sutures dissolve
- "Superglue" on incisions



23

Central Venous Port

When it is time for chemotherapy, a needle is inserted through the skin into the port



24

Restaging

CT or PET scan performed after preoperative therapy

- Surgery performed after restaging
- Timing depends upon recovery from therapy

25

Primary Care Practitioner (PCP)

Critical to coordinate care between specialists.

We will update your PCP after each visit

PCP Referral Line (844) 235-6998

26

My Atrium Patient Portal

- Critical to good communication with your care team
- Available for desktop or laptop or phone
- Sign up at my.atriumhealth.org

27

Exercise

- Reduces risk of complications from treatment
- Goal is 30min/day of vigorous exercise 6 days/wk
 - Working hard enough that you can't converse
 - Start slowly and build up
 - Every day counts! (Aim for daily activity)

28

Smoking Cessation

- Smoking makes cancer treatment more difficult
 - Increases risk of complications after surgery
- Options for help with smoking cessation:
 - NC Quit Line 1-800-QUIT-NOW (1-800-784-8669)
 - American Lung Assn
www.freedomfromsmoking.org
 - Smoking Cessation Counseling (Metro Charlotte)

29

Protein Needs

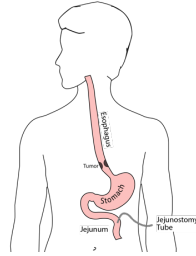
- Men: Average 75 grams/day
 - Women: Average 60 grams/day
- Protein Shakes provide protein with minimal sugar



30

Jejunostomy Tube

- Nutrition to bypasses the esophagus and stomach
- Placed in small intestine
- Pump administers feedings slowly
- Feeding done at night



31

Jejunostomy Typical Regimen

- Jejunostomy tube feeds for 16 hours (6pm-10am)
 - Men: 75mL/hour x 16 hours = 5 cartons
 - Women: 60mL/hour x 16 hours = 4 cartons
 - Water 240ml (8oz) via syringe 4x/day
- Hospital nurses will teach use of the feeding tube

32

Jejunostomy Feeds with Diabetes

Jejunostomy feedings elevate blood sugars

- Insulin may be required along with feeds
- Typical Pattern for tube feeds
- Feeds run via pump from 6pm to 10am
 - Insulin at 6pm (70/30 insulin)
 - Insulin at Midnight (70/30 insulin)
 - No insulin if tube feedings are not run

33

Jejunostomy Video

A video is available to help become familiar with the feeding jejunostomy



34

Stomach Cancer Surgery Goals

Staging refers to the tests to determine

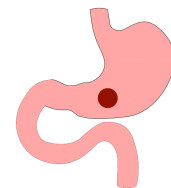
- Remove the tumor
- Remove lymph nodes (depends upon tumor type)
- Preserve stomach function
- Reconstruct GI tract

Treatment options depend upon the cancer stage

35

Distal Cancers

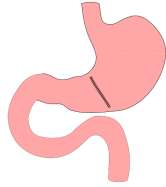
Distal cancers are those in the lower part of the stomach



36

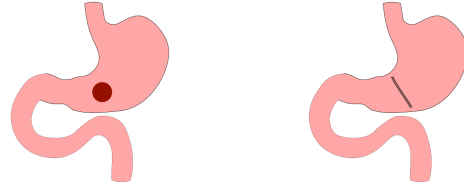
Partial Gastrectomy

- Removes the tumor
- Does not remove lymph nodes
- Best suited for:
 - Small adenocarcinoma
 - GI Stromal Tumors



37

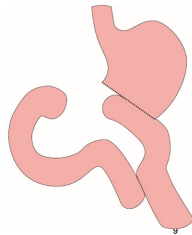
Partial Gastrectomy



38

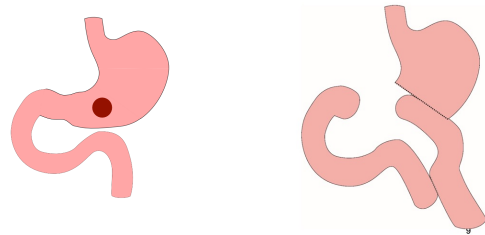
Distal Gastrectomy

- Removes bottom half of the stomach
- Does lower lymph nodes



39

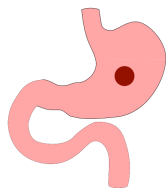
Distal Gastrectomy



40

Body Cancers

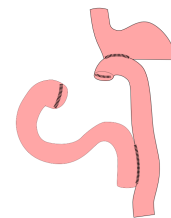
Body is the mid-portion of the stomach



41

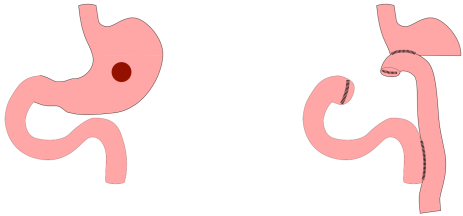
Subtotal Gastrectomy

- Removes bottom 2/3 of stomach
- Removes nearby lymph nodes
- Reconstruction with small intestine



42

Subtotal Gastrectomy



43

Proximal Tumors

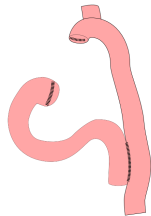
- Located near the top of the stomach
- Challenging area for surgery



44

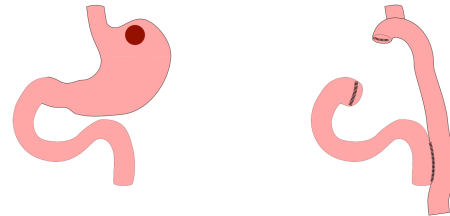
Total Gastrectomy

- Removes all of the stomach
- Reconstruction with small intestine
- Needed for those with CDH1 mutations



45

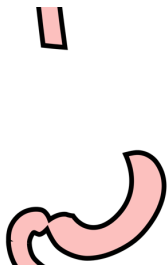
Total Gastrectomy



46

Esophagogastrectomy

- Removes top part of stomach
- Remove bottom half of esophagus
- Surgery in both abdomen and chest



47

Esophagogastrectomy

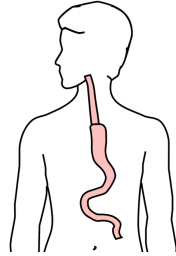
- Removes top part of stomach
- Remove bottom half of esophagus
- Surgery in both abdomen and chest



48

Esophagogastrectomy

- Removes top part of stomach
- Remove bottom half of esophagus
- Surgery in both abdomen and chest

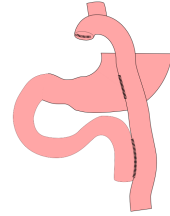


49

Dual Tract Gastrectomy

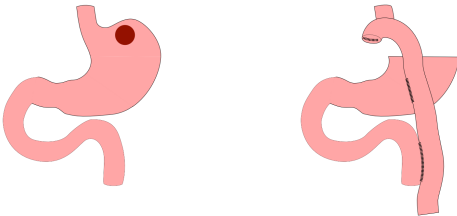
Alternative surgical approach for small tumors near the top of the stomach

- Preserves the bottom of the stomach as a reservoir



50

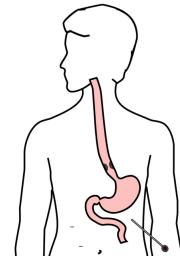
Dual Tract Gastrectomy



51

Laparoscopy

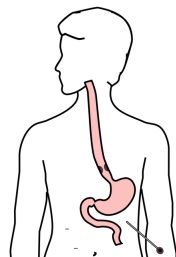
- Some stomach cancers can spread inside the abdomen
- Areas of spread can be very small (grain of rice)
- Laparoscopy can detect spread inside the abdomen



52

Laparoscopy

- General anesthetic
- Several 1/4" incisions
- Telescope examines the abdomen
- Biopsies can be performed.



53

Risks of Surgery

- Leak where bowel is joined together (anastomosis)
- Bleeding requiring reoperation
- Delayed stomach function
- Infection in the abdomen

54