T3 Cancer of the Stomach

1

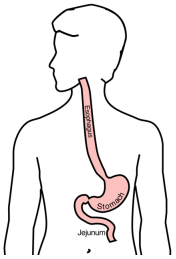
Anatomy

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

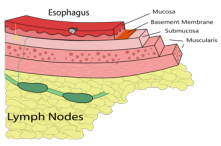
Cancer Staging

- **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



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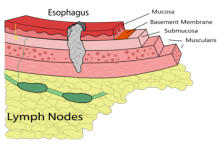
Locally-advanced Cancers

Over time, cancers can grow into the muscular wall



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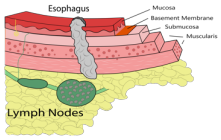
Lymph Nodes

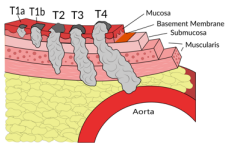
In some cases, cancer cells can break off from the main tumor and spread to lymph nodes



7

T Stage

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



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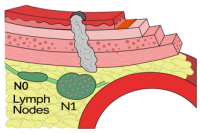
N Stage

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.

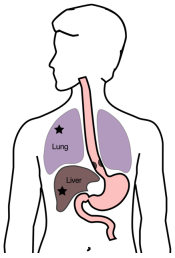


9

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 lungs, liver, or bone



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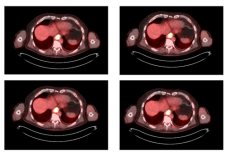
PET scan

Similar to CT scan

Tracer shows 'hot spots'

- Cancer
- Inflammation or infection
- Normal organs (heart, kidneys)



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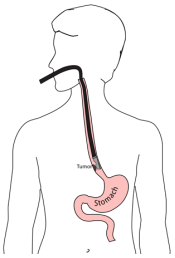
Endoscopic Ultrasound

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



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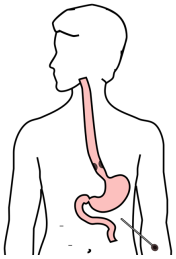
Laparoscopy

- 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



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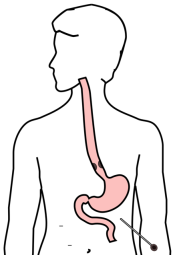
Laparoscopy

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



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Treatment Plan

Superficial (T1a): Endoscopic Therapy

Localized (T1b/T2): Surgery

Locally-advanced (T3M0): Chemo → Surgery

Metastatic (M1): Chemotherapy

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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)

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"Sandwich" Chemotherapy Drugs

FLOT
- 5-FU
- Leucovorion
- Oxaliplatin
- Taxotere

FOLFOX
- 5-FU
- Leucovorin
- Oxaliplatin

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FLOT Treatment Plan

- FLOT Chemo every 2 weeks x 4 (=8 weeks total)
- Surgery (4-6 weeks later)
- FLOT Chemo every 2 weeks x 4 (=8 weeks total)

18

Durvalumab Immunotherapy

Cancer cells can turn off immune cells using a protein PD-L1

Darvalumab turns on immune cells by counteracting PD-L1

Durvalumab strengthens the immmune system to fight cancer

19

Matterhorn Trial

The Matterhorn clinical trial compared two types of treatment:

FLOT → Surgery → FLOT

FLOT + Durvalumab → Surgery → FLOT + Durvalumab

Better survival with addition of durvalumab to FLOT

Treatment with durvalumab depends upon approval from insurance company

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FLOT Chemo ± Durvalumab

FLOT Chemotherapy

- FLOT (8 weeks)
- Surgery (4-6 weeks later)
- FLOT (8 weeks)

FLOT + Durvalumab

- FLOT + Durvalumab (8 wks)
- Surgery (4-6 weeks later)
- FLOT + Durvalumab (8 wks)
- Durvalumab monthly x10

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Tumor Biomarkers - Additional 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 very helpful

Biomarkers reported in a separate pathology report

Your medical oncologist will review these with you

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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

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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

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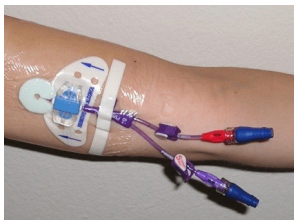
PICC Lines

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



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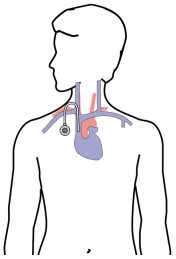
Central Venous Port

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



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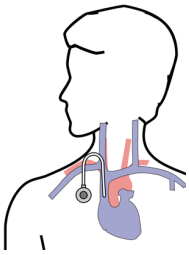
Central Venous Port

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



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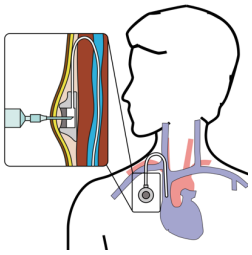
Central Venous Port

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



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Restaging

CT or PET scan performed after preoperative therapy

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

29

Primary Care Practitioner (PCP)

Critical to coordinate care between specialists.

We will update your PCP after each visit

PCP Referral Line (844) 235-6998

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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

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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)

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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)

33

Protein Needs

- Men: Average 75 grams/day
- Women: Average 60 grams/day

Protein Shakes provide protein with minimal sugar

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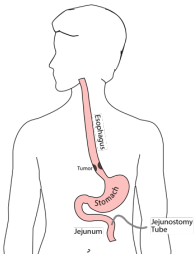
Jejunostomy Tube

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



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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

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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

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Jejunostomy Video

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

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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

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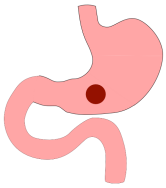
Distal Cancers

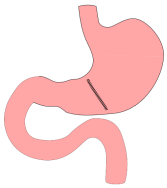
Distal cancers are those in the lower part of the stomach



40

Partial Gastrectomy

- Removes the tumor
- Lymph nodes not removed
- Best suited for:
  - Small adenocarcinoma
  - GI Stromal Tumors



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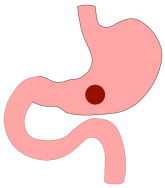
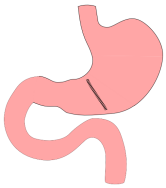
Partial Gastrectomy





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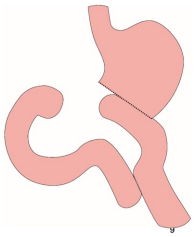
Distal Gastrectomy

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



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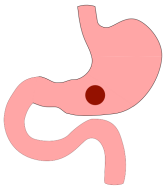
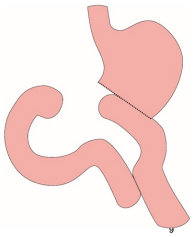
Distal Gastrectomy





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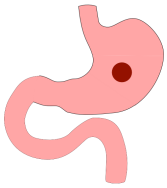
Body Cancers

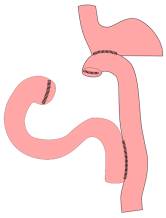
Body is the mid-portion of the stomach



45

Subtotal Gastrectomy

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



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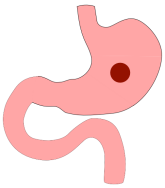
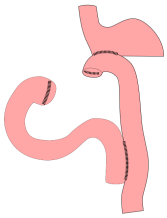
Subtotal Gastrectomy





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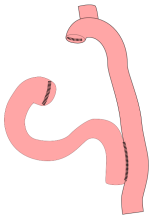
Proximal Tumors

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

48

Total Gastrectomy

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



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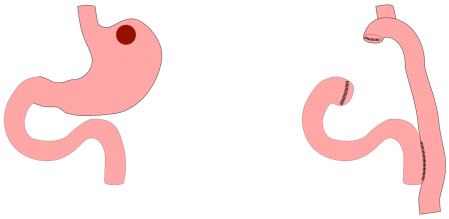
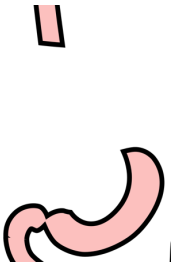
Total Gastrectomy



50

Esophagogastrectomy

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



51

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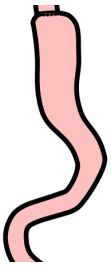

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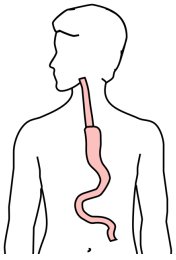

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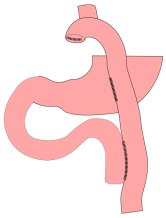
Dual Tract Gastrectomy

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

- Preserves the bottom of the stomach as a reservoir



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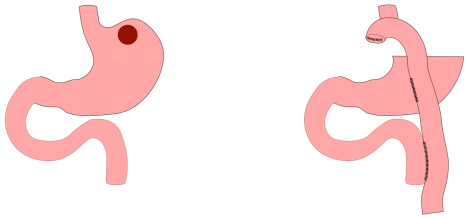
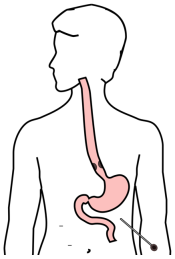
Dual Tract Gastrectomy



55

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



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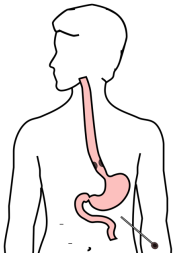
Laparoscopy

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



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Risks of Surgery

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

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Team Members - Physicians

Primary Care Provider

Gastroenterologist

Medical Oncologist (chemotherapy)

Radiation Oncologist (radiation)

Surgeons

- Jonathan Salo MD
- Jeffrey Hagen MD
- Michael Roach MD

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Team Members - Support Staff

Dietitian - Liz Koch

Nurses

- Matthew Carpenter RN
- Brandon Galloway LPN

Navigator - Laura Swift

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