T3 Cancer of the Stomach

## 1 Anatomy

Food moves from the throat

esophagus

stomach

small bowel (jejunum)

We’ll start with reviewing some anatomy about how the body digests food.

Food moves from the throat to the esophagus, and from there to the stomach.

From the stomach, food moved through a valve called the pylorus into the small intestines

## 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 Gastric Cancer Staging

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

## 4 Layers of the Wall of the Stomach

If we look at the walls of the stomach, we see several layers:

- Mucosa - Inner layer  
- Muscle wall (muscularis)  
- Lymph nodes located in fat outside the muscle

## 5 Early Stage Cancers

Early-stage cancers are those that are small and have not grown very far into the wall of the stomach.

Cancers start on the very inside of the layer called the mucosa

## 6 Locally-advanced Cancers

Over time, cancers can grow into the muscular wall

Locally-advanced cancers are those that have grown through the wall of the stomach

## 7 Lymph Nodes

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

If the lymph nodes contain enough cancer cells, they can be seen on CT scans or PET scans

## 8 T Stage

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

T1 tumors are early stage, and T4 tumors more advanced

## 9 N Stage

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

* **N0** cancers have not spread to the lymph nodes
* **M1** cancers have spread to the lymph nodes.

## 10 M Stage

Some cancers spread to other parts of the body

* **M0** cancers have not spread to other parts of the body
* **N1** cancers have spread lungs, liver, or bone

M1 cancers are considered Stage 4

## 11 PET scan

* Similar to CT scan
* Tracer lights up areas of cancer
* Preparation: Water (only) for 6 hours before

In some cases, the PET scan is not performed until a CT scans bas been done.

## 12 Endoscopic Ultrasound

* Similar to upper endoscopy (EGD)
* Ultrasound probe in scope
* Evaluates T stage of cancer

Endoscopic ultrasound is most helpful in early stage cancers.

## 13 Laparoscopy

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

Not all patients with stoach cancer need a laparoscopy.

## 14 Laparoscopy

A laparoscopy is performed under a general anesthetic.

* Several incisions 1/4” long
* Telescope looks inside the abdominal cavity.
* Biopsies can be performed.

## 15 Treatment Plan

- Superficial (T1) Endoscopic Therapy  
  
- Localized (T1b/T2) Surgery  
  
- Locally-advanced (T3/N1) Chemo Surgery  
  
- Metastatic (M1) Chemotherapy

This table summarizes four different treatment categories:

* Superficial cancers are T1 and can be treated by endoscopic therapy without the need for surgery
* Localized cancers are T1b or T2 and are frequently treated by surgery alone without the need for chemotherapy or radiation
* Locally-advanced cancers are T3 or N1 and are usually treated with chemotherapy prior to surgery
* Metastatic cancers are M1 and are treated primary by chemotherapy.

## 16 Locally-advanced Adenocarcinoma

“Sandwich” chemotherapy before and after surgery:

Chemotherapy (8 wks) Surgery Chemotherapy (8 wks)

Two different drug combinations:

* FLOT (more effective)
* FOLFOX (better tolerated)
* ECF (less commonly used)

## 17 “Sandwich” Chemotherapy Drugs

**FLOT**

* 5-FU
* Leucovorion
* Oxaliplatin
* Taxotere

**FOLFOX**

* 5-FU
* Leucovorin
* Oxaliplatin

## 18 Tumor Biomarkers

Surface proteins found on cancers which may show that additional 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

## 19 Chemotherapy

Chemotherapy drugs are administered intravenously.

There are several options for intravenous access:

* Peripheral IVs in the hand
* PICC line (Peripheral Inserted Central Catheter)
* Central Venous Port  
  [Central Venous Port](lci_cvport.htm)

## 20 Restaging

CT or PET scan performed after preoperative therapy

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

## 21 Additional Slides

[Nutrition Slideshow](lci_nutrition.htm)  
[Gastrectomy Slideshow](lci_gasgtrectomy.htm)  
[Central Venous Port](lci_cvport.htm)