General Data

- Age: 75y/o
- Sex: female
- Date of admission: 87-10-31

Chief complaint

- Poor oral intake, hunger pain for months and body weight loss about 10kg in 3 months

Present Illness

- Quit healthy before
  DM(-), HTN(-), CVD(-), smoking(-), drinking(-)
- 3 months ago, LLQ abdominal discomfort, poor appetite noted
- PES and colonoscopy done in Argentina
  -- Polyps noted
  -- Biopsy: unknown finding

Present Illness

- 1 month ago, intermittent LLQ abdominal pain, upper abdominal pain (hunger pain and relieved after meal) and vomiting noted
- Body weight loss: 10kg in 3 months

PE

- GA: fair
- Con’s: clear
- Vital sign: TPR:36.4/90/17, BP:120/78mmHg
- HEENT: conjunctivae: pale
  LAP(+) about 1x1cm in size at left post-SCM area
- Chest: breathing sounds: clear
  heart sounds: regular, no murmur
- Abdomen: flat and soft, LLQ tenderness
  bowel sounds: hypoactiv
- Extremities: freely movable, pitting edema(+)

Impression

- Peptic ulcer
- Poor oral intake and body weight loss suspect malignancy induced

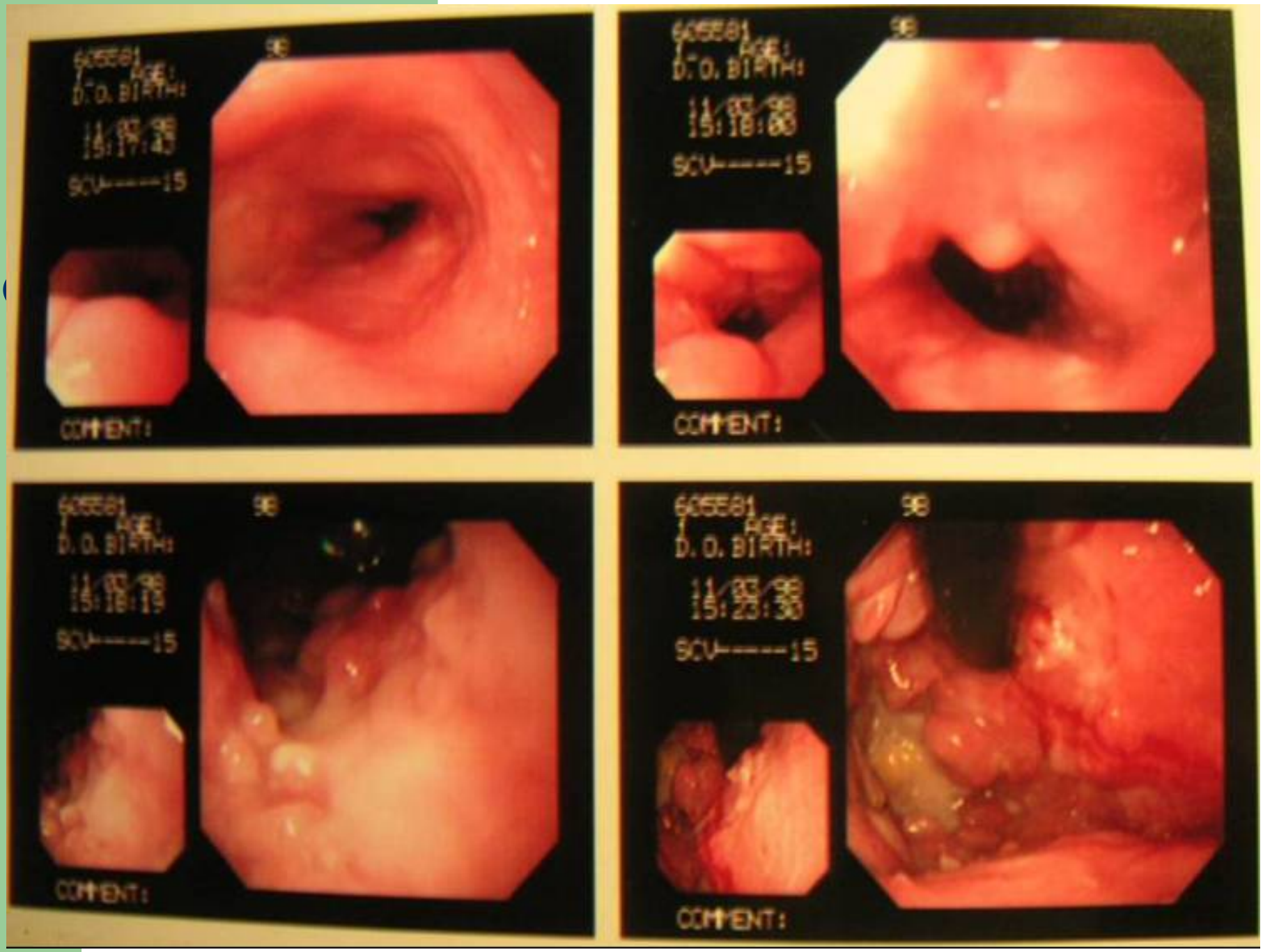
Evaluation

- 11-1 Hb: 7.9, MCV: 79.1, Ret%:1.5%
  WBC: 8440, Seg: 86.8%, Plt: 624000
- 11-2 Albumin:2.1, GOT:28, GPT:34
  BUN:8.6, Cr:0.7
  Fe:1, TIBC:195
- 11-3 CEA: 1.39 (0~4.6), AFP: 1.13 (0~15),
  CA125: 48.22 (10~35)

Evaluation

- 11-3 PES: A very big ulcerating tumor with infiltrating margin was found at cardia to angle. Biopsy x 4

  IMP: carcinoma, advanced, stomach, with extension to esophagus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Evaluation

- 11-3 Abdominal Sonar: multiple hypoechoic nodule (1~2cm) were noted near pancreatic head & aorta.
  IMP: chronic parenchymal liver disease, liver sludge, thicken GB wall, hypoechoic lesions, nature? r/o LN enlargement

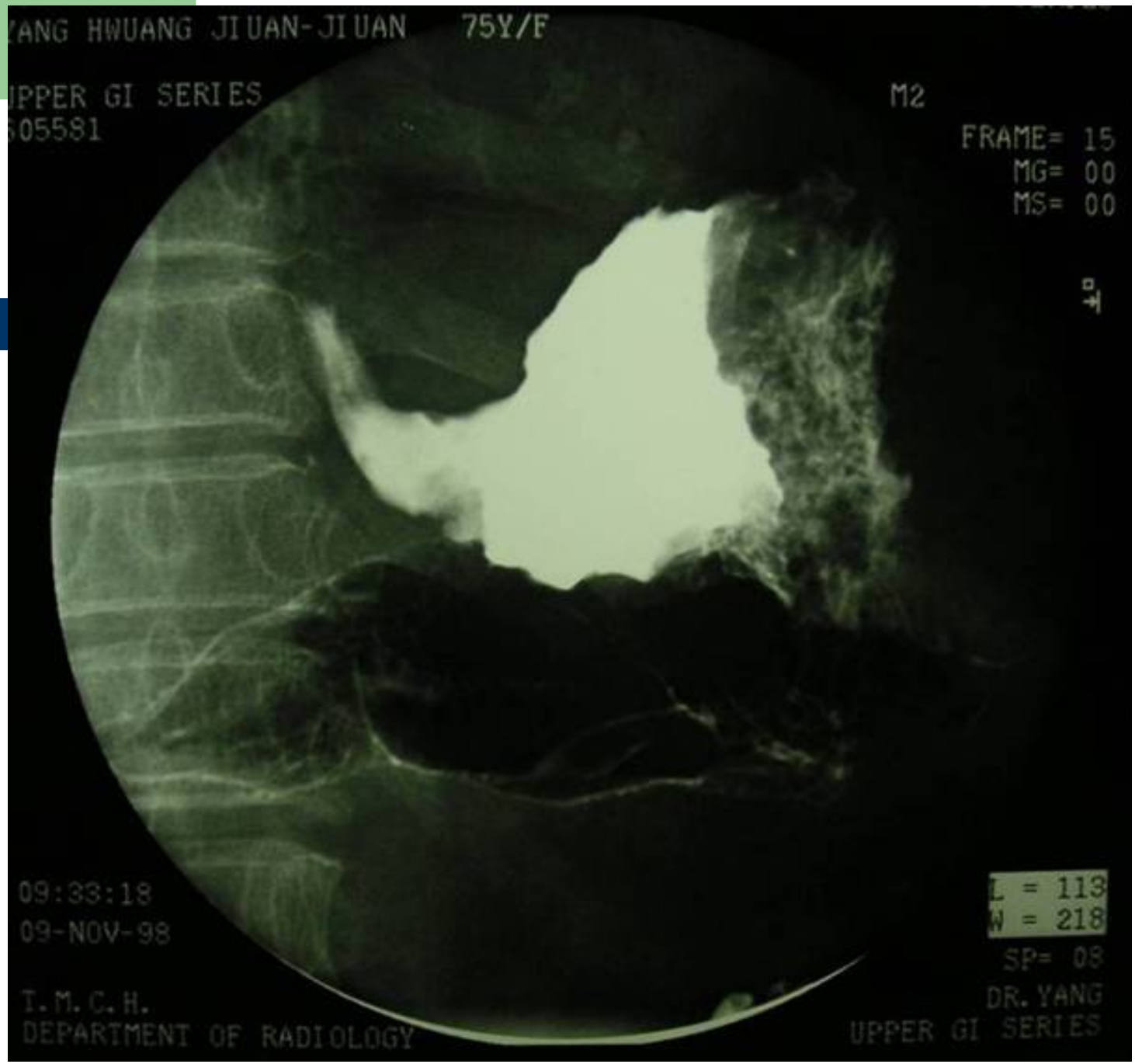
Evaluation

- 11-6 Hb:11.7 (PRBC:4U)
- 11-6 Abdomen CT
- 11-9 UGI series
- 11-16 Small bowel series
- 11-18 Patient transfer to 和信Hospital for C/T

UGI


YANG HWUANG JI UAN-JI UAN 75Y/F
UPPER GI SERIES
605581
M1
FRAME= 12
MG= 00
MS= 00
09:31:06
09-NOV-98
T.M.C.H.
DEPARTMENT OF RADIOLOGY
L = 156
W = 261
SP= 08
DR. YANG
UPPER GI SERIES

UGI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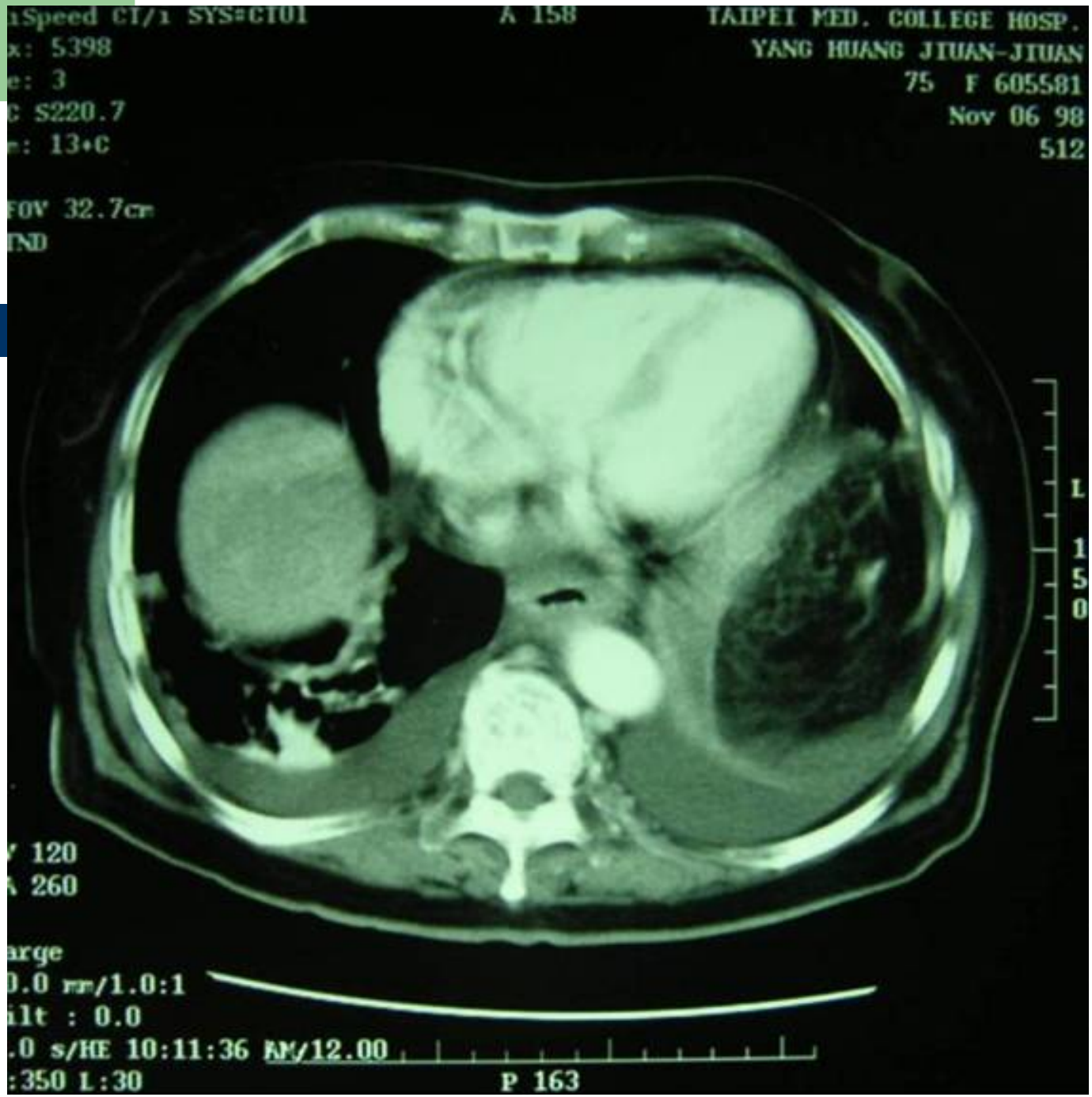
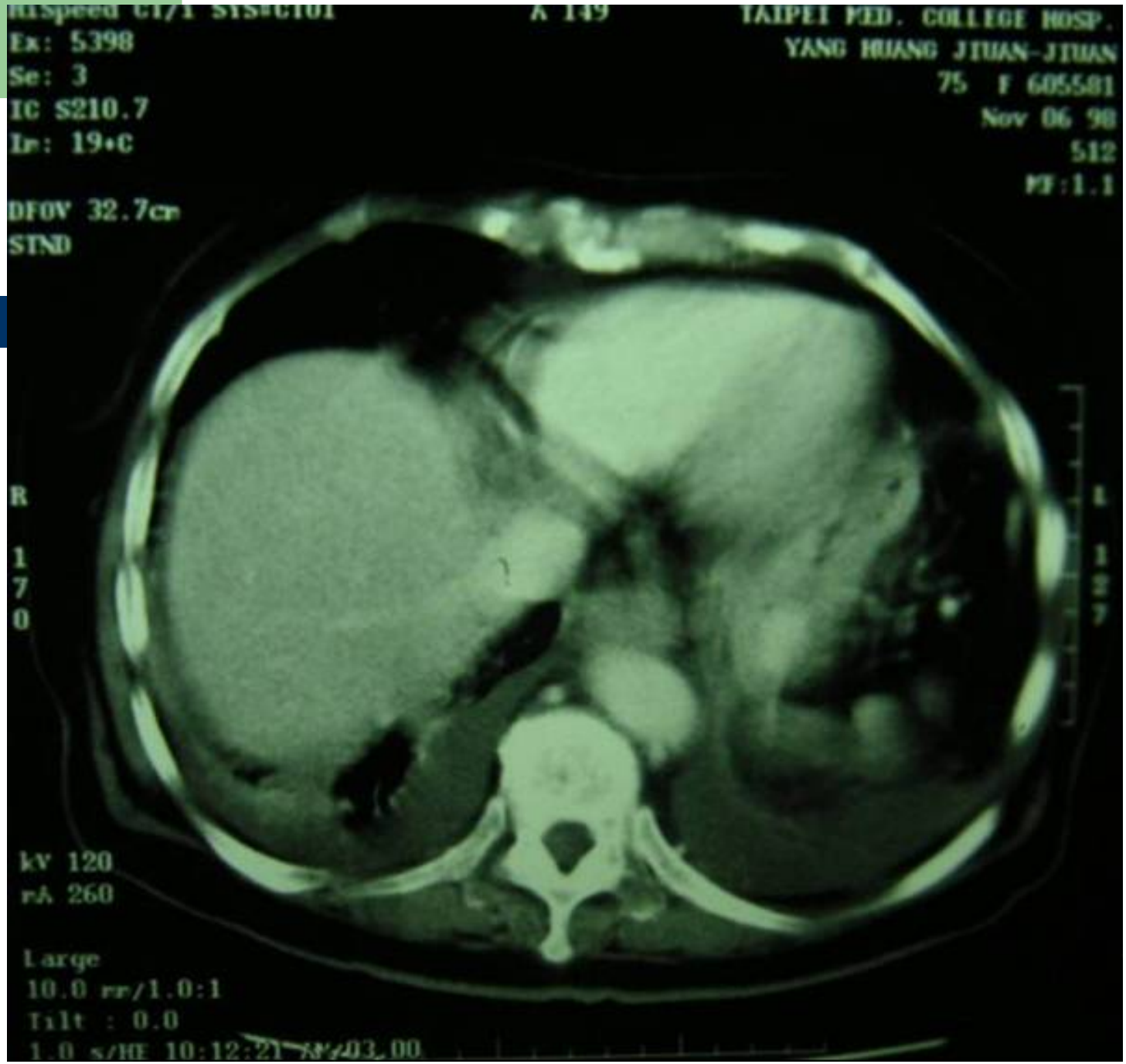
SP= 08
DR.YANG
UPPER GI SERIES

CT

- Pleura effusion
- Thickened esophageal wall



CT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Se: 3
IC S210.7
Im: 19+C
DFOV 32.7cm
STND
TAIPEI MED. COLLEGE HOSP.
YANG HUANG JIUAN-JIUAN
75 F 605581
Nov 06 90
512
MF:1.1
R
1
7
0
kV 120
mA 260
Large
10.0 mm/1.0:1
Tilt : 0.0

CT

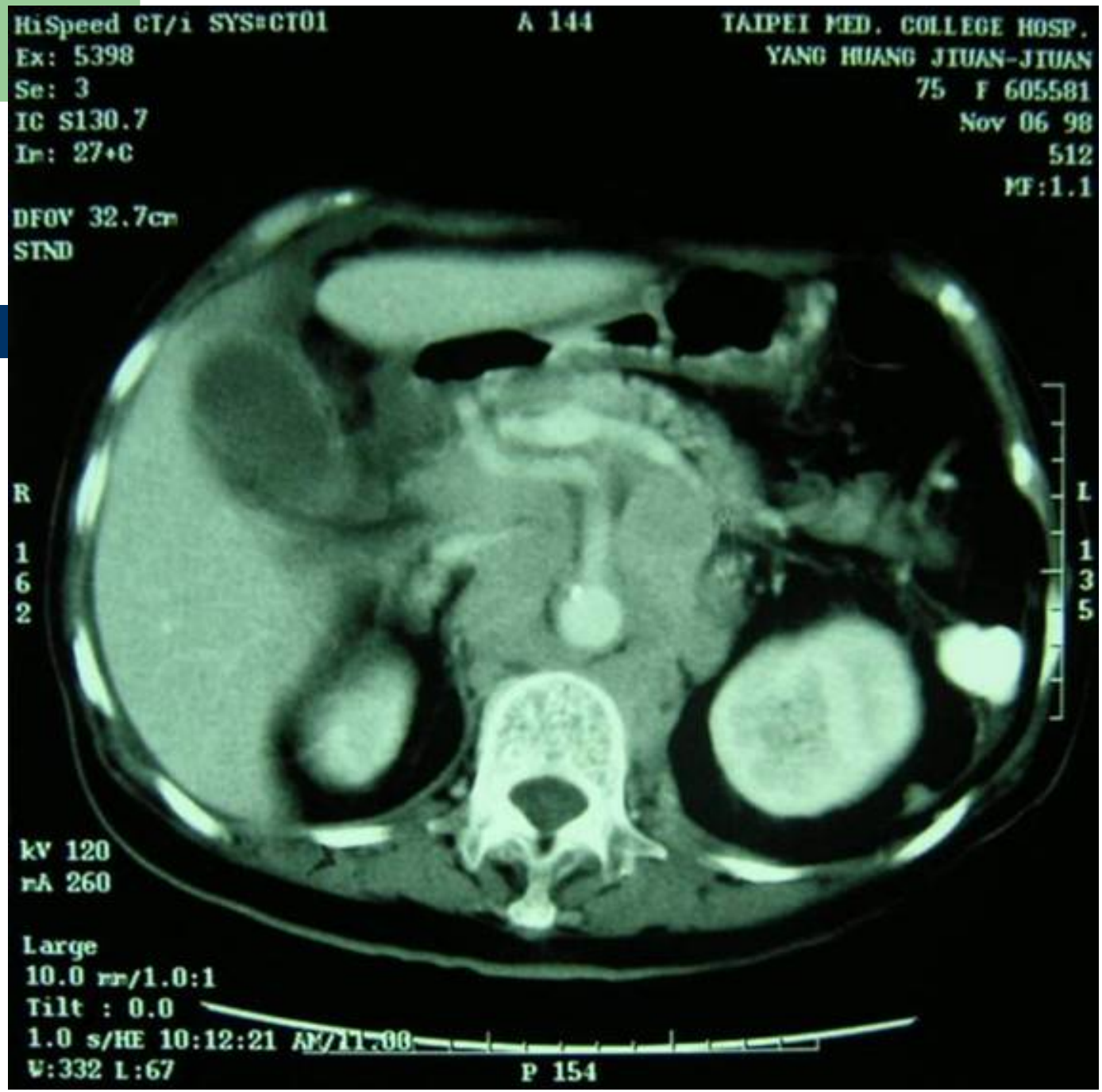
- Thickened gastric wall
- Soft tissue density at the lesser sac
- Liver intact

CT


IC S150.7
Ir: 25+C
Nov 06 98
512
MF:1.1
DFOV 32.7cm
STND
R
L
kV 120
mA 260
Large
10.0 mm/1.0:1
Tilt : 0.0
P 154

CT

- Soft tissue density at retroperito-nium



CT


HiSpeed CT/i SYS=CT01
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IC S110.7
Ir: 29+C
A 144
TAIPEI MED. COLLEGE HOSP.
YANG HUANG JIUAN-JIUAN
75 F 605581
Nov 06 98
512
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DFOV 32.7cm
STND
R
162
L
135
kV 120
mA 260
Large
10.0 mm/1.0:1
Tilt : 0.0
1.0 s/HE 10:12:21 AM/13:00
W:342 L:59
P 154

CT

- Soft tissue density at peri-aortic area near pelvic inlet

CT

- Impression:
  1. Lymphoma
  2. Gastric cancer with lymphatic metastasis

Pathology

- Stomach & Esophagus biopsy
- Malignant lymphoma made up of large-sized atypical lymphoid cells, B cell
- Diffuse infiltrating in the esophagus and gastric tissue

Diagnosis

- Gastric lymphoma, Diffuse large B cell type malignant lymphoma from cardia to angle

Differential Diagnosis

Gastric maliganancies

- The stomach is the site of variety of malignant neoplasms. They are primary carcinoma, gastric lymphoma, mesenchymal tumours and metastatic carcinomas.
- The most common of these are carcinoma and lymphoma.

Gastric carcinoma: Morphology

- Primary carcinoma of the stomach may be present as:

1. Superficial spreading carcinoma (Early gastric cancer)

Type I	lesions are elevated and protrude more than 5 mm into the lumen.
Type II	tumors are superficial lesions that are elevated (IIa), flat (IIb), or depressed (IIc).
Type III	early gastric cancers are shallow, irregular ulcers surrounded by nodular, clubbed mucosal folds.

Gastric carcinoma: Morphology

2. Polypoid or fungating carcinoma

3. Ulcerating or penetrating carcinoma (70%)

4. Advanced bulky carcinoma

5. Infiltrating or cirrhous carcinoma (5~15%) (linitis plastica)

Gastric carcinoma: UGI

1. Superficial spreading carcinoma

   a flat or slightly depressed lesion accompanied by converging folds

2. Polypoid or fungating carcinoma

   irregular protruding mass

3. Ulcerating or penetrating carcinoma

   ulcerated mass, amputation of folds surface may be highly irregular (cauliflower)

Gastric carcinoma: UGI

4. Advanced bulky carcinoma

   mass or bulk, one or more ulceration, irregular surface, margins may be a distinct angular demarcation (shelf)

5. Infiltrating or cirrhous carcinoma (linitis plastica)

   fibrotic reaction, contracted stomach lacking the normal rugal fold pattern with a smooth or a finely granular surface

Gastric carcinoma: CT

- thickening of the gastric wall, asymmetric thickening of folds, irregular nodular luminal surface, mass of uniform density

Gastric carcinoma: Spread

1. beyond the serosa, obliteration of the pre-gastric fat planes
2. direct extension to adjacent structures including the oesophagus, gastrocolic ligament, gastrohepatic ligament, gastrosplenic ligament and pancreas.
3. Further extension may involve any of the lymph node groups in the upper abdominal region.
4. The most common sites of distant metastases are the liver and peritoneal cavity

Gastric lymphoma

- Radiographic type:
  1. Polypoid or nodular (47%)
     enlarged nodular folds
  2. Ulcerative (42%)
     ulcerative lesions, may be complicated by perforation; aneurysmal configuration
  3. Diffusely infiltrating(11%)
     diffuse hoselike thickening of bowel; decreased or absent peristalsis

Gastric lymphoma: UGI

1. Infiltrative, ulcerative, or nodular mass that often mimics the appearance of adenocarcinoma. Flexibility of gastric wall preserved.
2. The antrum and body are most commonly involved. Duodenum often affected when antrum involved.
3. Circumscribed mass with endogastric or exogastric growth
4. Large irregular ulcers

Gastric lymphoma: CT

1. diffuse involvement of entire stomach, typically more than half of gastric circumference
2. segmental involvement
3. thickened gastric wall
4. luminal irregularity, hyperrugosity
5. spread of the tumour:
   direct extension into pancreas, spleen, transverse colon and liver

Discussion
Gastric Lymphoma

Lymphoma

	Hodgkin (1)	non-Hodgkin (10~15)
Presentation	Usually nodal	Usually extranodal
Spread	Contiguous	Hematogenous, Non-contiguous
Mediastinum	Common	Uncommon(except lymphoblastic type)
Spleen	Common	Uncommon
Bone Marrow	Uncommon	Common
Liver,GI,CNS	Uncommon	Common

Gastric Lymphoma

- Primary gastric lymphomas: less than 2% of all primary stomach malignancies
- Non Hodgkin's type and of B-cell lineage
- almost 75% of primary gastrointestinal lymphomas were of gastric origin.
- Gastric lymphomas are more prevalent in patients over the age of 50, and men are affected two to three times more frequently than women

Gastric Lymphoma

- Usually arise from MALT (mucosa associated lymphoid tissue)- also known as Marginal Zone B-cell lymphoma (Low and High grade).
- Diffuse large B-cell lymphoma include high grade lymphoma of MALT origin and non-MALT type and they are indistinguishable

MALToma

- Stomach, Mucosa associated lymphoid tissue
- Related to H. pylori
- Low grade, remission after H. pylori eradication
- Other sites: lung, breast, salivary gland, lacrimal gland

Gastric Lymphoma: Clinical Sign

- Most common: abdominal pain, nausea and vomiting, anorexia, weight loss, and bleeding.
- Early symptoms are vague .
- More advanced lesions may present with weakness, hemorrhage, pyloric stenosis, or signs of perforation.

- PE:Abdominal tenderness(35%), a palpable abdominal mass(20-30%), hepatomegaly(14%)

Gastric Lymphoma: Staging

- Ann Arbor staging system
  Stage IE: tumor confined to the GI tract
  Stage IIE: regional lymph node involvement
  Stage IIIE: spread to other organs within the abdomen
  Stage IV: spread beyond the abdomen

Gastric Lymphoma: Prognosis

- IPSS
  (International prognostic scoring system; for Diffuse large B cell lymphoma initially)

  1. Age>60y/o
  2. Ann Arbor stage Ⅲ or Ⅳ
  3. Extranodal involvement >1 site
  4. Poor performance status (ECOG 2~4)
  5. High LDH

  Risk: low(<1), low-intermediate(2),
  intermediate-high(3), high(4~5)

Gastric Lymphoma: Treatment

Surgery:

1. No decrease in survival for patients if adjuvant RT or C/T were given than total resection of all gross disease and involved lymph nodes.
3. In surgically treated patients, most recurrences are extraabdominal and local disease is well controlled.
4. Currently, splenectomy is only indicated in cases of direct tumor extension.

Gastric Lymphoma: Treatment

Radiotherapy:

Gastric lymphoma seems to be a more systemic disease with the majority of recurrences occurring at extraabdominal sites. So, in the absence of obvious persistent local disease, the need for additional local therapy with RT is put in question.

Gastric Lymphoma: Treatment

Chemotherapy:

1. As stated earlier, most primary gastric lymphomas are of the diffuse histiocytic or the diffuse large cell type. They are quite responsive to current chemotherapy.
2. Stages IE & IIE treated with chemotherapy after surgery: excellent 5-year disease free survival

Gastric Lymphoma: Treatment

C/T regimens:

- CHOP (cyclophosphamide, Adriamycin, vincristine, prednisone)
- CHOP-bleo (added bleomycin)
- COPP-bleo (cyclophosphamide, vincristine, procarbazine, prednisone, bleomycin)
- CVP (cyclophosphamide, vincristine, and prednisone)

Gastric Lymphoma: Treatment

C/T

- High grade
  - Aggressive course without tratment
  - 80% complete remission rate by C/T
  - 40% cure by C/T
- Low grade
  - Indolent course even late stage
  - Incurable by C/T

Gastric Lymphoma: Treatment

Conclusion:

Early stage:

Surgery: for local control and preoperative staging

Adjuvant C/T: for extraabdominal lesion

Gastric Lymphoma: Treatment

Conclusion

Invasion:

C/T: mainstay of treatment with either surgery or radiation providing local control.

In those patients with non-diagnostic biopsies, surgical exploration and resection are needed.