



# CASE CONFERENCE

2016.04.25

PGY莫心怡 / Vs常傳訓





# Patient Profile

- Chart No.: 00000000
- 70Y / F / 000
  
- Menopause at 60Y
- Past medical history: denied



# Chief complaint

- Intermittent lower back pain for several year but exaggeration in the morning in recent months



# Present illness

000  
(60Y/F)  
DOB:1955/8/20  
0000000  
Acc No:201603291832



000  
(60Y/F)  
DOB:1955/8/20  
0000000  
Acc No:201603291832



(1/1)  
T-L spine 2 view (1).AP,(2).Lat  
16:46:36

CR  
2550

CR  
2550

14cm  
Fit 33%



SIEMENS FD-X  
RADIS4625  
SIEMENS

W:1619 L:3086

W:2717 L:1626

2550

R

L





# Present illness

3/30

## ■ Surgical-oncology OPD

- Palpable fixed hard stiffen mass in UOQ of right breast
- Peau d'orange and darken skin appearance
- Nipple retraction; no discharge
- Palpable fixed right axillary lymph node

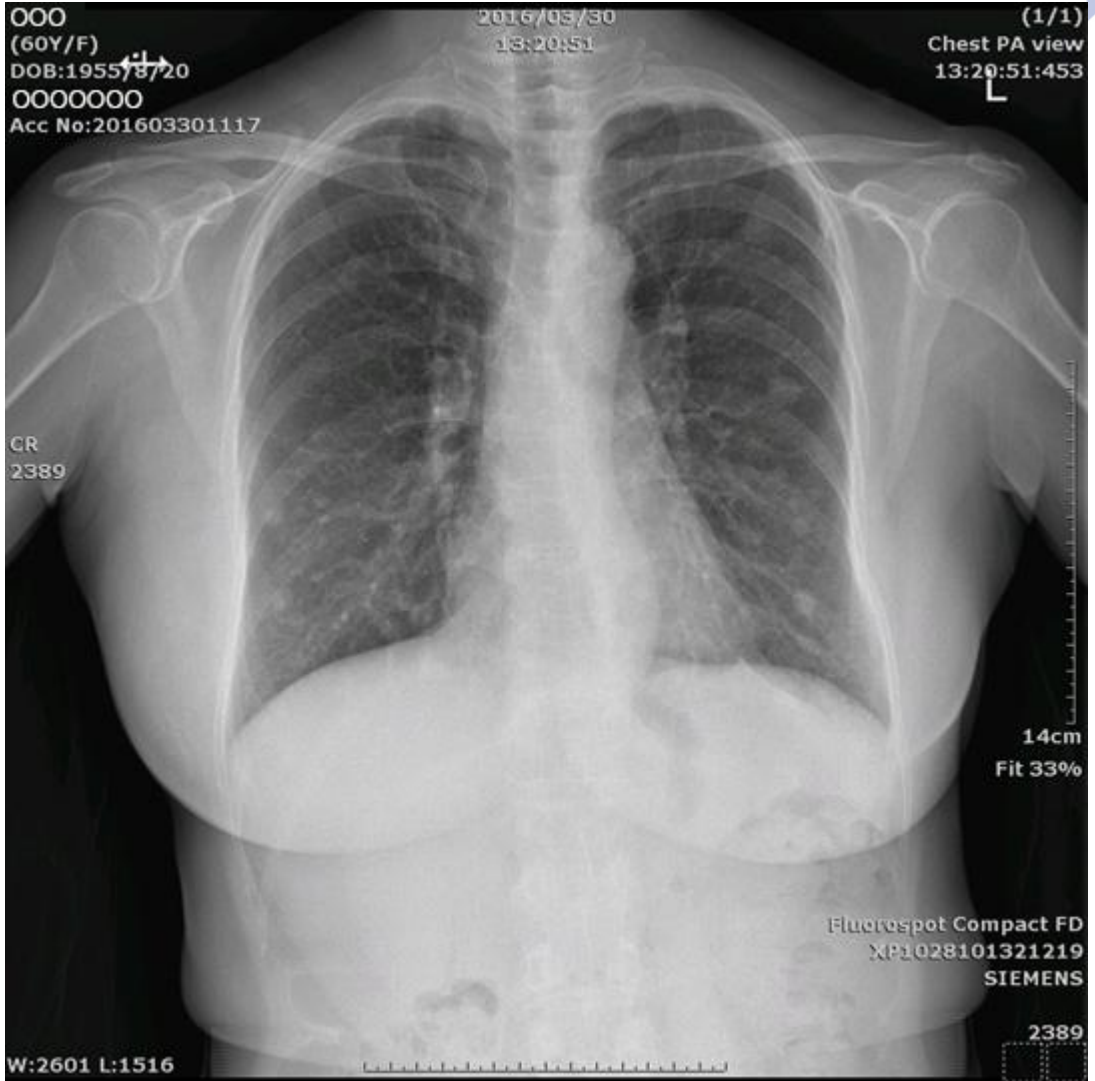




# Lab data / CXR

項目名稱	檢驗報告	單位
CBC		
WBC	9.6	$10^3/uL$
RBC	4.33	$10^6/uL$
HGB	12.8	g/dL
HCT	40.5	%
MCV	93.5	fL
MCH	29.6	pg
MCHC	31.6	g/dL
PLT	245	$10^3/uL$
BT	1min30sec	min
CT	4min30sec	min

項目名稱	檢驗報告	單位
BUN	6.9	mg/dL
Creatinine	0.51	mg/dL
eGFR	131	
AST	29	IU/L
ALT	28	IU/L
Na	140	mmol/L
K	3.4	mmol/L





# Tentative diagnosis

Right breast locally advanced cancer,  
cT4dN2M1, stage 4,  
with spinal metastases?



# Hospital course

3/31

- Consult ORT
- Operation:
  - Port-A implantation, left chest wall
  - Right axillary sentinel lymph nodes biopsies
    - (105-03994) Metastatic breast carcinoma
    - ER: (-); PR: (-); Her-2-Neu Score: (2+)

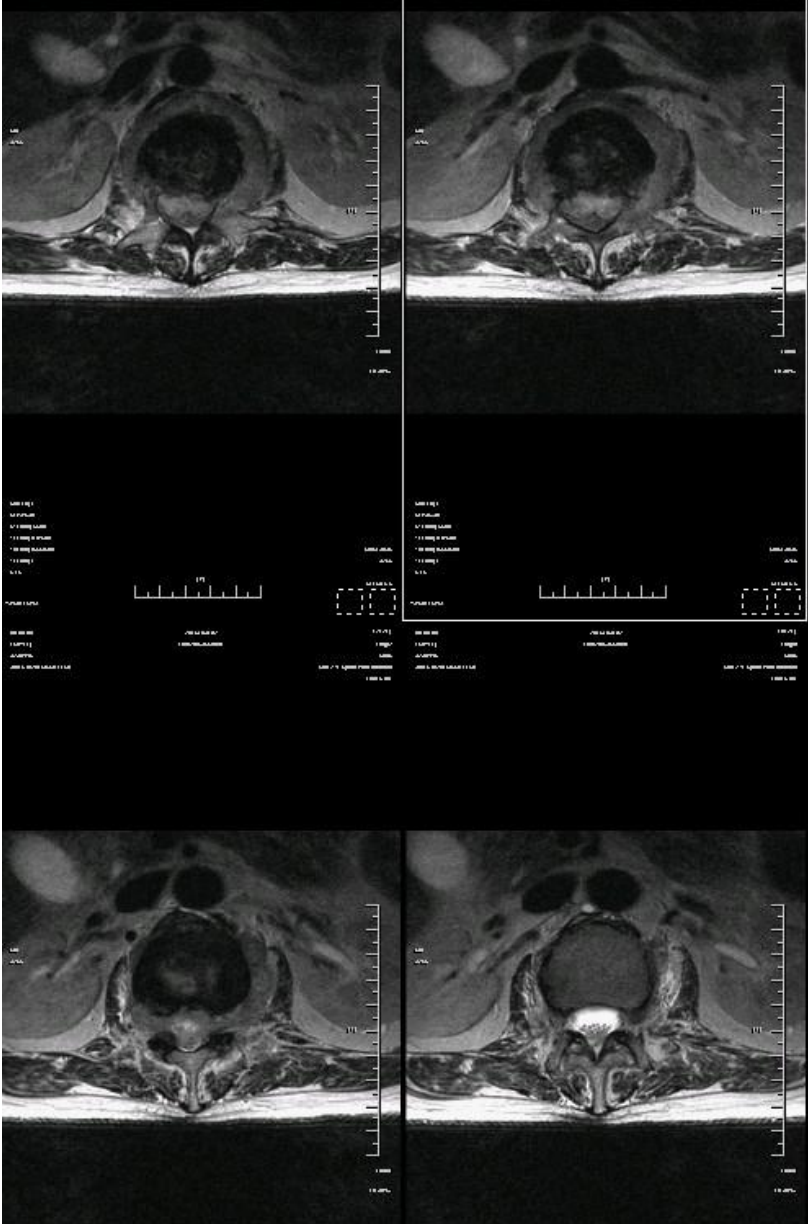






- Breast sonography impressions
  - C/W right breast cancer, cT4dN2M1, stage IV
  
- Neck ultrasound impression
  - Few tiny thyroid cysts at right lobe.
  
- Abdomen sonography impression:
  - Fatty liver
  - No evidence of abnormalities in the gallbladder, CBD, pancreas, spleen and both kidneys

# 4/2 MRI of T-L spine



S.

000  
(60Y/F)  
0000000

2016/04/05  
12:39:17

Total Body  
Cheng Hsin General Hospital

(1/1)  
Img:1  
Ser:406  
5 April, 2016

Acc No:201603301438

Whole body bone scan

DOB: 1955/8/20

AcqTime:



W:256 L:128

Philips Nuclear Medicine

ent in  
chest





# Hospital course

4/6

- **Chemotherapy:** FEC-1
  - 5-FU 750 mg (500mg/m<sup>2</sup>)
  - Epirubicin 150 mg (100mg/m<sup>2</sup>)
  - Endoxan 750 mg (500 mg/m<sup>2</sup>)
- Start **radiotherapy** of L1

4/7

- Vagina bleeding
  - U/A: OB(-); RBC 0-2/HPF
  - Consult OBGYN(-)

4/8

- Mammography
  - BI-RADS CATEGORY 6



# Hospital course

4/8

- Stool OB (4+)
  - Digital exam: no hemorrhoid
  - Consult CRS >> Colonoscopy on 4/11

4/11

■

項目名稱	檢驗報告	單位
CBC		
WBC	4.8	10 <sup>3</sup> /uL
RBC	3.71	10 <sup>6</sup> /uL
HGB	11.0	g/dL
HCT	34.1	%
MCV	91.9	fL
MCH	29.6	pg
MCHC	32.3	g/dL
PLT	212	10 <sup>3</sup> /uL
DIFF		
NEUT%	75.4	%
LYMPH%	23.6	%
MONO%	0.4	%
EO%	0.4	%
BASO%	0.2	%

項目名稱	檢驗報告	單位
BUN	12.3	mg/dL
Creatinine	0.47	mg/dL
eGFR	144	
AST	20	IU/L
ALT	15	IU/L
Na	138	mmol/L
K	3.5	mmol/L



# Hospital course

4/11

## ■ Operation by ORT

- T12 to L2 posterior decompression.
- L1 compression fracture reduction with bone graft.
- Posterolateral fusion with pedicle screws with T11-L3.

4/12

## ■ L1 vertebral body biopsy

- (105-04506) Metastatic breast carcinoma





# Hospital course

4/13

項目名稱	檢驗報告	單位
CBC		
WBC	2.0	10 <sup>3</sup> /uL
RBC	3.35	10 <sup>6</sup> /uL
HGB	10.1	g/dL
HCT	30.0	%
MCV	89.6	fL
MCH	30.1	pg
MCHC	33.7	g/dL
PLT	93	10 <sup>3</sup> /uL
DIFF		
NEUT%	91.7	%
LYMPH%	7.3	%
MONO%	0.0	%
EO%	0.0	%
BASO%	0.9	%

項目名稱	檢驗報告	單位
Glucose AC	98	mg/dL
BUN	26.1	mg/dL
Creatinine	0.43	mg/dL
eGFR	159	
Albumin	2.3	g/dL
Na	139	mmol/L
K	3.3	mmol/L

- Blood transfusion PRBC 2 units \* 2 days
- Antibiotic: Cefazolin + Gentamycin





# Hospital course

- 4/15  
1am ■ Massive rectal bleeding (~1800gm weight)
  - Trand / VitK1/ VitC injection
  - Blood transfusion with PRBC 2 units
  
- 4/15  
9am ■ Blood transfusion PRBC  
2 units \* 3 days
  - Filter use
  - Dexamethasone
  
- Patient **refused** to receive **colonoscopy**

項目名稱	檢驗報告	單位
CBC		
WBC	1.5	10 <sup>3</sup> /uL
RBC	2.22	10 <sup>6</sup> /uL
HGB	6.7	g/dL
HCT	19.5	%
MCV	87.8	fL
MCH	30.2	pg
MCHC	34.4	g/dL
PLT	64	10 <sup>3</sup> /uL
DIFF		
NEUT%	25.8	%
LYMPH%	65.2	%
MONO%	3.0	%
EO%	1.5	%
BASO%	3.0	%
ATYPICAL LYMPH	1.5	%





# Hospital course

4/15  
8pm

- Acute rectal bleeding
  - Compression / Trand / VitK1
  - Blood transfusion with whole blood
  - Emergent colonoscopy
    - Ulcer noted at 2cm near anus
    - Suture

4/16

- Intermittent bleeding
  - Blood transfusion with single doner, PRBC
  - Filgrastim 300mcg ST + BID

項目名稱	檢驗報告	單位
CBC		
WBC	1.0	10 <sup>3</sup> /uL
RBC	2.72	10 <sup>6</sup> /uL
HGB	7.7	g/dL
HCT	22.3	%
MCV	82.0	fL
MCH	28.3	pg
MCHC	34.5	g/dL
PLT	165	10 <sup>3</sup> /uL
DIFF		
NEUT%	7.4	%
BAND	4.6	%
LYMPH%	64.8	%
MONO%	14.8	%
EO%	0.0	%
BASO%	2.8	%
NRBC%	3.7	/100WBC
ATYPICAL LYMPH	5.6	%



# Hospital course

4/17  
1am

## ■ Transfer to ICU

項目名稱	檢驗報告	單位
CBC		
WBC	1.4	10 <sup>3</sup> /uL
RBC	3.37	10 <sup>6</sup> /uL
HGB	9.8	g/dL
HCT	28.3	%
MCV	84.0	fL
MCH	29.1	pg
MCHC	34.6	g/dL
PLT	158	10 <sup>3</sup> /uL
DIFF		
NEUT%	10.0	%
BAND	3.0	%
LYMPH%	53.0	%
MONO%	26.0	%
EO%	0.0	%
BASO%	1.0	%
NRBC%	5.0	/100WBC
META	1.0	%
ATYPICAL LYMPH	6.0	%

項目名稱	檢驗報告	單位
BUN	9.5	mg/dL
Creatinine	0.47	mg/dL
eGFR	144	
Na	141	mmol/L
K	3.6	mmol/L

■ Persist low grade fever

■ Antibiotic:  
Gentamycin + Flumarin





# Hospital course

4/18

- Try soft diet
- Consult INF for neutropenic fever
  - Cefepime (Antifect) 2g Q8H


4/19

- Transfer to common ward

項目名稱	檢驗報告	單位
CBC		
WBC	4.1	10 <sup>3</sup> /uL
RBC	3.28	10 <sup>6</sup> /uL
HGB	9.5	g/dL
HCT	27.8	%
MCV	84.8	fL
MCH	29.0	pg
MCHC	34.2	g/dL
PLT	151	10 <sup>3</sup> /uL
DIFF		
NEUT%	7.5	%
BAND	10.3	%
LYMPH%	53.3	%
MONO%	17.8	%
EO%	0.9	%
BASO%	1.9	%



# Discharge at 4/23

- Right breast locally advanced cancer, cT4dN2M1, stage 4
    - ER(-), PR(-), HER2/neu(2+)
    - chemotherapy of FEC-1;
    - compression fracture of L1;
    - spinal cord compression syndrome of T12-L2 s/p posterior decompression
  - *Low GI track bleeding*
- 

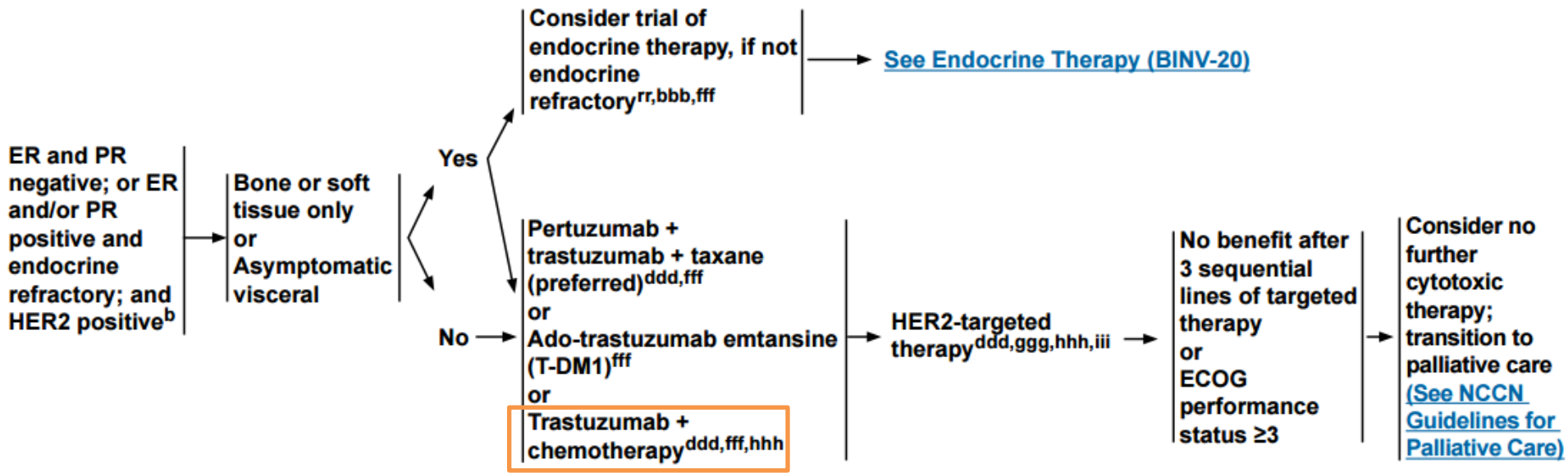


# DISCUSSION





**SYSTEMIC TREATMENT OF RECURRENT OR STAGE IV DISEASE**  
ER and PR NEGATIVE; or ER and/or PR POSITIVE and ENDOCRINE REFRACTORY; and HER2 POSITIVE





### CHEMOTHERAPY REGIMENS FOR RECURRENT OR METASTATIC BREAST CANCER<sup>1</sup>

#### Preferred single agents:

##### *Anthracyclines*

- Doxorubicin
- Pegylated liposomal doxorubicin

##### *Taxanes*

- Paclitaxel

##### *Anti-metabolites*

- Capecitabine
- Gemcitabine

##### *Other microtubule inhibitors*

- Vinorelbine
- Eribulin

#### Other single agents:

- Cyclophosphamide
- Carboplatin
- Docetaxel
- Albumin-bound paclitaxel
- Cisplatin
- Epirubicin
- Ixabepilone

#### Chemotherapy combinations:

- CAF/FAC (cyclophosphamide/doxorubicin/fluorouracil)
- ➔ FEC (fluorouracil/epirubicin/cyclophosphamide)
- AC (doxorubicin/cyclophosphamide)
- EC (epirubicin/cyclophosphamide)
- CMF (cyclophosphamide/methotrexate/fluorouracil)
- Docetaxel/capecitabine
- GT (gemcitabine/paclitaxel)
- Gemcitabine/carboplatin
- Paclitaxel/bevacizumab<sup>2</sup>

#### Preferred first-line agents for HER2-positive disease:

- Pertuzumab + trastuzumab + docetaxel (category 1)<sup>5</sup>
- Pertuzumab + trastuzumab + paclitaxel<sup>5</sup>

#### Other agents for HER2-positive disease:

- Ado-trastuzumab emtansine (T-DM1)
- Trastuzumab + paclitaxel ± carboplatin
- Trastuzumab + docetaxel
- Trastuzumab + vinorelbine
- Trastuzumab + capecitabine

#### Agents for trastuzumab-exposed HER2-positive disease:

- Lapatinib + capecitabine
- Trastuzumab + capecitabine
- Trastuzumab + lapatinib (without cytotoxic therapy)
- Trastuzumab + other agents<sup>3,4,5</sup>



# Adverse effect of FEC

- **Transient pancytopenia**
- Alopecia
- Nausea, vomiting, diarrhea
- Soreness of gum, taste changed
- Fatigue
- Menopause symptoms



# Treatment of bone metastasis

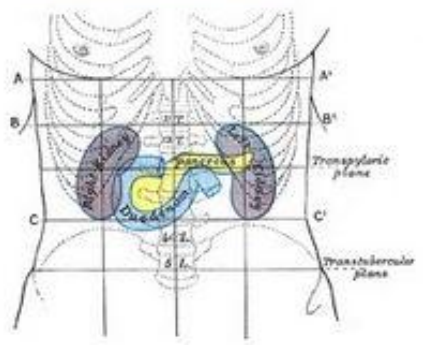
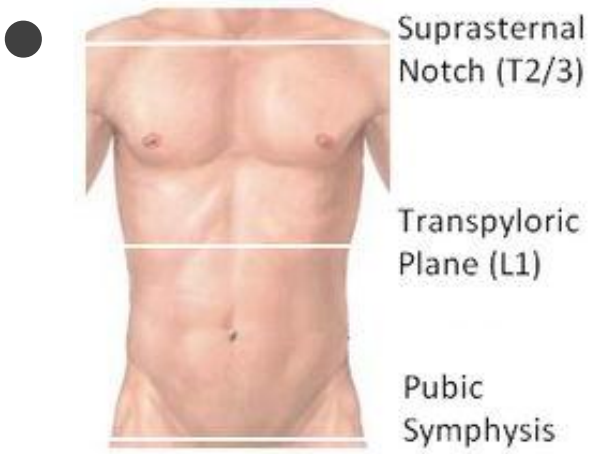


- Radiation therapy
  - Commonly used for pain relief and prevention of morbidity and disease progression.
  - Responses rates of 60% to 70%, but last only 3-4 months



# Radiation therapy

- Most common adverse effect: **skin reaction**
  - Decrease bone marrow production

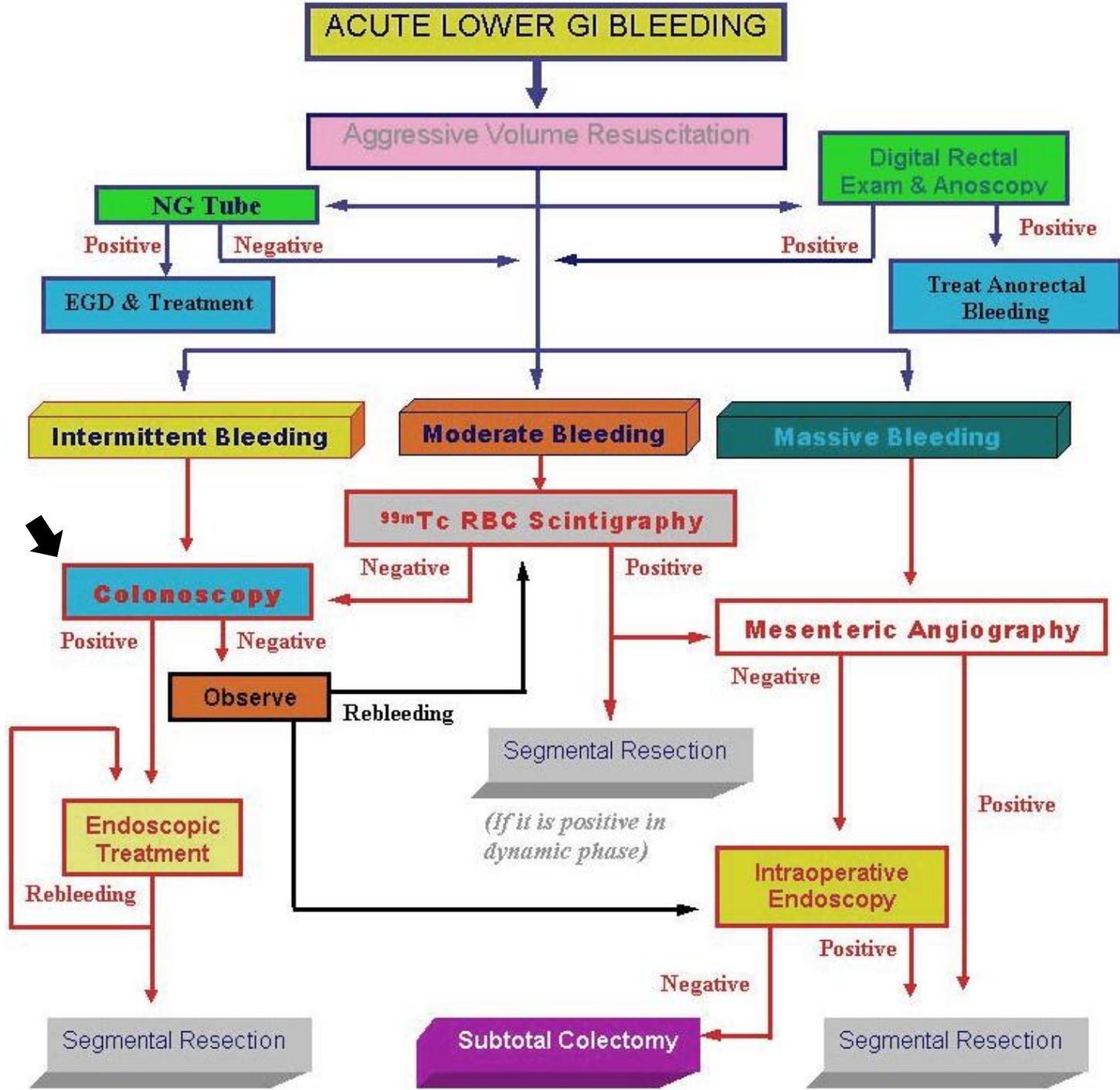


- Structures Crossed By Transpyloric Plane :**
- L1 vertebra
  - Pylorus
  - Pancreatic neck
  - Duodenojejunal flexure
  - Fundus of gall bladder
  - 9th costal cartilage
  - Hila of kidneys
  - Origin of portal vein
  - Transverse mesocolon
  - 2nd part of duodenum
  - Superior mesenteric artery origin
  - Hilum of spleen
  - Termination of spinal cord

# Treatment of bone metastasis



- Surgical management
  - relieve pain, provide stabilization, and prevent impending fracture or spinal cord compression.





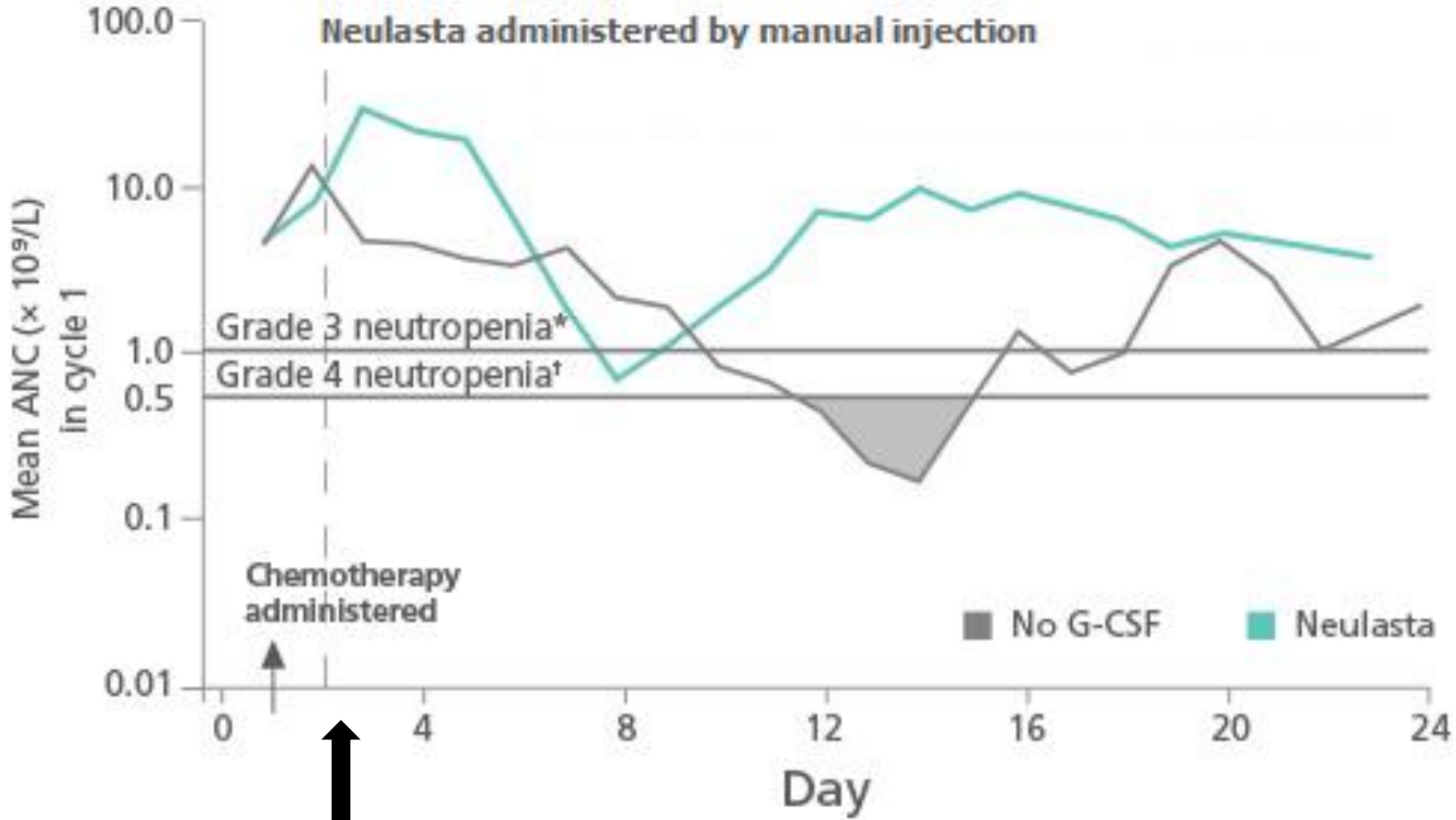
# Manufacturer for using of G-CSF

適應症	用法·用量		
癌症化學療法所引起之嗜中性白血球減少症	其他癌症腫瘤	成人 · 小兒	<p>通常，因癌症化學療法導致的嗜中性白血球少於<math>1,000/mm^3</math>，而且發燒(<math>38.0^{\circ}C</math>以上為標準)，或是觀察發現到嗜中性白血球少於<math>500/mm^3</math>，給予Filgrastim<math>50\mu g/m^2</math>，1日1次，皮下注射。如有出血傾向等導致皮下注射困難時，可改為靜脈注射(含點滴)Filgrastim<math>100\mu g/m^2</math>，1日1次。此外，因癌症化學療法導致的嗜中性白血球少於<math>1,000/mm^3</math>，而且發燒(<math>38.0^{\circ}C</math>以上為標準)，或是觀察發現到嗜中性白血球少於<math>500/mm^3</math>，而必須持續同一化學治療之病患，再下一次以後的化學治療進行時，觀察發現到嗜中性白血球少於<math>1,000/mm^3</math>時，給予Filgrastim<math>50\mu g/m^2</math>，1日1次，皮下注射。如有出血傾向等導致皮下注射困難時，可改為靜脈注射(含點滴)Filgrastim<math>100\mu g/m^2</math>，1日1次。</p> <p>但是，嗜中性白血球數經過最低值時期後，上升到<math>5,000/mm^3</math>以上時，須觀察症狀，停止投藥。</p> <p>此外，做為是否中止投與本劑指標之嗜中性白血球數，基於緊急狀況而無法確認時，應以白血球之一半來推斷其嗜中性白血球數。</p>

- 如果前一次化學治療產生白血球低於  $1000/mm^3$  或 granulocyte 低於  $500/mm^3$  連續三天以上，則下一療程使用同樣化學治療時可給付 G-CSF 費用 (使用至白血球升高至  $4000/mm^3$  以上)

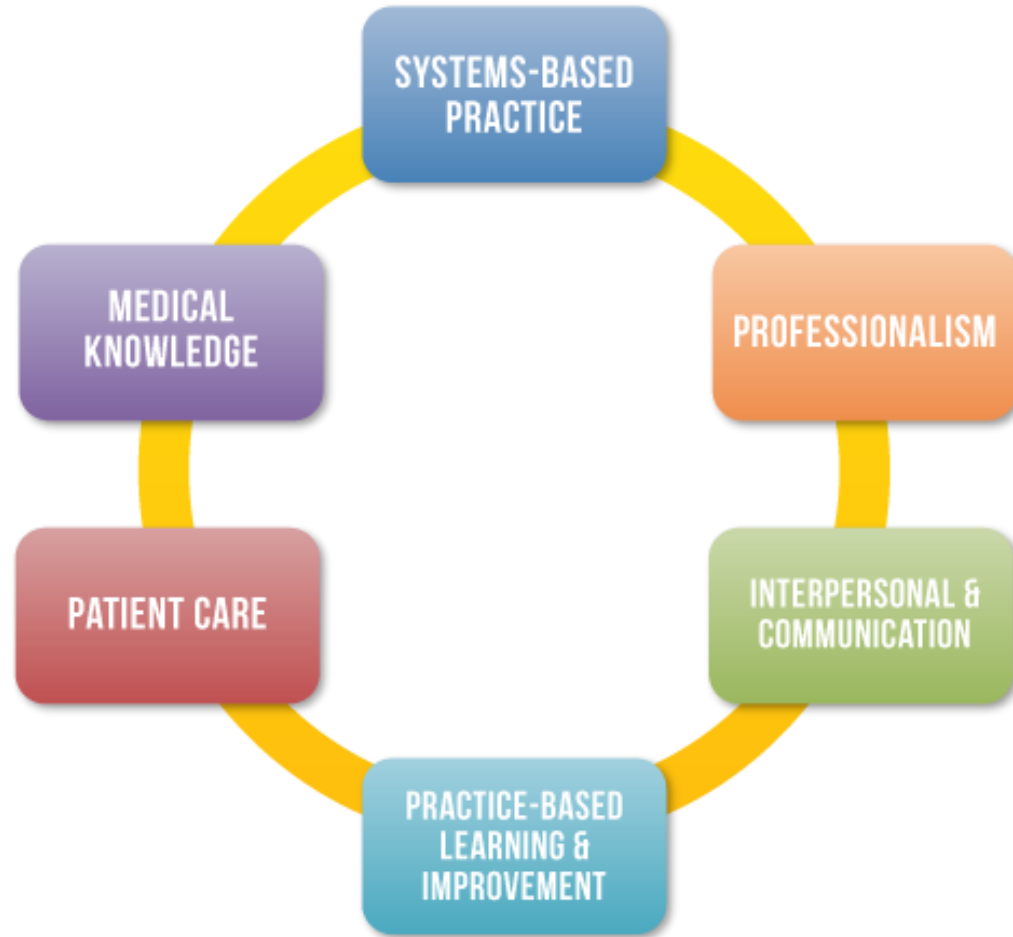


# Effect of G-CSF administered



5 $\mu$ g/kg/day within 24-74 hours after chemotherapy

# ACGME core competencies



The  
end

A simple line drawing of a right hand holding a pen, positioned as if writing. The words "The end" are written in a cursive script to the left of the hand. The drawing is minimalist, using only black outlines on a white background.