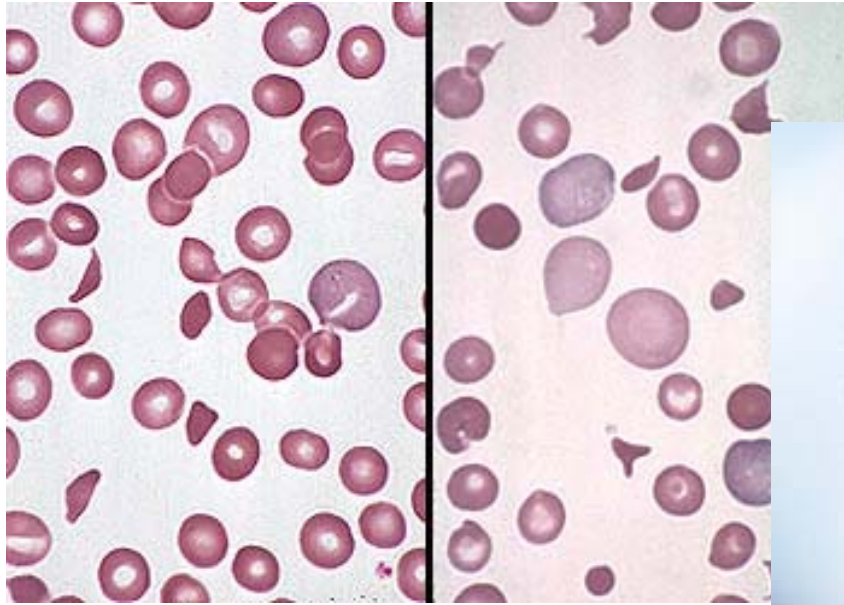


# A patient with chest pain.....



# Introduction:

A 66 years old man presents to the emergency department with symptoms of atypical chest pain.

His past medical history is significant for COPD , HTN , BPH , fracture of D6 in 2010

On physical examination - bilateral wheezes on expiration  
ECG-normal sinus rhythm  
CT scan –lytic bone lesions in spinal column

# Laboratory exams on admission:

PLT X10 <sup>3</sup> /mm	RBC X10 <sup>3</sup> /mm	WBC X10 <sup>3</sup> /mm	MCV fl	HGB Gr/dl
68.4	3.78	10.4	89.4	11

INR-PT	PT%	PTT sec
1.66	47	31.2

LDH u/l	GGT u/l	ALP u/l	ALT u/l	AST u/l	Trop Ngr/ml	Alb gr/dl	Bil-d Mgr/dl	Bil-T Mgr/dl	Amy u/l	K Meq/l	Na Meq/l	Urea Mgr/dl	Cr Mgr/dl
581	26	917	15	20	0.02	4.4	0.3	1.1	37	4.3	134	43	0.7

# Differential diagnosis:

Blood and urine  
immunoelectroforesis  
Bence jones-negative

Multiple myeloma •

Bone tumor •

Bone metastases •

Infection-TB •

Langerhans cell histiocytosis (histiocytosis X) •

# Follow up- 7-th day from admission:

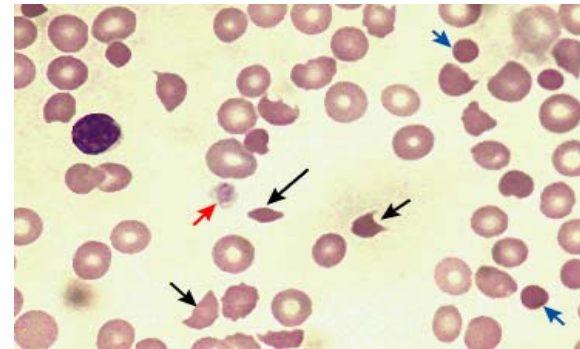
PTT sec	PT %	INR-PT
27.6	51	1.61

HGB Gr/dl	PLT X10 <sup>3</sup> /mm	HCT %	WBC X10 <sup>3</sup> /mm
5.5	26.8	16.7	9

LDH u/l	HAPTO	BIL T Mgr/dl	BIL D Mgr/dl
1593	<10	1.8	0.4

- Confusion ●
- Multiple bruises ●
- Coffee ground ●

Peripheral blood smear

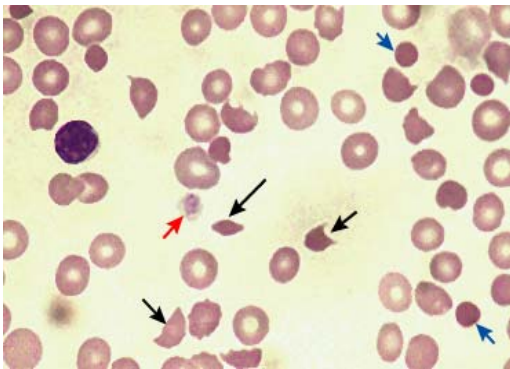


BMT-adenocarcinoma of gastroenteric origin  
Radioisotope bone scan-metastatic lesions

# TTP:

## Trombotic microangiopathy

- Thrombocytopenia
- Microangiopathic hemolytic anemia
- In many patients neurologic and renal abnormalities



## Classic pentad of TTP

- Thrombocytopenia
- Microangiopathic hemolytic anemia
- Neurologic symptoms and signs
- Renal function abnormalities
- fever

# Etiology of TTP-HUS:

- Idiopathic
- Shiga toxin-producing E.Coli
- Drugs- antiplatelet agents , immunosuppressive agents
- Antiphospholipid antibodies
- Cancer and chemotherapy
- Disseminated malignancy
- Alogenic HCT
- Pregnancy
- HIV

# TTP-disseminated malignancy

- Adenocarcinoma of GI tract ,breast, lung, prostate
- Renal failure is uncommon
- Levels of ADAMS13 are normal or mildly reduced
- Respond poorly, if at all, to plasma exchange
- Usually die within days to weeks of diagnosis, unless the underlying malignancy can be controlled

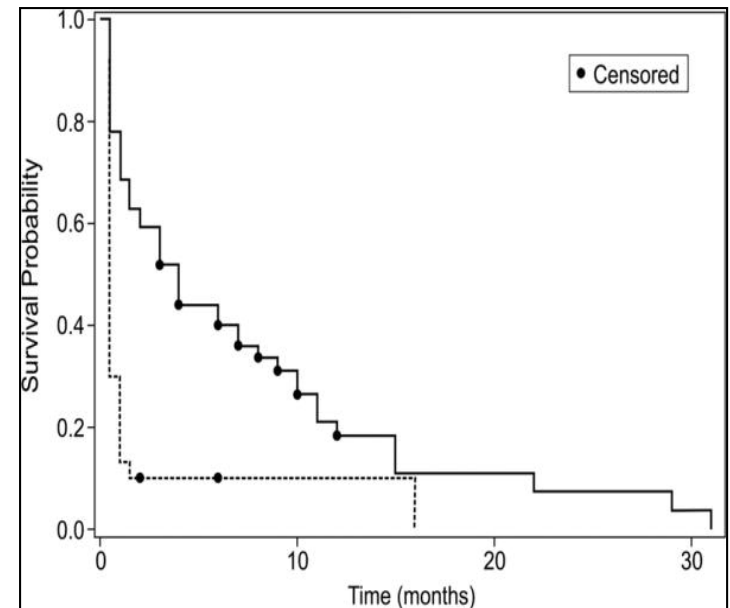


# Literature overview:



Cancer-related microangiopathic hemolytic anemia: clinical and laboratory features in 168 cases  
 Medicine(Baltimore)-2012 jul  
 Medical university of Vienna

Cancer Site	No.	Reference
Gastric	44	[4,5,9,14,15,21,24,27,32,38,52,54,58,65,67,68,71,77,78,89,91,92,103,106,108-111,115,124,131,141,142,151]
Breast	36	[10,12,22,24,29,38,40,41,43,47,48,60,88,98,104,106,126,139,153,155,160]
Prostate	23	[18,39,48,70,83,90,96,97,106,129,133,137,147,150]
Lung	16	[17,24,33,38,43,101,106,115,120,135]
CUP	12	[1,9,52,67,82,87,100,106,117,141,148]
Abdominal	10	[43,79,84,99,106,134,141,156]
Genitourinary	3	[43,63,119]
Endocrine tumor	6	[38,51,74,75,127,132]
Other tumor	4	[13,43,94,102]
Lymphoma	14	[7,20,31,37,43,48,61,69,72,95,136]



# Conclusion:

- Importance of blood smear
- Differential diagnosis of bone lytic lesions
- Malignancy and thrombosis
- Main differences of primary and secondary  
TTP