

432
Radiology
Team



(6): Endocrine interactive lecture



Done By:
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جامعة
الملك سعود
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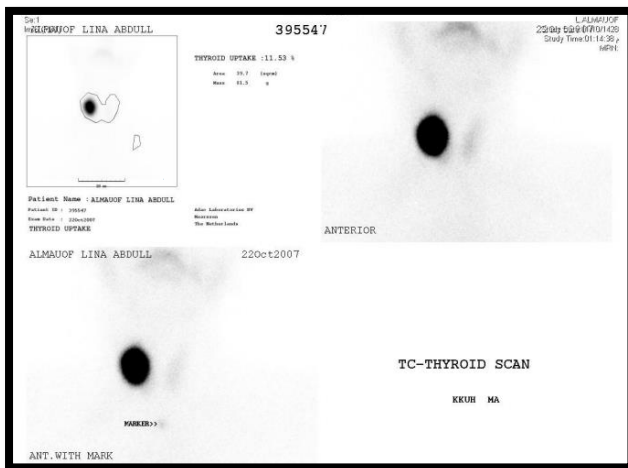
COLOR GUIDE: • Females' Notes • Males' Notes • Important • Additional

Objectives

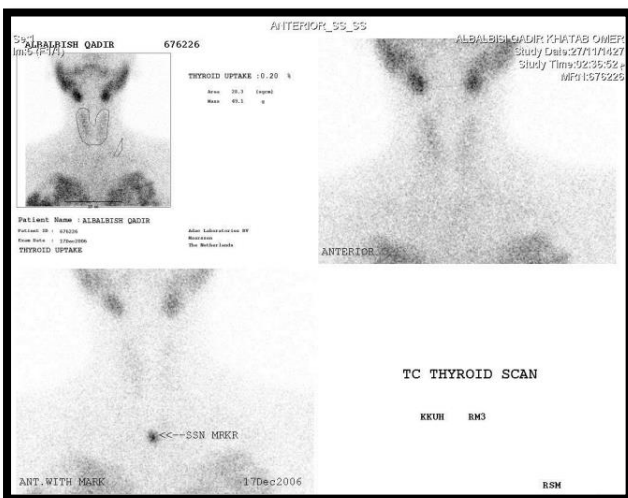
1. To answer the 4 questions

- i. What is the study?
- ii. What is the agent used?
- iii. What are the imaging findings?
- iv. What is the most likely diagnosis?

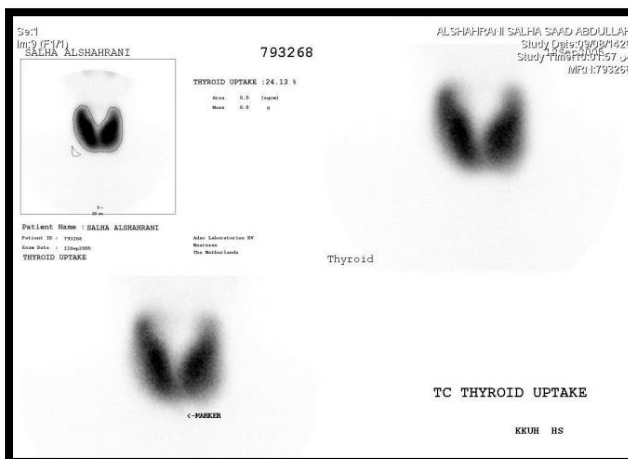
2. Some extra questions on the pictures



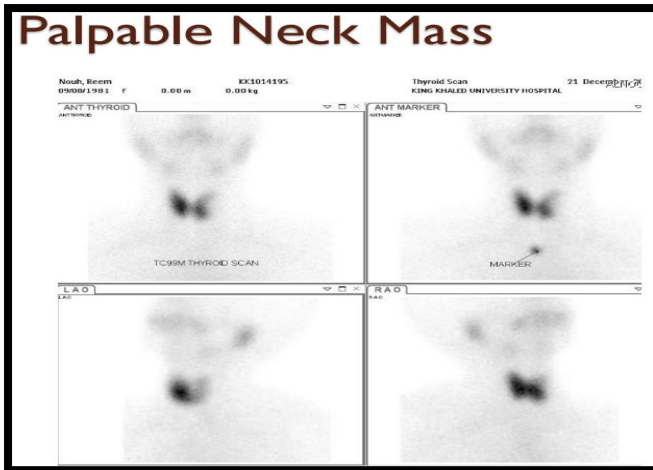
What is the study?
 Nuclear scan of the thyroid
What is the agent used?
 Tc-99m Pertechnetate
What are the imaging findings?
 Hot nodule on the right lobe suppressing the left
 Elevated up take 11.5% <the normal (.5%-4%)>
What is the most likely diagnosis?
 Thyrotoxic adenoma
 Extra question: What is the chances of this nodoul of being malignant?
 ((low chance of beiang malignant))



What is the study?
 Nuclear scan of the thyroid
What is the agent used?
 Tc-99m Pertechnetate
What are the imaging findings?
 Decreased up take in both lobes .2% <the normal (.5%-4%)>
What is the most likely diagnosis?
 Post partum Thyroiditis



What is the study?
 Nuclear scan of the thyroid
What is the agent used?
 Tc-99m Pertechnetate
What are the imaging findings?
 Bilateral deffused uptake
 Elevated uptake (24.13%)
What is the most likely diagnosis?
 Post partum Thyroiditis
 Hyperthyroidism (Graves)
 Extra: Give 4 causes of increased thyroid uptake?
 Autonomous toxic nodule
 Multinodular toxic goiter (Plumer's Disease)
 Enzyme defects (Dyshormonogenesis).(imp)
 Iodine starvation (Iodine deficiency)



What is the study?
Nuclear scan of the thyroid

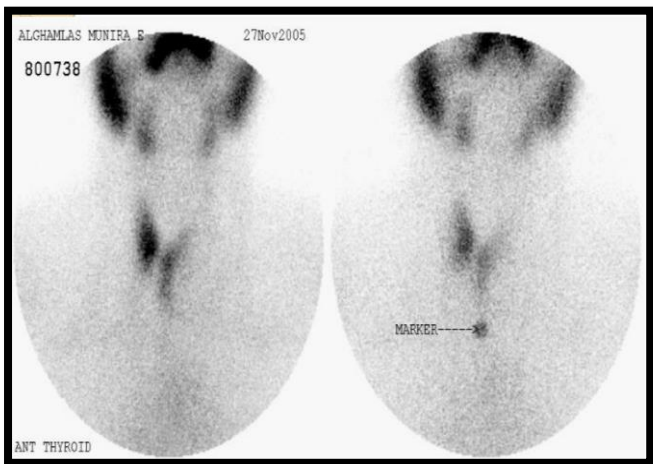
What is the agent used?
Tc-99m Pertechnetate

What are the imaging findings?
Cold nodule in the left thyroid lobe

What is the most likely diagnosis?
lymph

What are the chances of malignancy?
15%-20%

Papillary
Medullary
Follicular
Anaplastic



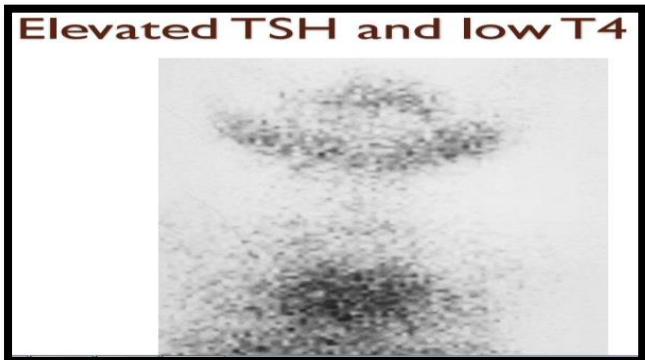
What is the study?
Nuclear scan of the thyroid,,

What is the agent used?
Tc-99m Pertechnetate

What are the imaging findings?
Cold nodule in the left thyroid lobe

What is the most likely diagnosis?
Mass on the left side pushing the gland laterally

Extra: What does the patient present with clinically?
Dyspnea because of tracheal deviation



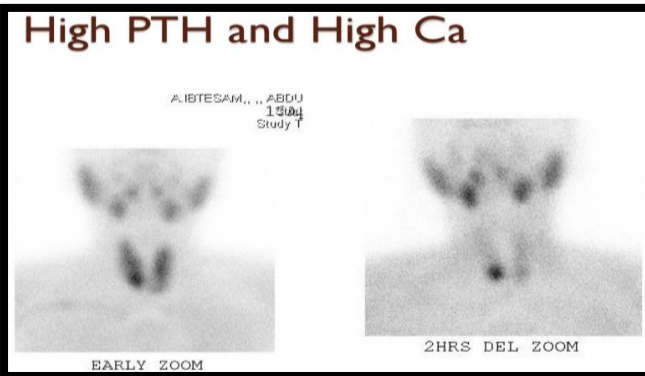
What is the study?
Nuclear scan of the thyroid,(for a child)

What is the agent used?
Tc-99m Pertechnetate

What are the imaging findings?
Absent thyroid gland

What is the most likely diagnosis?
Agenesis

What is the causes of hypothyroidism?



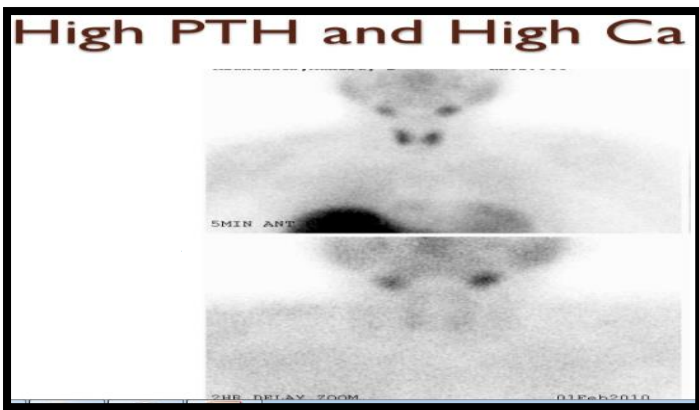
What is the study?
Parathyroid scan

What is the agent used?
Tc-99m Sestamibi (Dual Phase)

What are the imaging findings?
Right lower parathyroid adenoma

What is the most likely diagnosis?
Adenoma

Extra: What is the causes of hypothyroidism?



What is the study?

Parathyroid scan

What is the agent used?

Tc-99m Sestamibi (Dual Phase)

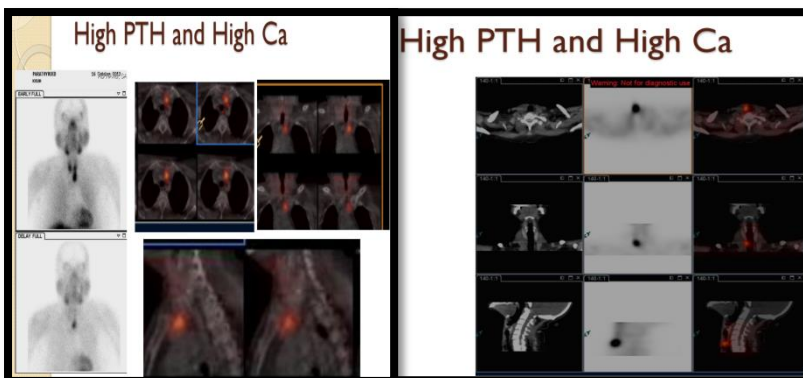
What are the imaging findings?

False negative because it is from the clear cells from the mitochondria

What is the most likely diagnosis?

Parathyroid adenoma

Extra: How can we confirm the presences or absence of the abnormality?



What is the study?

Parathyroid scan

What is the agent used?

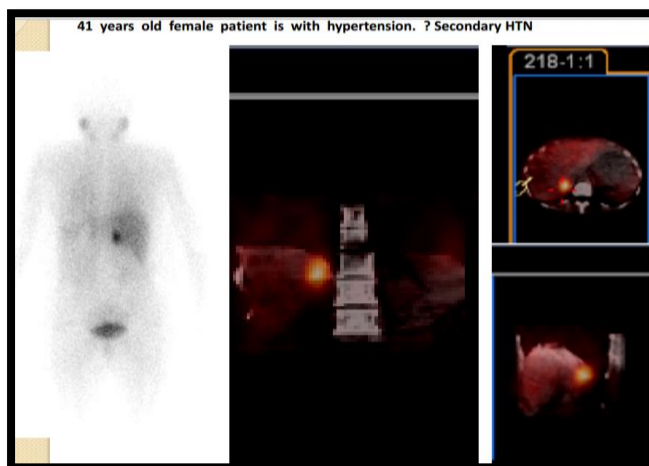
Tc-99m Sestamibi (Dual Phase)
(SPECT CT)

What are the imaging findings?

Adenoma in the anterior mediastinum

What is the most likely diagnosis?

Parathyroid adenoma



What is the study?

(SPECT CT)

What is the agent used?

I-123/131 MIBG

What are the imaging findings?

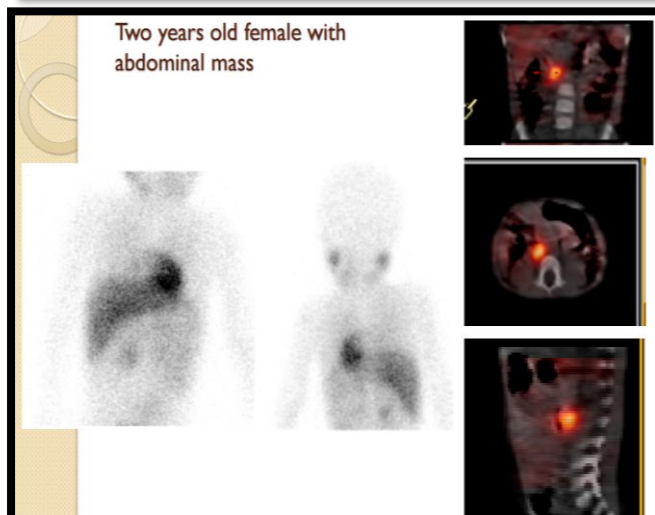
Increased uptake of the right adrenal gland

What is the most likely diagnosis?

Phyochromocytoma

What are the causes of secondary HTN?

Renal artery stenosis



What is the study?

Spect CT

What is the agent used?

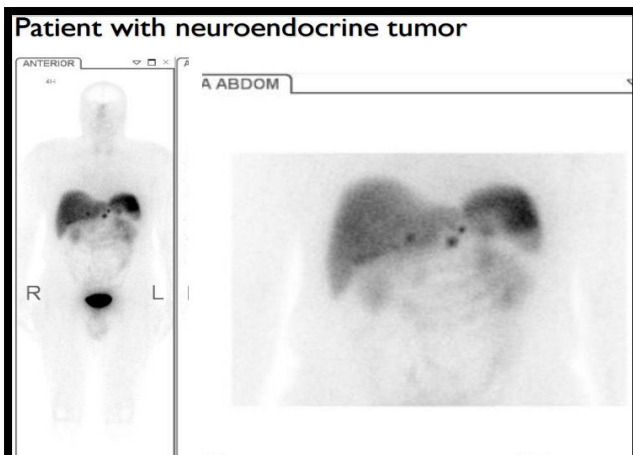
I-123/131 MIBG

What are the imaging findings?

Focal area of increased up take in the right med abdomen(right para spinal)

What is the most likely diagnosis?

Neuroblastoma

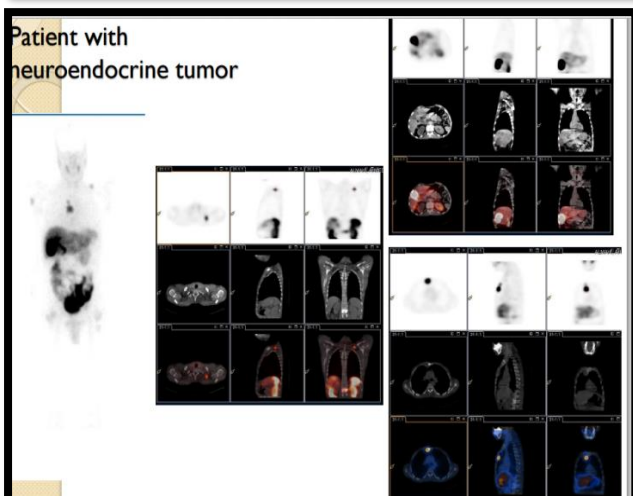


What is the study?
Spst CT

What is the agent used?
Ioden 123/ MIBD

What are the imaging findings?
Multipul smatostatin legens in the eipgastric region

What is the most likely diagnosis?
Neuroendocrine tumor

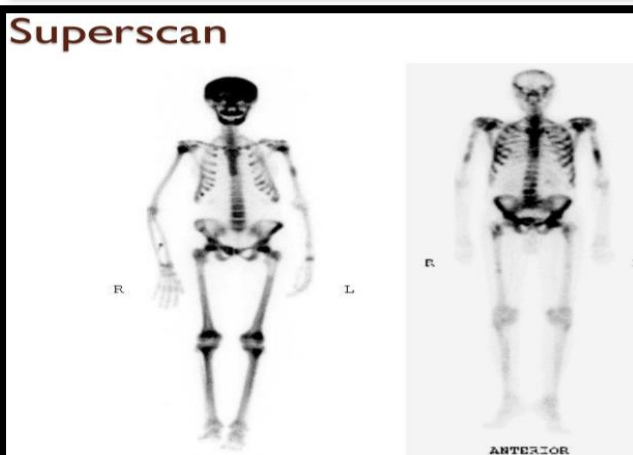


What is the study?
Spst CT

What is the agent used?
In-111 octreoscan.

What are the imaging findings?
Increased uptake in the right lower abdomen + metastasis in the sholder

What is the most likely diagnosis?
Carcinoid tumor with multiple bone and lymph node metastases

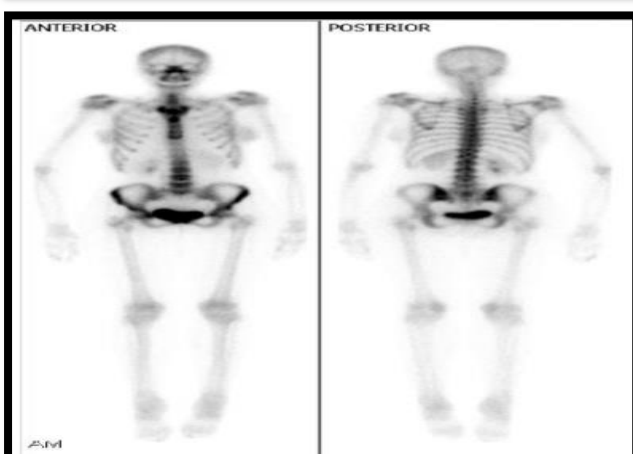


What is the study?
Metabolic,, Superscan

What is the agent used?
MDP

What are the imaging findings?
Normal bone scan

What is the most likely diagnosis?
Hyper parathyrodism



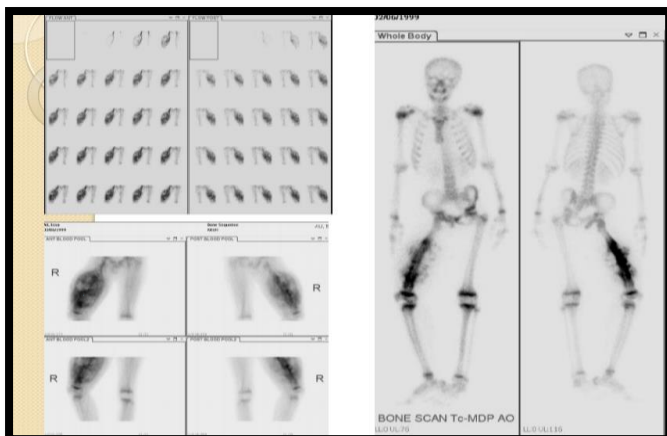
Patient with cancer and bone mets on CT

What is the study?
Metabolic,, Superscan

What is the agent used?
MDP

What are the imaging findings?
Normal bone scan,, Lytic legens metastises

What is the most likely diagnosis?
Multiple myeloma
Renal



What is the study?

Bone scan -

What is the agent used?

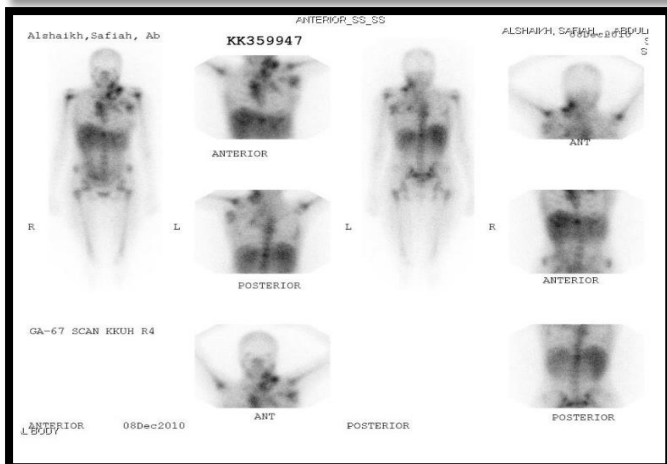
phosphate

What are the imaging findings?

Highly vascular soft tissue invading the under laying bone

What is the most likely diagnosis?

Soft tissue sarcoma



What is the study?

Gallium scan

What is the agent used?

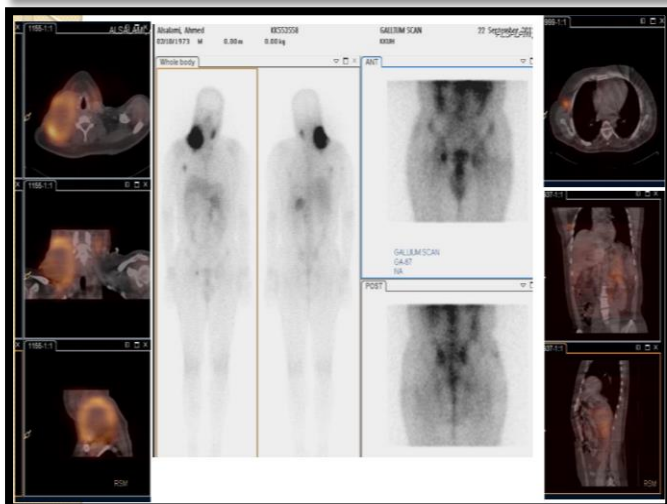
gallium

What are the imaging findings?

Multipule lymph nodes,, metastasis

What is the most likely diagnosis?

Lymphoma,, stage 2



What is the study?

Gallium scan

What is the agent used?

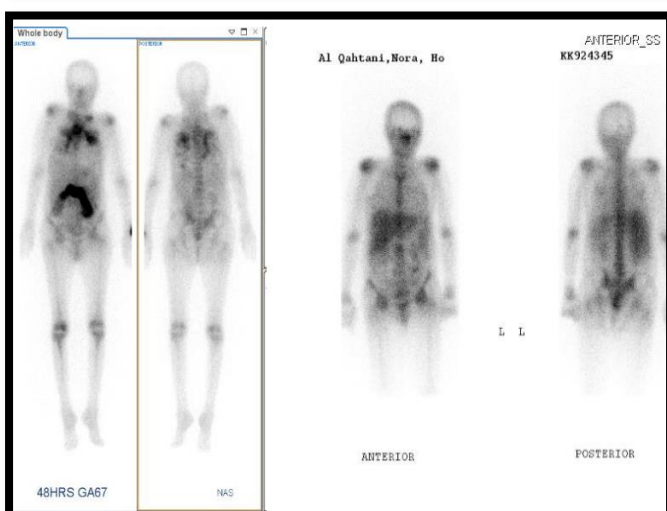
Gallium

What are the imaging findings?

Multipule lymph nodes above and below the diaphragm with spleen involvement

What is the most likely diagnosis?

Lymphoma,, stage4



What is the study?

Gallium scan

What is the agent used?

Gallium

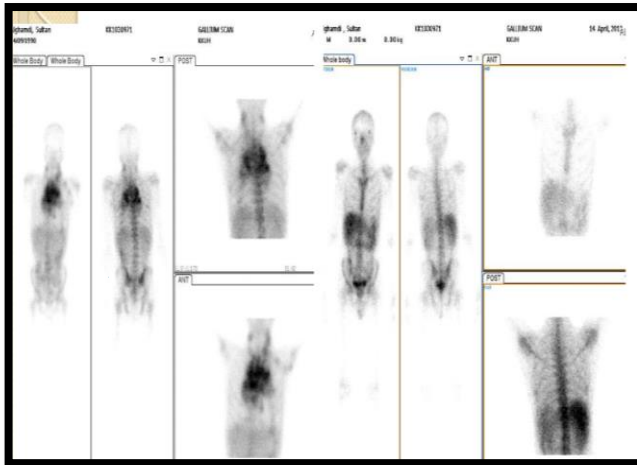
What are the imaging findings?

Before chemotherapy: lymph node above and below the diaphragm. After chemotherapy: clear image

What is the most likely diagnosis?

This scan was used to follow up the a patient with Lymphoma,, stage4 Extra: When do we ideally do the follow up scan?

2 weeks after the last after the last dose of chemotherapy



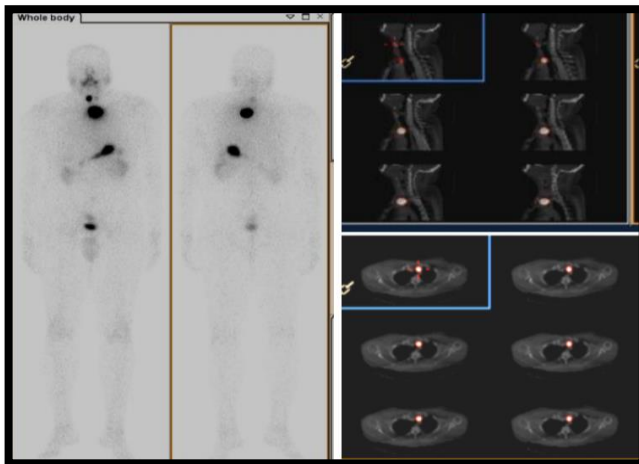
What is the study?
Gallium scan

What is the agent used?
Gallium

What are the imaging findings?
Before chemotherapy: lymph node high intake
After chemotherapy: clear image

What is the most likely diagnosis?
This scan was used to follow up the a patient with Lymphoma,, stage2

What is the gold standard for follow up?
Pit scan



What is the study?
I-123 WB Scan

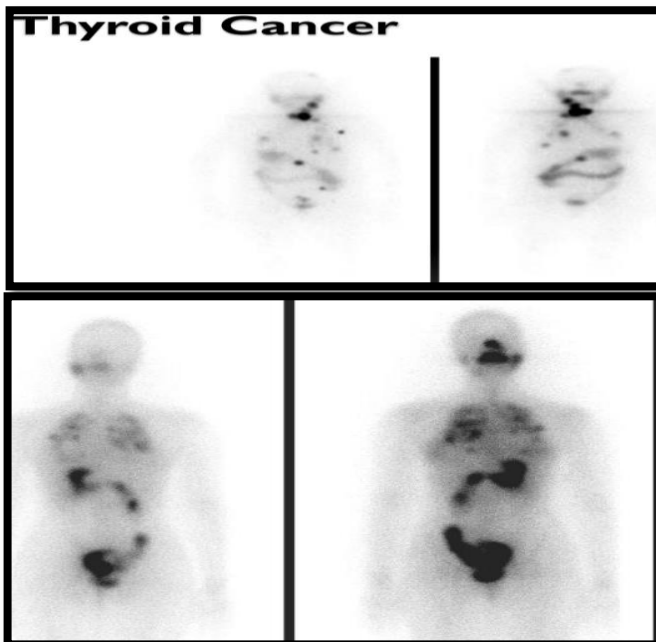
What is the agent used?
I-123

What are the imaging findings?
Post-operative,, Thyroid remnants.

What is the most likely diagnosis?
This patient has a remenance of thyroid cancer after thyroid surgery.

Extra: What are the indications for this study?
Detection and localization of persistent or recurrent local or distant functioning thyroid cancer

How can we treat this patient?
I-131



What is the study?
I-123 WB Scan

What is the agent used?
I-123

What are the imaging findings?
Before chemotherapy: lymph node high intake
After chemotherapy: clear image

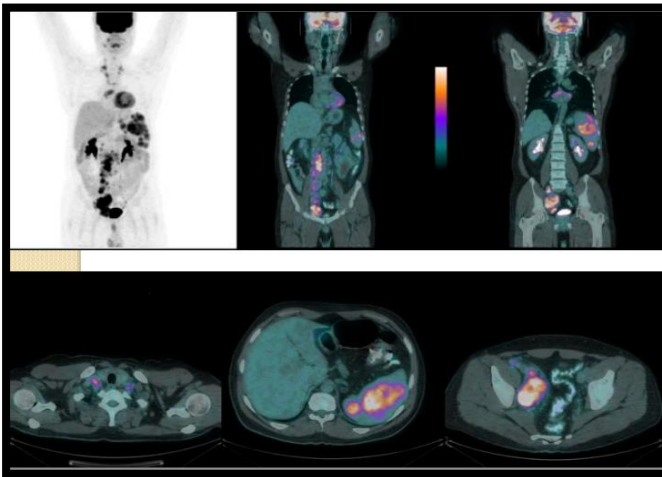
What is the most likely diagnosis?
Thyroid cancer

Which dose do we give him? Bons

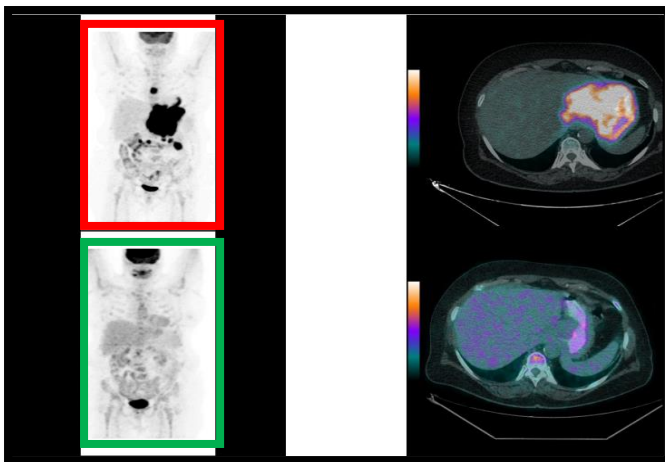
Boone: 200

Lung: 150

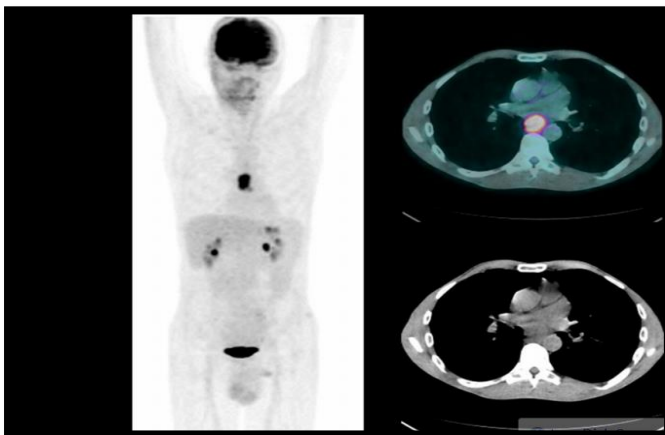
Local: 100



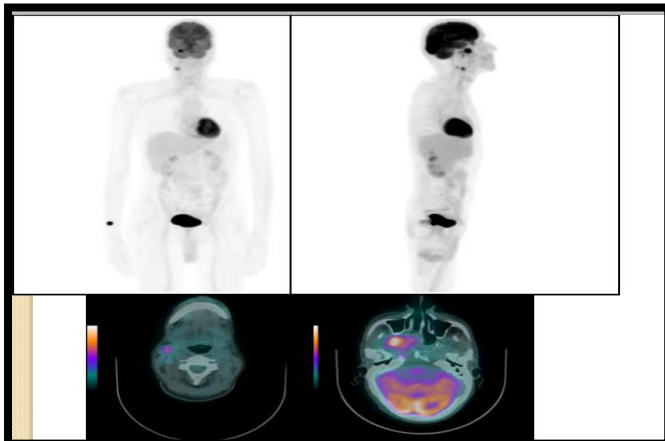
What is the study?
 PET-CT
What is the agent used?
 FDG
What are the imaging findings?
 Highly metabolic areas in the mediastinum and Para aortic lymph nodes
What is the most likely diagnosis?
 Lymphoma



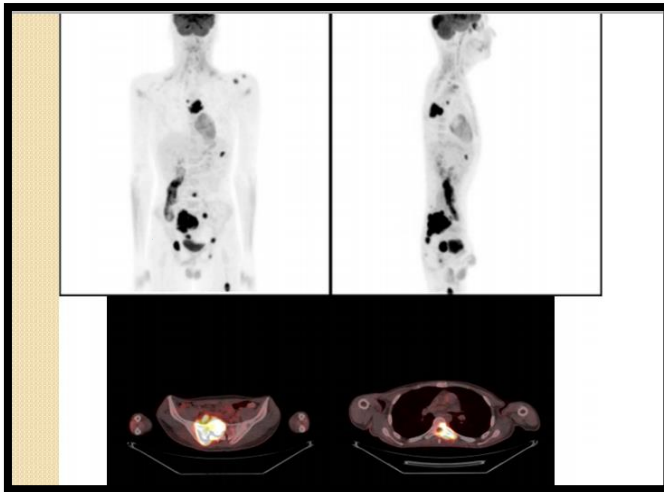
What is the study?
 PET-CT
What is the agent used?
 FDG
What are the imaging findings?
 1-High uptake before the treatment
 2-Progression after it
What is the most likely diagnosis?
 Lymphoma of the stomach with bone metastasis (the vertebral body)



What is the study?
 PET-CT
What is the agent used?
 FDG
What are the imaging findings?
 Hyper intake in the esophagus
What is the most likely diagnosis?
 Esophageal cancer



What is the study?
 PET-CT
What is the agent used?
 FDG
What are the imaging findings?
 Increased uptake in the right nasopharynx
What is the most likely diagnosis?
 Nasopharyngeal carcinoma



What is the study?

PET-CT

What is the agent used?

FDG

What are the imaging findings?

What is the most likely diagnosis?

Esophageal cancer with metastasis above and below the diaphragm

432 Radiology Team Leaders

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