MRCCC Siloam Hospitals

UPH UNIVERSITAS PELITA HARAPAN FACULTY OF MEDICINE

MOCHTAR RIADY INSTITUTE FOR NANOTECHNOLOGY
UNIVERSITAS PELITA HARAPAN

MRCCC NMS 2013
Nuclear Medicine Seminar

akreditasi

PERHIMPUNAN RADIOGRAFER INDONESIA
PARI
PENGDA DKI JAKARTA

Certificate of Attendance

given to

Dr. AISYAH ELLIYANTI, SpKN, M[illegible]

as

Speaker

MRCCC Nuclear Medicine Seminar 2013

"What **Nuclear Medicine** Can Do For Cancer Patients?"

May 4th - 5th, 2013 at 09.00 - 13.00 wib

Conference Room 36th Floor - MRCCC Siloam Hospitals Semanggi

Dr. Melissa Luwia, MHA	Dr. Eko Purnomo, SpKN	Dr. Sjafruddin, SpTHT
Director	Chairman of The Committee	Chairman of IDI South Jakarta

SKP IDI No. 401/IDIWIL/SKP/IV/2013 Tanggal 30 April 2013 | Seminar : Peserta: 7 SKP / Pembicara: 1 SKP / Moderator: 1 SKP / Panitia: 1 SKP
Workshop : Peserta: 2 SKP / Pembicara: 2 SKP / Moderator: 0 SKP / Panitia: 1 SKP

SK PP PARI No. :471 PP.PARI/003/IV 2012 Tanggal 26 April 2013 | Peserta: 1,25 SKPR / Pembicara: 1,75 SKPR / Moderator: 1,75 SKPR / Panitia: 1,25 SKPR

SKP PPNI 236JPP.PPNUSKP/JV/2013 Tanggal 26 April 2013 | Peserta: 1 SKP / Pembicara: 3 SKP / Moderator: 2 SKP / Panitia: 2 SKP

ONCOLOGY
SPECT CASES

Dr.Aisyah Elliyanti SpKN,Mkes

Nuclear Medicine School of Medicine
Andalas University/Dr.M.Djamil Hospital
Padang

Nat Rev Clin Oncol 2012 Dec 9 (12):712-720

Is there still a role for SPECT-CT in oncology in the PET-CT era?

Hicks RJ, Hofman MS

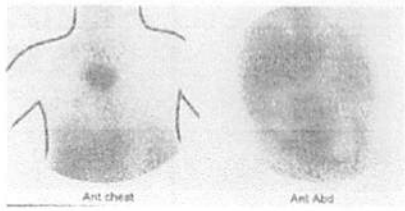
University of Melbourne, Departments of Medicine and Radiology, The Peter MacCallum Cancer Centre, 7 St Andrew's Place, Melbourne, VIC 3002, Australia
rod.hicks@petermac.org

For the evaluation of biological processes using radioisotopes, there are two competing technologies: single-photon emission computed tomography (SPECT) and positron emission tomography (PET). Both are tomographic techniques that enable 3D localization and can be combined with CT for hybrid imaging. PET-CT has clear technical superiority including superior resolution, speed and quantitative capability. SPECT-CT currently has greater accessibility, lower cost and availability of a wider range of approved radiotracers. However, the past decade has seen dramatic growth in PET-CT with decreasing costs and development of an increasing array of PET tracers that can substitute existing SPECT applications. PET-CT is also changing the paradigm of imaging from lesion measurement to lesion characterization and target quantification, supporting a new era of personalized cancer therapy. The efficiency and cost savings associated with improved diagnosis and clinical decision-making provided by PET-CT make a cogent argument for it becoming the dominant molecular technique in oncology.

INDONESIA

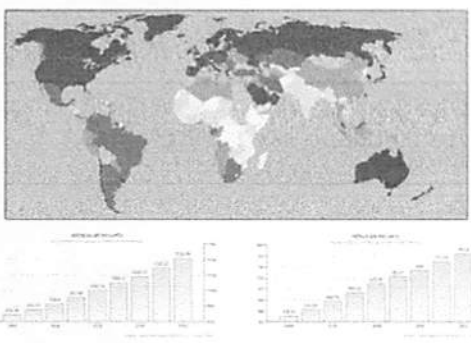
- Indonesia comprises > 17,000 Islands
- The census in 2010 : 237,424,363.
  Estimated by July 2012 : 248,216,193.
- Centre NM : Active 9 (4 PET/CT)
  » Non-active (5 gamma camera)

Case 1

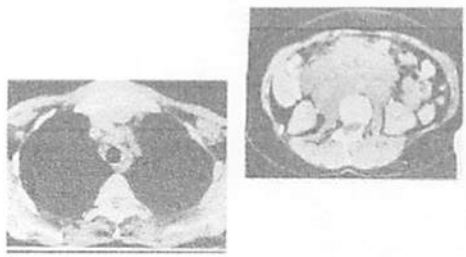


What kind of test from this images?
Which radiopharmaceutical was used ?
What do you find from this images ?

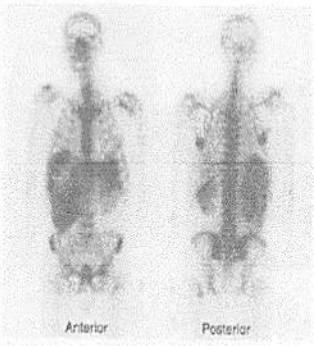
Essentials of Nuclear Medicine Imaging 2012



Map of world GDP/Capita : IMF 2011



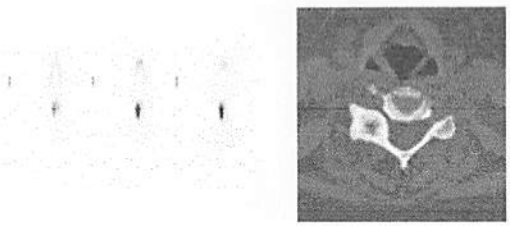
Essentials of Nuclear Medicine Imaging 2012



Case 2

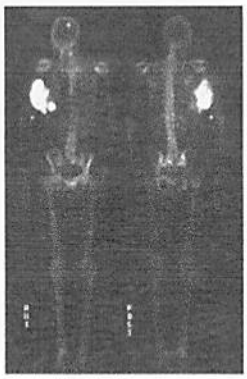
- What kind of the study ?
- What do you find from images ?
- Where are tumor origins from?

Essentials of Nuclear Medicine Imaging 2012



When severe degenerative changes of the spine are dramatically asymmetrical, an underlying bone lesion should be suspected, especially in young patients unless there is history of trauma, surgery, etc.

Teraching file case bs 126

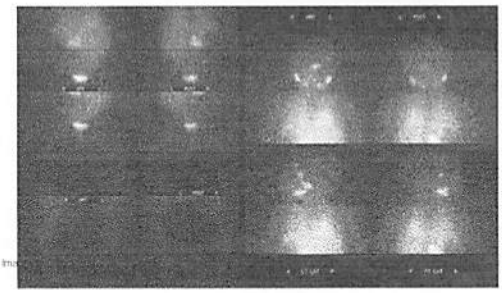


Case 3

A Female 61 yo
What type of this study ?
What do you see in this image ?
What is the diagnose?

Teaching file case bs055

Case 5



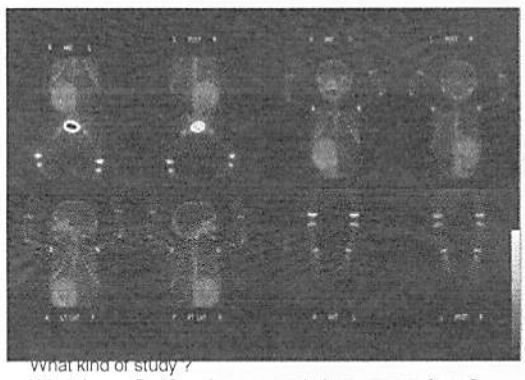
8 month old girl with URI symptoms
What kind of the study ?

Teraching file case mb 002

CASE 4

What kind of the examination ? .
What do you find from images?
Where the uptake from ?

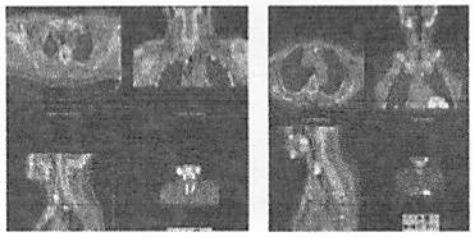
Teraching file case bs 126



What kind of study ?
What do you find from images and where a mass from ?

Case 7

What kind of test ?
What the advantage for clinical purpose?



Pt #1 Pt #2

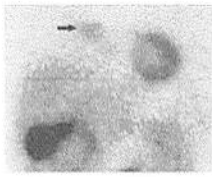
IAEA-TECDOC-1597

(A)

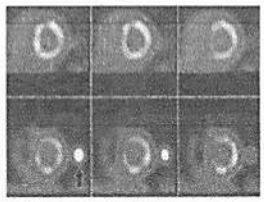
Case 6

1. What kind of examination ?.
2. Where do you think avidity from ?
3. This is false positive findings in plannar hole body scan I-131 ?

IAEA-TECDOC-1597



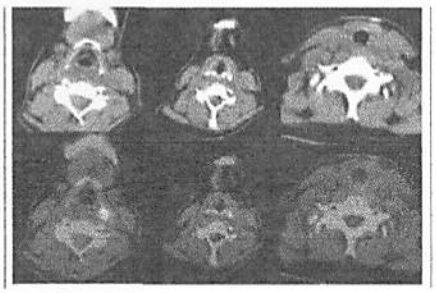
Case 8



A 63 yo man with episodic chest pain
What do you think about the finding?
What do you planning to do next ?

Bybel B et al. Radiographics 2008;28:1097-1113

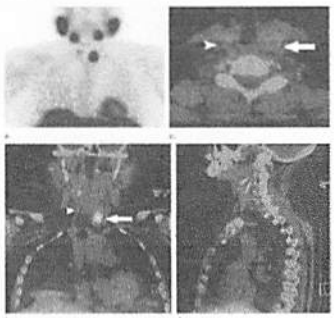
(B)



IAEA-TECDOC-1597

Subsequent streess images CT image shows no abnormality

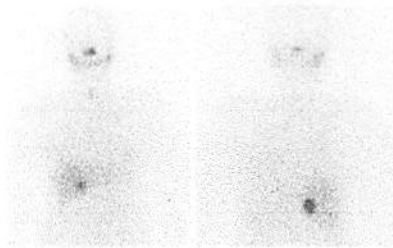
CASE 9



a. What is kind of study ?
b. Which radiopharmaceutical were used ?

Bybel B et al. Radiographics 2009;29:1097-1113

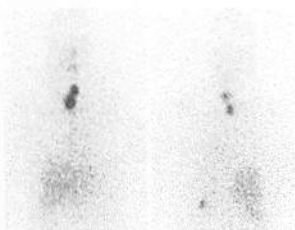
Case 11



A Patient with thyroid cancer for residual recurrent disease : I-131 whole body scan to asses

Bybel B et al. Radiographics 2009;29:1097-1113

CASE 10

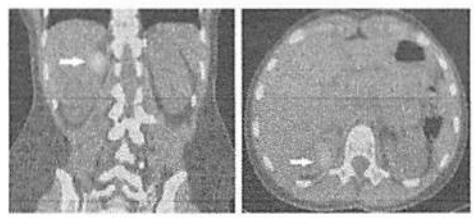


What is the study ?
What do you find from this image ?

Anterior posterior

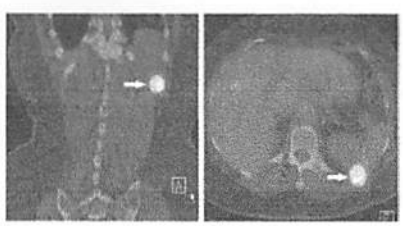
Bybel B et al. Radiographics 2009;29:1097-1113

SPECT/CT



Bybel B et al. Radiographics 2009;29:1097-1113

What is another test to confirm a finding ?



Bybel B et al. Radiographics 2009;29:1097-1113

Ok.....

I will finish soon

Just a bit moments please

Conclusion

- SPECT/CT imaging in nuclear oncology
  - Anatomical accuracy of image
  - Image data sets for potential future application
  - Additional information or diagnosis from CT
  - Estimating internal radiation dosimetry

Thank You