



Research in Neuroendocrine Tumours

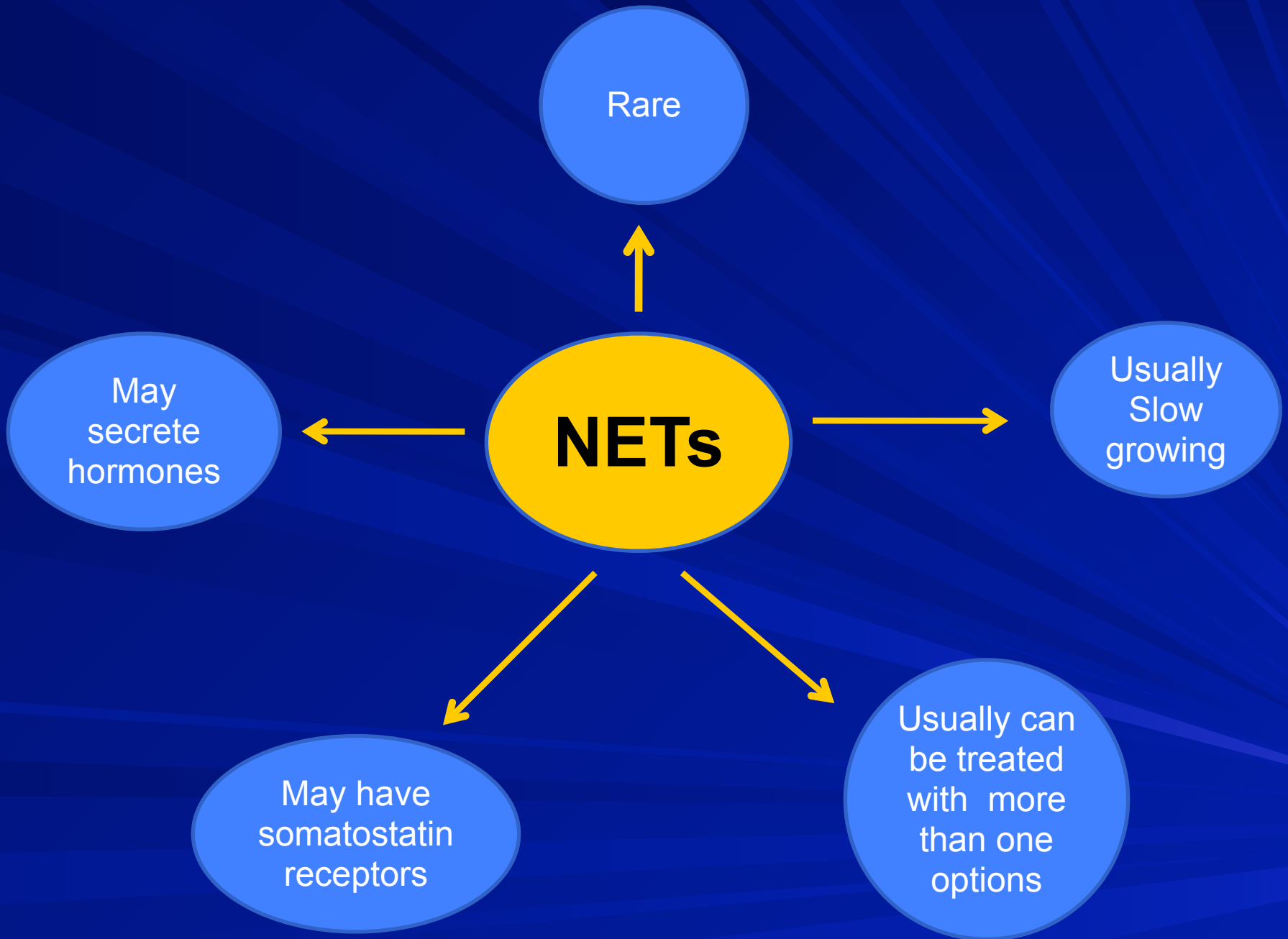
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Neuroendocrine Tumour Unit – European Centre of Excellence





Research in Diagnosis & Treatment of NETs

- Brief overview of “what is available in diagnosis & treatment”
- What we would need and is currently missing ?
- What we got recently ?
- What is currently under clinical trials and may be available soon ?
- What could we get in the future ?

Diagnosis of NETs

- History and clinical examination
- Biochemical tests
- Imaging studies
(for localization of primary and metastatic lesions)
- Histology - “ gold standard”

CLINICAL PRESENTATION

Specific symptoms



MIDGUT CARCINOIDS

- a. “Carcinoid syndrome”
- b. “Carcinoid crisis”

FUNCTIONING PANCREATIC NEUROENDOCRINE TUMOURS

- Symptoms related to the hormone that is secreted by tumour cells

Biochemical tests (tumour markers)

SPECIFIC

a. 24hour urinary 5-HIAA (metastatic midgut NETs)

Please note that : certain foods like bananas, avocados, aubergine, pineapple, plums, walnuts and some drugs like paracetamol, fluorouracil, methysergide, naproxen and caffeine , may cause false positive results, whilst other drugs like levodopa or phenothiazines may cause false negative results.

b. Fasting gut hormones (functioning pancreatic NETs)

(gastrin, VIP, somatostatin, insulin, PP, neurotensin)

c. **Calcitonin (medullary thyroid carcinoma)**

NON-SPECIFIC

Chromogranin-A (CgA)

(Chromogranin-B)

Please note that :

Minimally elevated CgA can be seen in renal failure, liver failure, atrophic gastritis and inflammatory bowel disease.

SCREENING FOR MEN-1

- Ca
- PTH
- Pituitary hormones

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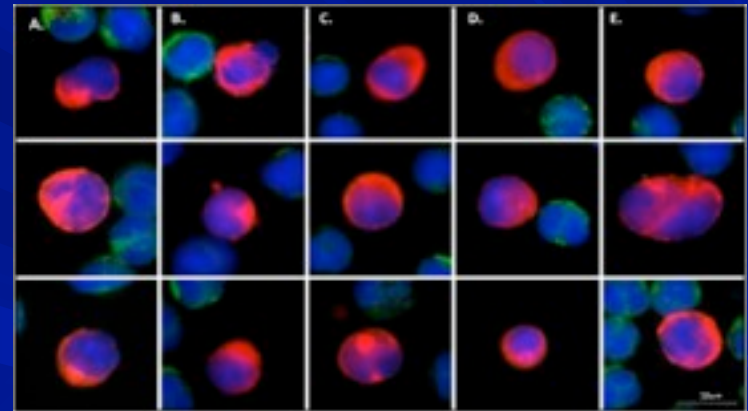
Circulating tumor cells and EpCAM expression in neuroendocrine tumors

Khan MS, Tsigani T, Rashid M, Rabouhans JS, Yu D, Luong TV, Caplin M, Meyer T.

Neuroendocrine Tumour Unit, Centre for Gastroenterology, Royal Free Hospital, UCL Cancer Institute, University College London, London, United Kingdom

Clin Cancer Res. 2011 Jan 15;17(2):337-45.

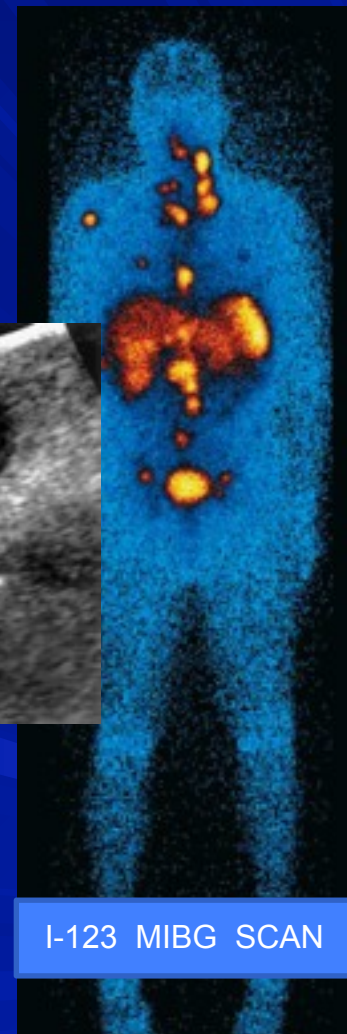
- The absence of CTCs was strongly associated with stable disease
- There was a moderate correlation between CTC levels and urinary 5-HIAA and between CTC levels and burden of liver metastases.
- There was no or low correlation between CTC levels and Ki-67 and serum chromogranin A
- CTCs seem to be associated with progressive disease and may provide useful prognostic information given the variable survival rates in these tumors.



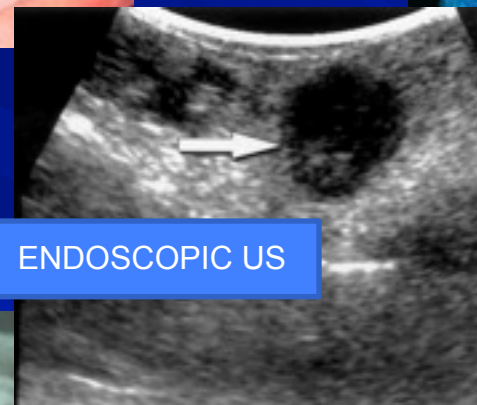
Imaging studies in NETs



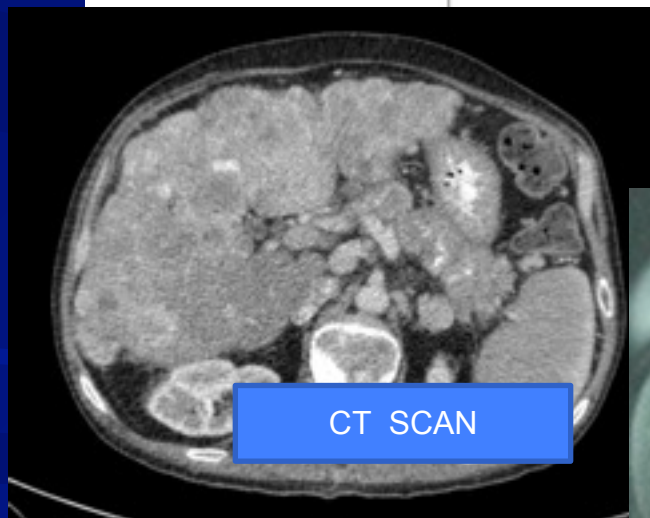
ENDOSCOPY



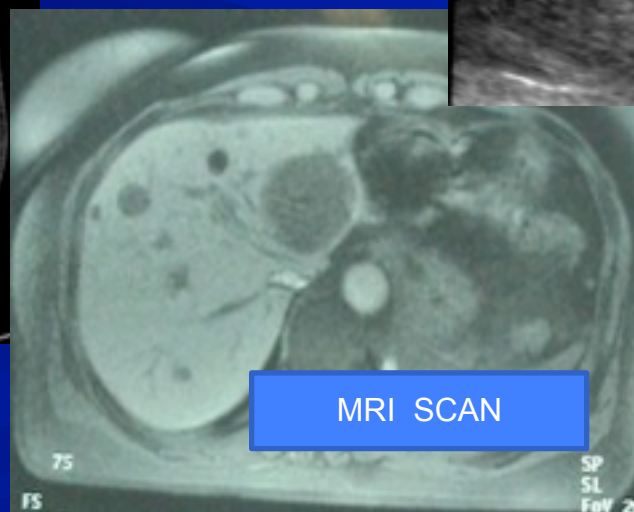
I-123 MIBG SCAN



ENDOSCOPIC US

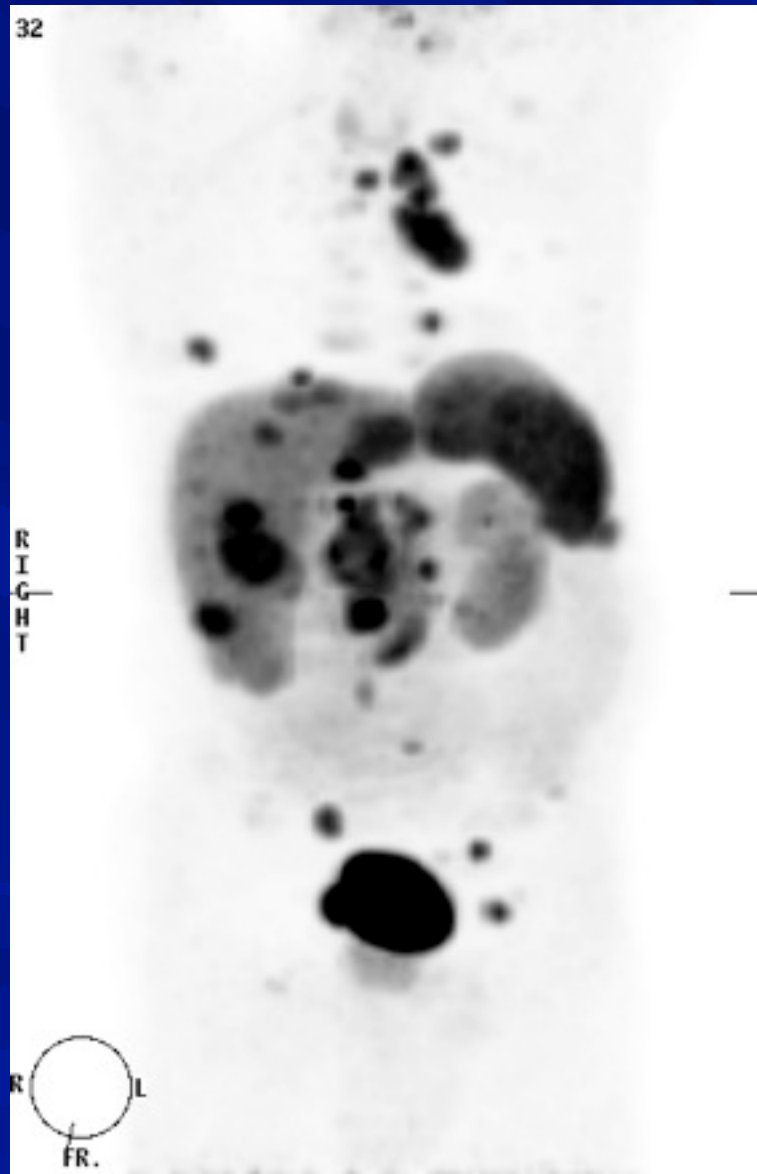


CT SCAN

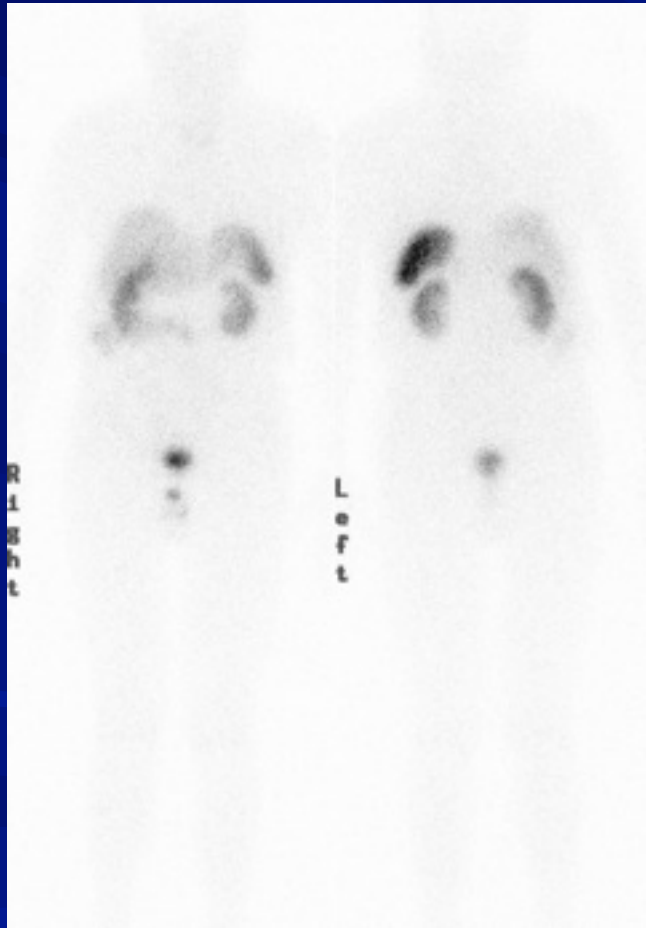


MRI SCAN

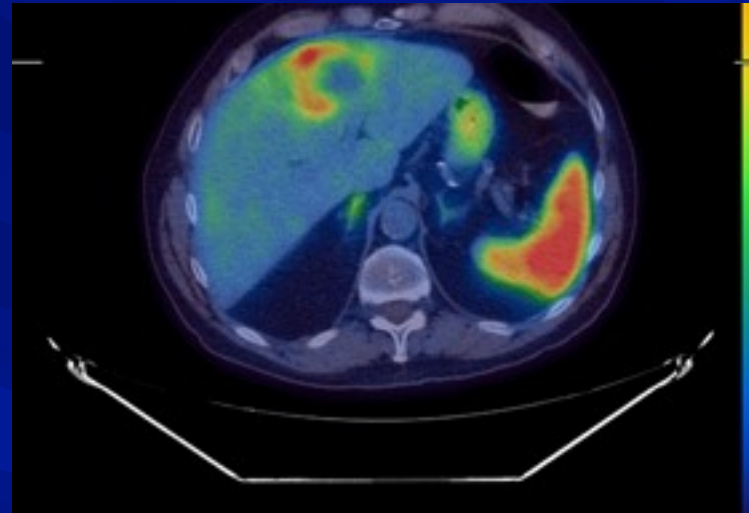
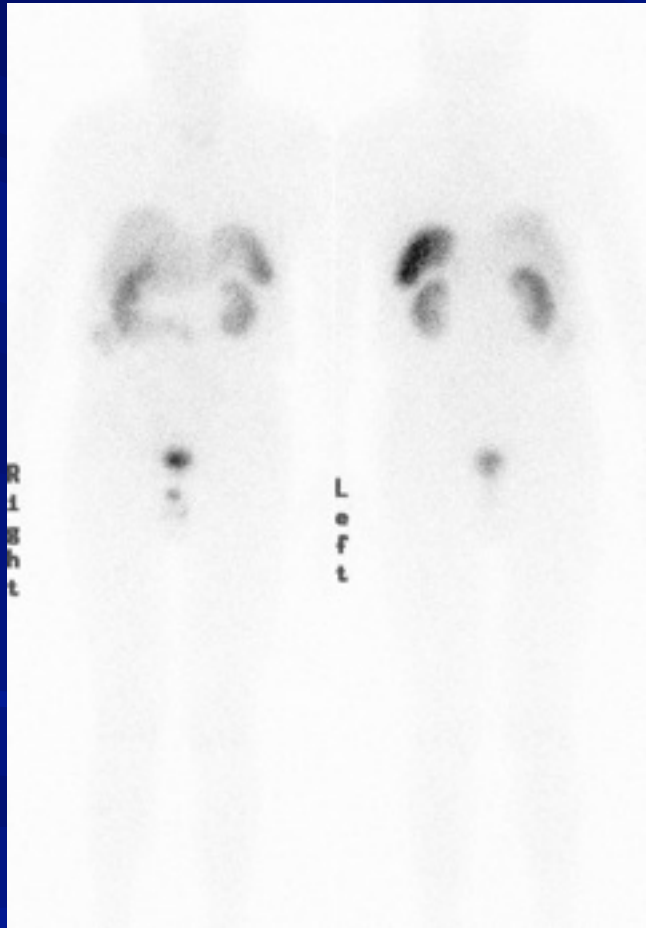
Ga^{68} octreotate PET scan



Patient with negative Octreoscan but positive uptake on 68Ga-octreotate PET/CT



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