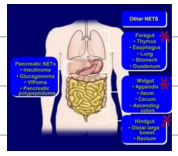
Neuroendocrine tumor ≠ Carcinoid tumors.

→ Heterogeneous group of tumors

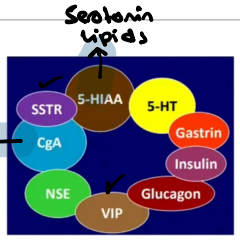


WHY → Neuro – Endocrine

Neuro → Synaptophysin

Endocrine → cells producing Hormons.

→ Biomarkers

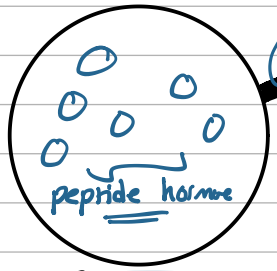


CgA = Chromogranin A; 5-HIAA = 5-hydroxy-3-indoleacetic acid, 5-HT = serotonin, NSE = neuron-specific enolase, VIP = vasoactive intestinal peptide; SSTR = somatostatin receptor

* Most of granules express it ← Best

* –ve when :- when it Arise from the hind Gut , Appen. or if it is poorly diffrentiate.

↳ use GcgB



Synaptophysin

imp

chromogranin A = best Available biomarker for dx of NET

→ classification

functional

Wide variety of symptoms depending on the type of NET.

you suspect based on symptoms then you send Biomarkers !

<<<

non-functional.

late mass effect symptoms

you suspected based on Radiology then you send Biomarkers !

Biomarkers orderd depends on the clinical scenario.

→ Imaging :-

most imp → * CT scan → Hyperintense in the Arterial phase.

* Endoscopic US :- for localization ± biopsy

* MRI

very imp → * somastostatin receptor scintigraphy

↳ we give somatostatin

↳ if they take it → +ve → ✓ tumor.

Rare

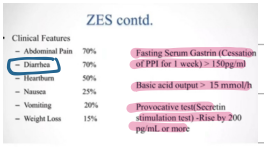
NET of Pancreas

- m/c NET of panc → non functional
- m/c benign NET of panc → insulinoma.
- m/c malignant functional NET → Gastrinoma.

?? * Arises from islet of Lang.
* types according to origin.

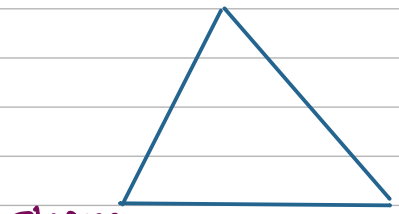
Gastrinoma

→ Mostly malig.
→ NTF
→ Gastrin ↑
↓
Symptoms :-



insulinoma

→ most common
→ From β cells.
→ F > M (benign)
↓↓
Clinical present.
→ whipple Δ :-
symptoms + hypoglycemia.



plasma glucose <40 mg/dl

Relief of symptoms with glucose administration
↓
Causing wt. gain.

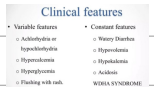
→ Dx :-
↓ ↓ ↓ ↓
Serum Glucose <45 | Serum insulin >5 | neuro glycopenic symptoms | Serum C-peptide. >0.7

Imaging
* difficult to be seen by CT scan (small)
* EUS.

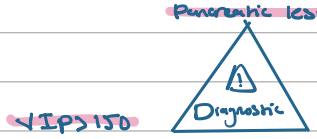
Glucagonoma

Vipoma

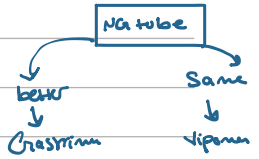
→ 2/3 Malignant
Syndrome - ostip, (WADHA)



→ Diagnostic triad :-
Pancreatic lesion.



How to differentiate it from Gastrinoma diarrhea ?



SSoma