



University – Hospital Padova

UO Endocrinology
Department of Medicine – DIMED
Prof. Marco Boscaro



**European
Reference
Network**

for rare or low prevalence
complex diseases

⚙️ **Network**

Endocrine Conditions
(Endo-ERN)

● **Member**

AO di Padova — Italy

Mitotane-induced Central hypothyroidism

Filippo Ceccato
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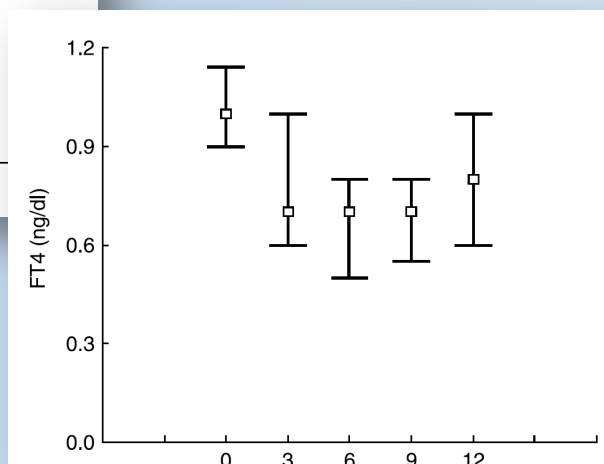
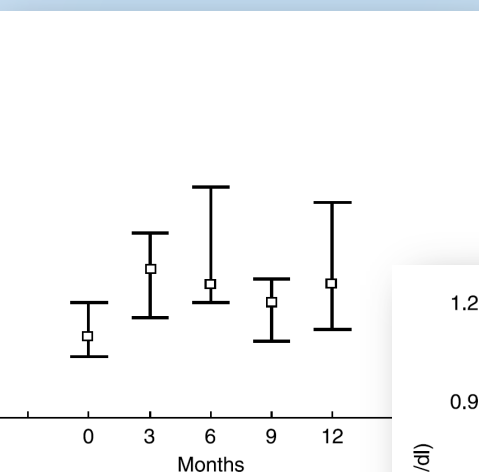


Endo-ERN

Mitotane therapy is associated with many side effects, including central hypothyroidism

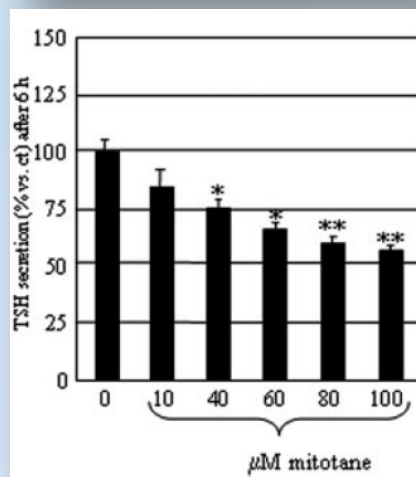
Active evaluation of mitotane toxicity
in adrenocortical cancer patients treated
long-term

nts



F, Endoc Relat Cancer 2008

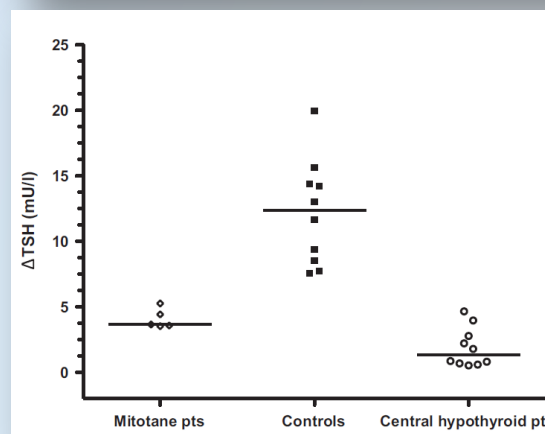
Therapeutic Concentrations of Mitotane (o,p'-DDD)
Inhibit Thyrotroph Cell Viability and TSH Expression
and Secretion in a Mouse Cell Line Model



In vitro

Zatelli MC, Endocrinology 2010

Mitotane treatment in patients with adrenocortical cancer causes
central hypothyroidism



5 patients

Russo M, Clin Endocrinol

Study design

Increase number of patients (now 22 cases described)

Predictive factor for central hypo-TSH

- ✓ Only pituitary?
- ✓ All patients????
- ✓ Thyroid ultrasound and AB? FT4→FT3 increased conversion?

QoL

After mitotane discontinuation?

Thyroid function and cancer-ACC?

Retrospective

Prospective (treat with LT4 all patients with fT4 in the 1st quartile?)



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Cortisol/Cortisone ratio for the diagnosis of ACTH-dependent CS

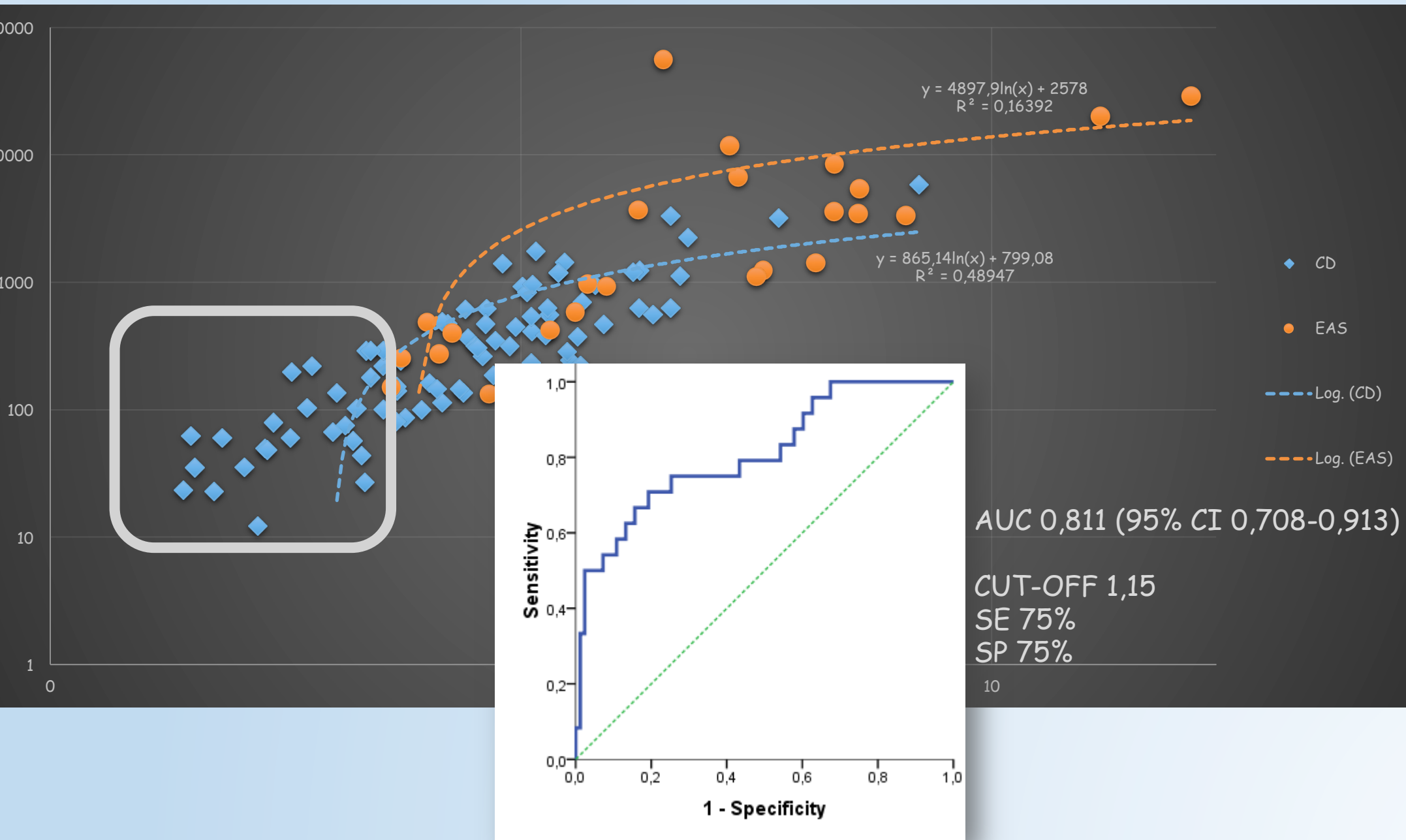
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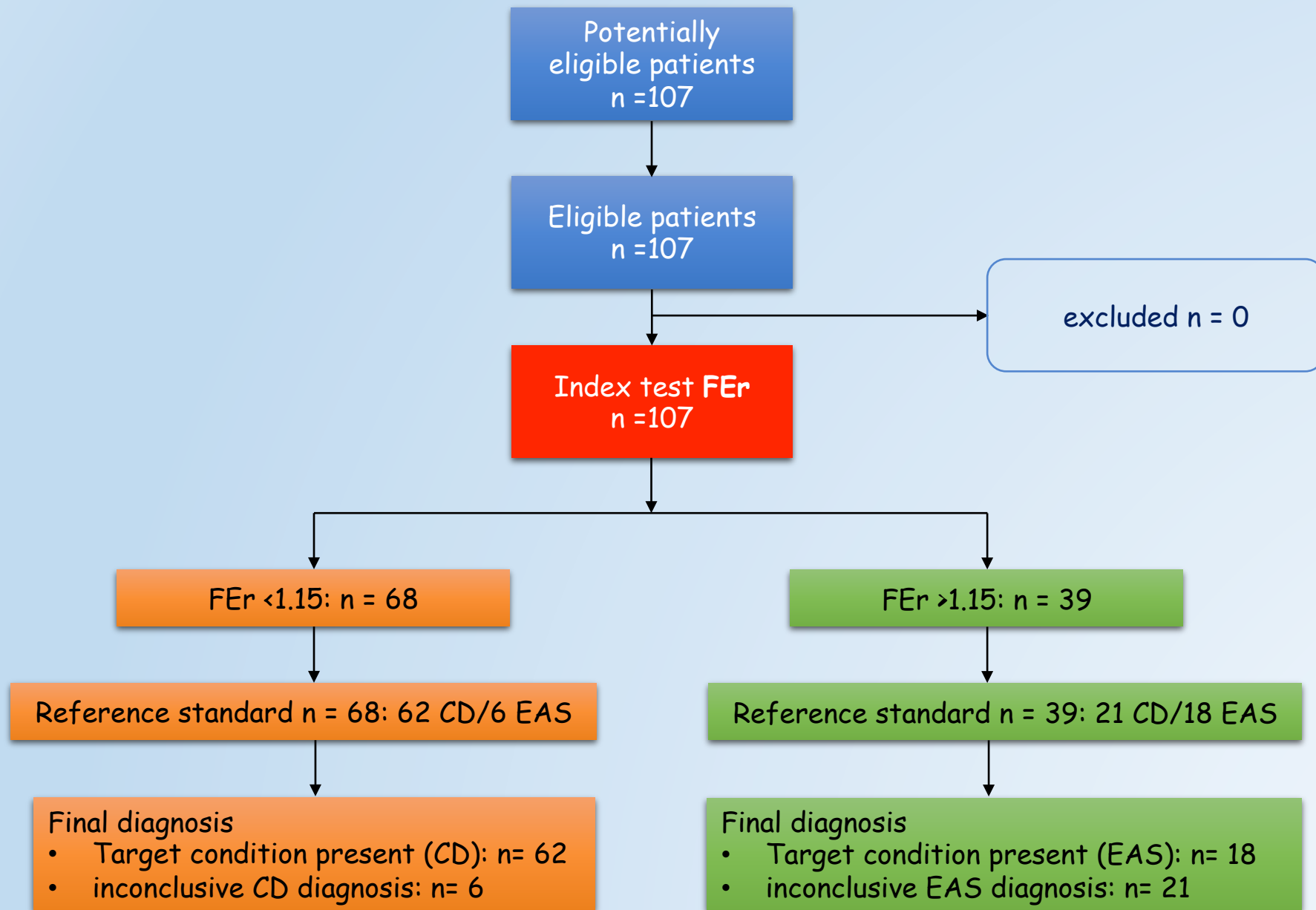
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Endo-ERN

test	pituitary	ectopic		
	Positive response	Rare response	Good accuracy	expensive Cut-off
Low dose dexamethasone suppression test	Suppression > 70-80%	Rare Suppression	Good accuracy, cheap	Cut-off DEX metabolism
AVP	Positive response	Rare response	Poor accuracy	Cut-off
Pituitary MRI	adenoma 60%	Pituitary incidentaloma	Only large adenoma	1,5-3-4,5 Test Incidentaloma
SS	central	peripheral	Gold standard	invasive, expensive not worldwide





Study design

Eratio as a second line test
ctopic score (2nd paper)

mples
At least 5 ml, send -20°C (<12 months) stored -80°C ,

Retrospective: patients with CD or EAS (BIPSS, hystology or surgical remission)

rospective (results in one week)



Any question?