Incidentalome surrénalien

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Adaptation corticothérapie

DEMI-JOURNÉE DE FORMATION CONTINUE SNM

8 janvier 2026

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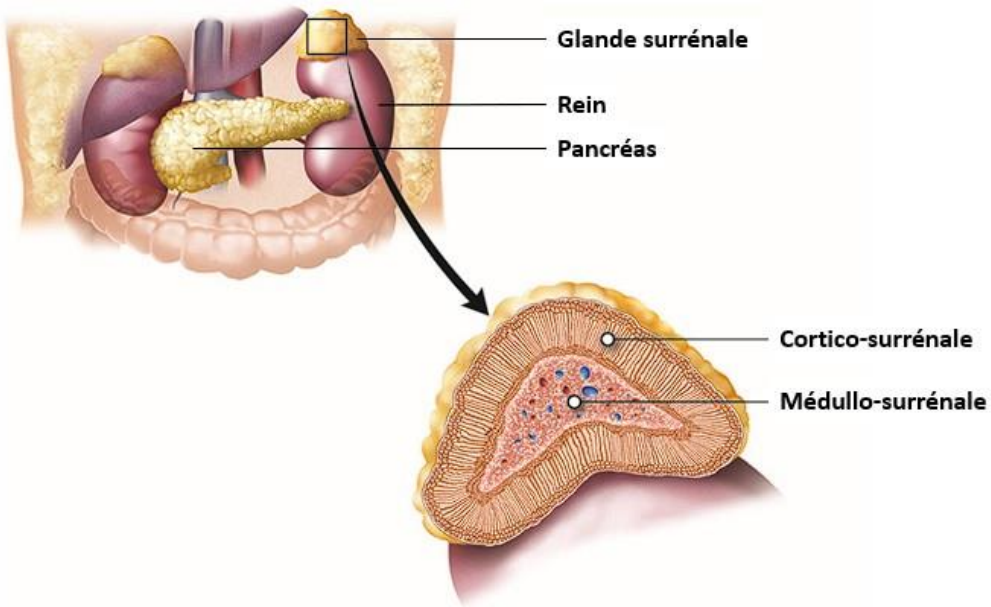


Incidentalome surrénalien

Masse surrénalienne, généralement >1cm, découverte fortuitement lors d'un examen radiologique réalisé pour une autre indication

Prévalence importante, augmente avec l'âge

- Séries d'autopsie ~ 2% tout âge confondu
- Séries radiologiques ~ 3% chez les adultes > 50 ans et ~ 10% > 80 ans
- Cohorte chinoise [1] : 0.2% chez les 18-25 ans et 3.2% chez les plus de 65 ans

1. Ying Jing et al. Prevalence and Characteristics of Adrenal Tumors in an Unselected Screening Population : A Cross-Sectional Study. *Ann Intern Med*. 2022

Etiology	Prevalence of the different entities among adrenal incidentalomas
Adrenocortical adenoma or macronodular bilateral adrenal hyperplasia	80%-85%
• Nonfunctioning	40%-70%
• Mild autonomous cortisol secretion	20%-50%
• Primary aldosteronism	2%-5%
• Overt Cushing's syndrome	1%-4%
Other benign mass	
• Myelolipoma	3%-6%
• Cyst and pseudocyst	1%
• Ganglioneuroma	1%
• Schwannoma	<1%
• Hemorrhage	<1%
Pheochromocytoma	1%-5%
Adrenocortical carcinoma	0.4%-4%
Other malignant mass (mostly adrenal metastases)	3%-7%

European Society of Endocrinology clinical practice guidelines on the management of adrenal incidentalomas. *EJE*. 2023

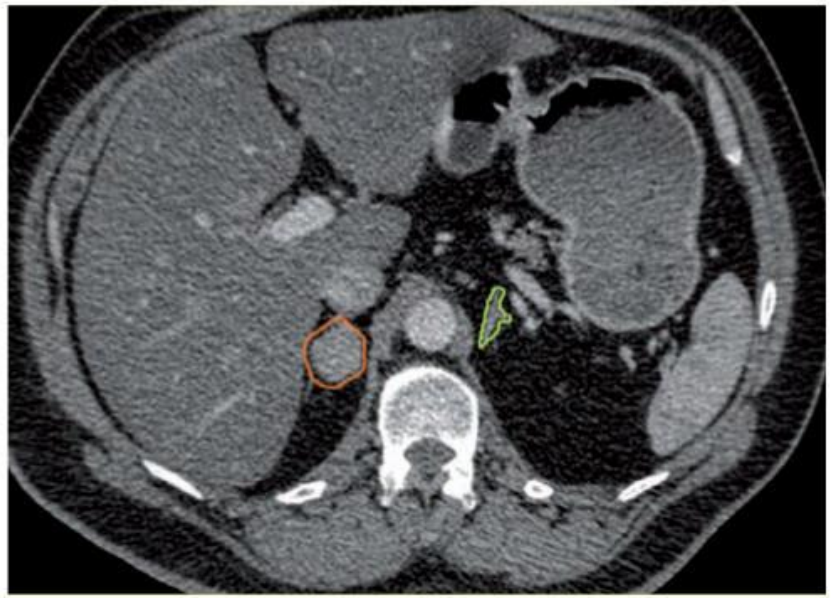
Mise au point

- Risque de malignité ?
- Masse sécrétante?

Caractéristiques radiologiques

- Taille de la lésion
- Homogénéité
- Densité

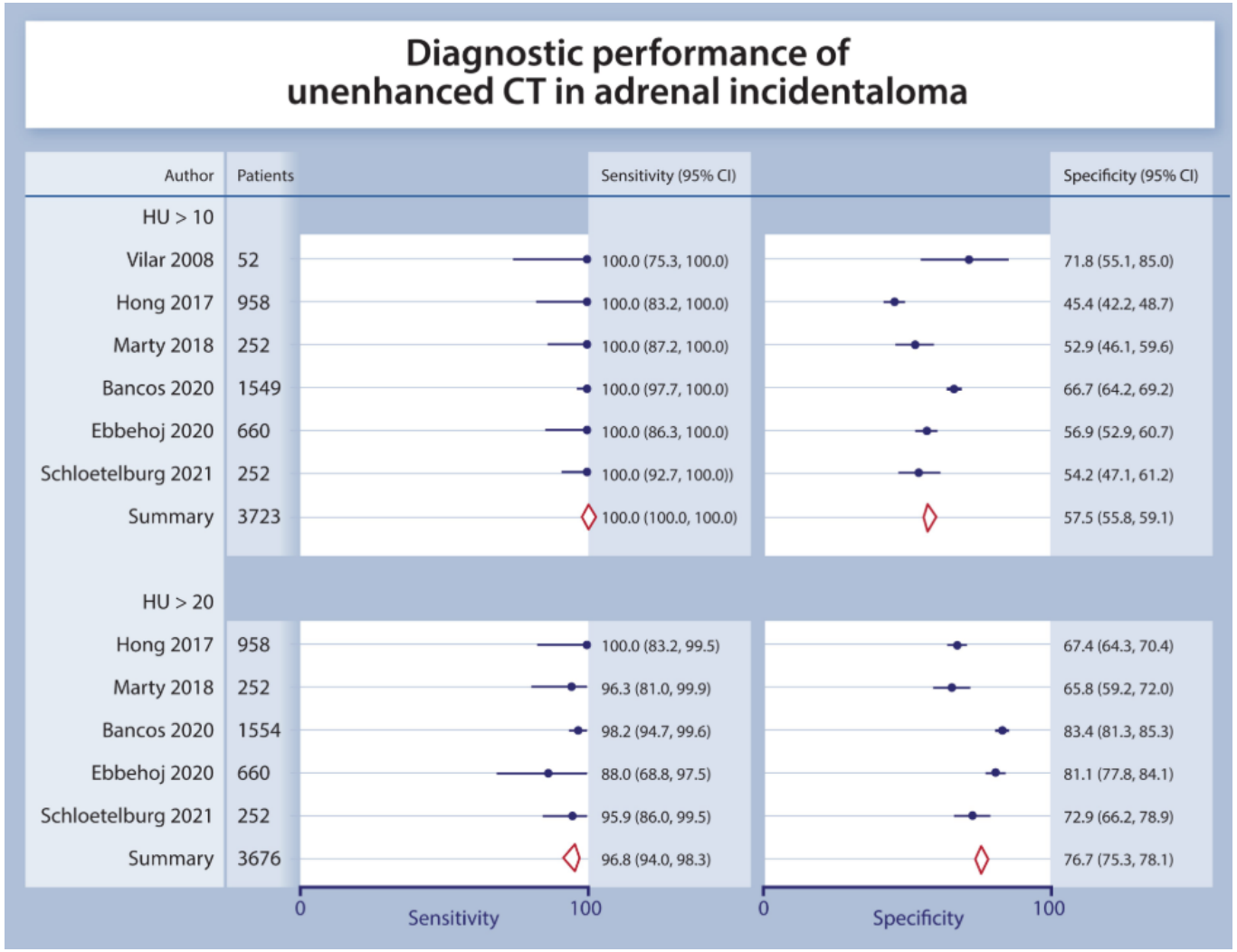
=> **Scanner non injecté en première intention**



Revue médicale suisse

Caractéristiques radiologiques

Cutoff de 10 UH = sensibilité de quasi 100%



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Caractéristiques radiologiques

- Scanner injecté

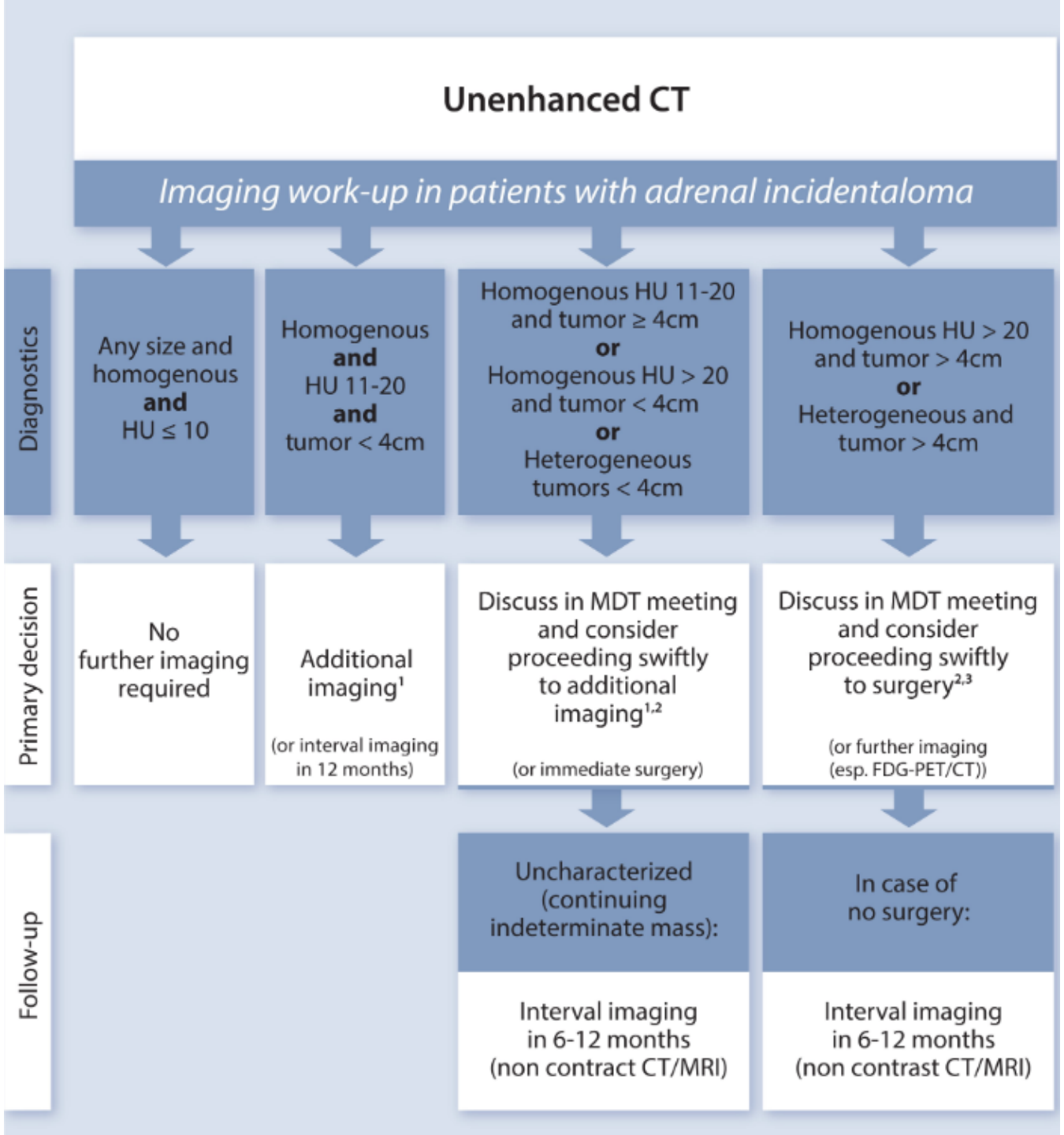
Cutoff washout relatif de 58% pour une sensibilité proche de 100% mais spécificité de seulement 15%

- IRM

Sensibilité 89%-99% (chute de signal > 30 % en séquence IP/OP)

- PET-CT FDG

Sensibilité 87-100% avec le SUVmax ou ratio foie/surrénale



European Society of Endocrinology clinical practice guidelines on the management of adrenal incidentalomas. *EJE*. 2023

Place de la biopsie

- Très limitée
- Toujours exclure un phéochromocytome
- Attention risque de dissemination corticosurrénalome

Evaluation hormonale

Anamnèse et examen clinique à la recherche de signe d'une hypersécrétion

HTA ?

Signes de cushing ?

Triade de Ménard (céphalées – palpitations – sudation) ?

Evaluation hormonale

Test de suppression à la Dexamethasone 1mg

=> <u>chez tous les patients</u>

Protocole CHUV

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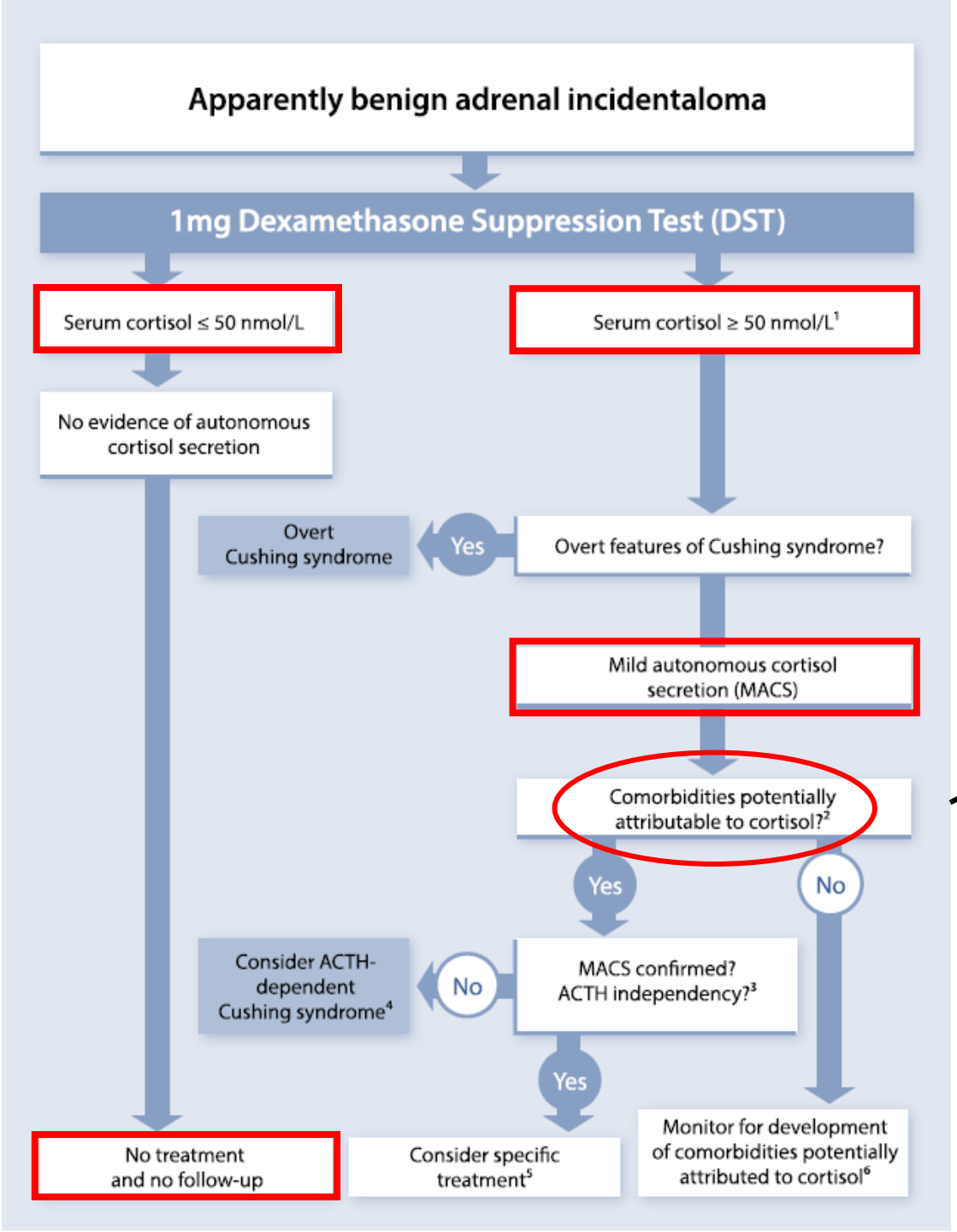

HTA

Diabète de type 2

Dyslipidémie

Ostéoporose

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Evaluation hormonale

Rapport aldostérone/activité rénine

HTA +/- hypokaliémie

attention aux interférences médicamenteuses

Meets Criteria for Primary Aldosteronism**

Renin concentration or activity is low or suppressed, while aldosterone concentration is inappropriately high relative to renin

- Plasma renin activity (PRA) ≤ 1 ng/mL/h
- Direct renin concentration (DRC) ≤ 8.2 mU/L
- Aldosterone (immunoassay) ≥ 10 ng/dL (≥ 277 pmol/L)
- Aldosterone (LC-MS/MS) ≥ 7.5 ng/dL (≥ 208 pmol/L)

AND

Aldosterone to renin ratio (ARR) is increased

- Aldosterone (immunoassay, ng/dL) / PRA (ng/mL/h) > 20
- Aldosterone (immunoassay, pmol/L) / DRC (mU/L) > 70
- Aldosterone (LC-MS/MS, ng/dL) / PRA (ng/mL/h) > 15
- Aldosterone (LC-MS/MS, pmol/L) / DRC (mU/L) > 52

Primary Aldosteronism: An Endocrine Society Clinical Pratice Guidelines. *JCEM*. 2025

Evaluation hormonale

Métanéphrines plasmatiques libres

si lésion suspecte : hétérogène

densité > 10 UH

Cutoff à 1.4 pmol/mL pour la metanephrine libre et 2.5 pmol/mL pour la normetanephrine > 2.5 pmol/mL [1]

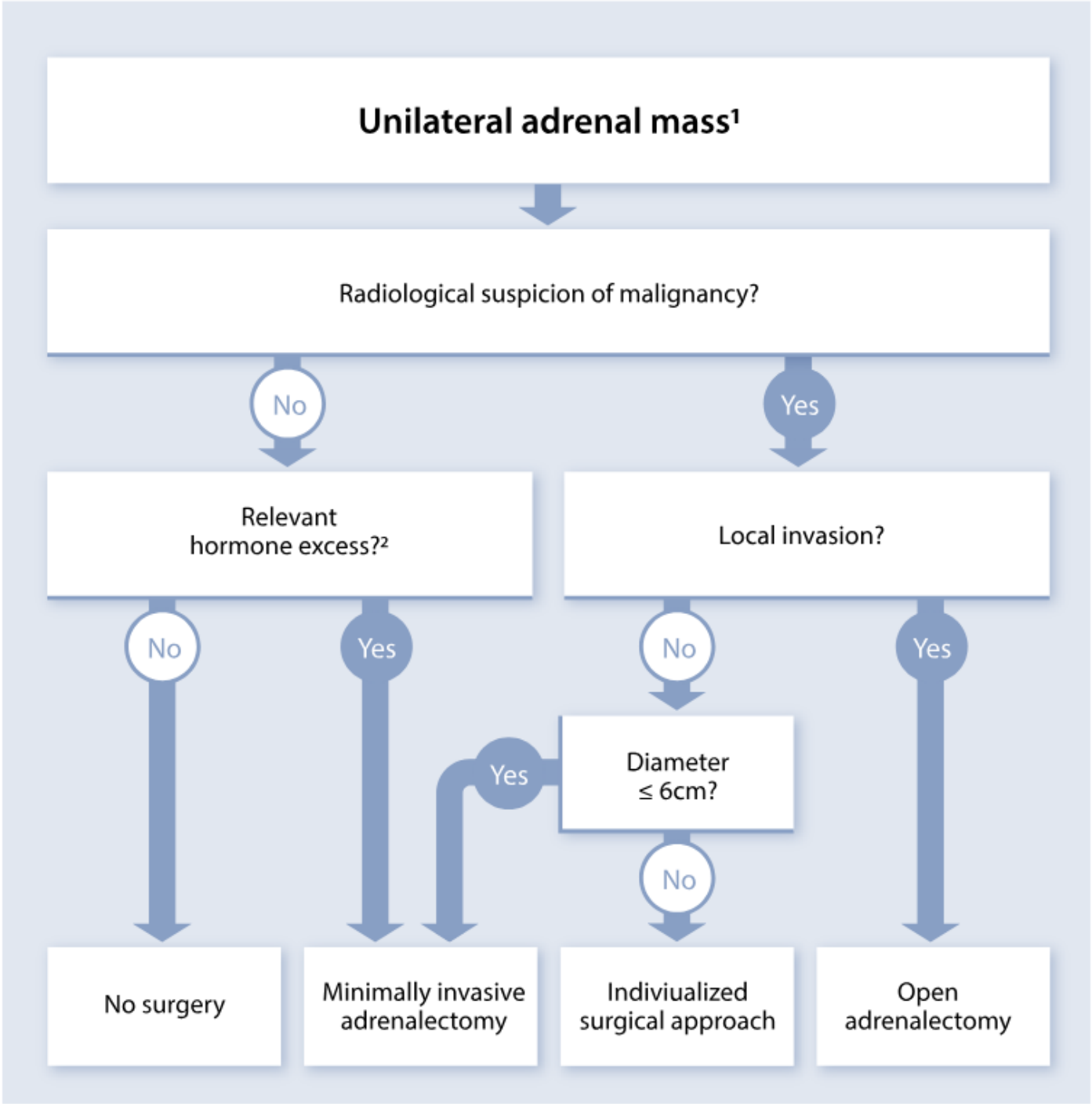
1. Pheochromocytoma: an updated scoping review from clinical presentation to management and treatment. *Front Endocrinol*. 2024

Evaluation hormonale

Signe de virilisation => dosage testostérone (+ DHEA sulfate + androsténédione)

Gynécomastie => dosage oestradiol

En cas de lésion bilatérale => dosage 17-hydroxyprogestérone



European Society of Endocrinology clinical practice guidelines on the management of adrenal incidentalomas. *EJE*. 2023

Quand nous adresser les patients

- Suspicion d'hypersécrétion
    - Test de freinage sous dexamethasone pathologique
    - Métanéphrines plasmatiques libres pathologiques
    - Aldostérone/activité rénine pathologique
- Suspicion de malignité à l'imagerie
    - Lésion > 4cm
    - Lésion hétérogène
    - Densité > 10UH
- Signes cliniques de virilisation
- Contexte oncologique

Insuffisance surrénalienne sur corticothérapie

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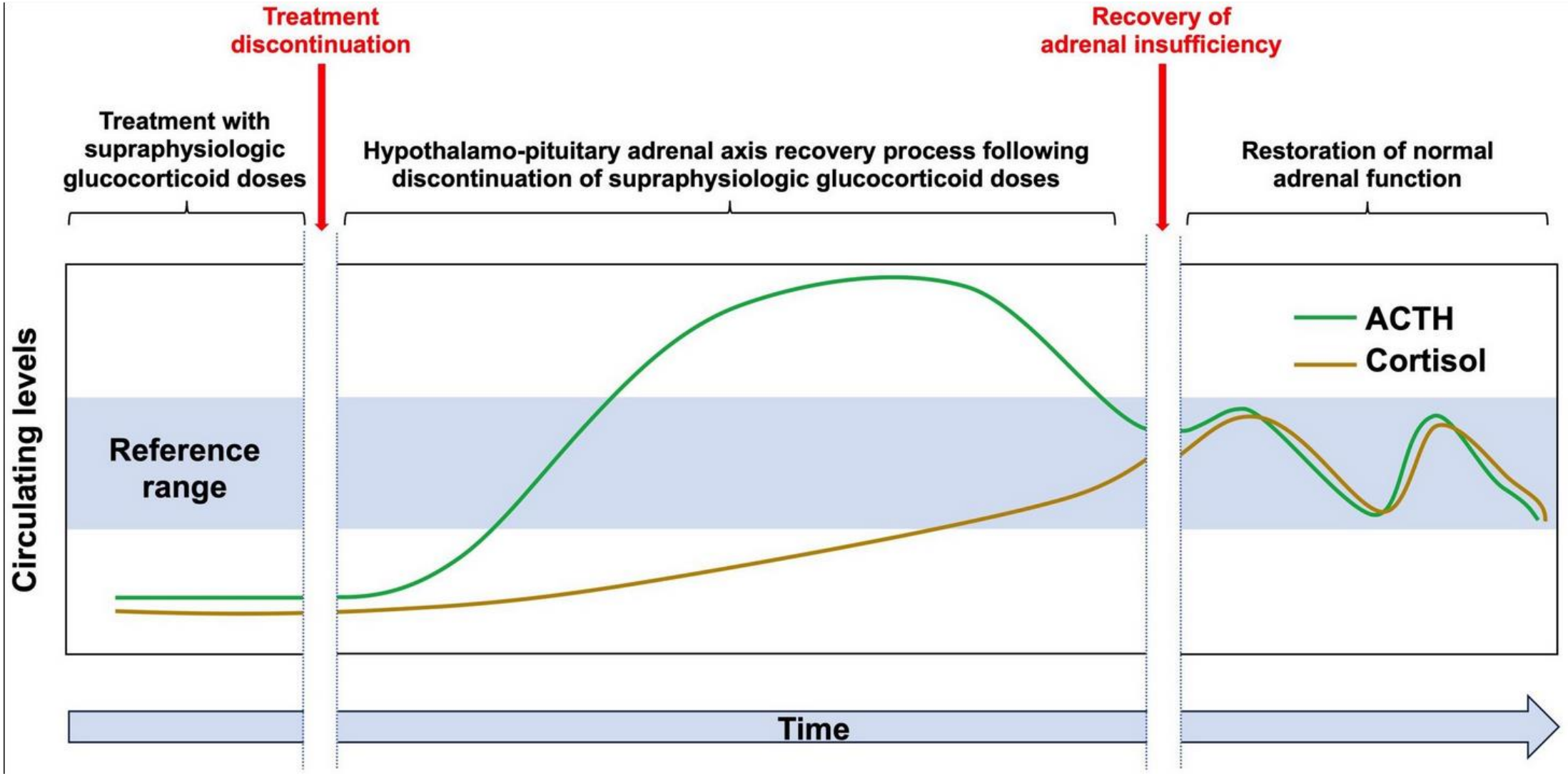
https://doi.org/10.1210/clinem/dgae250
Advance access publication 10 May 2024
Clinical Practice Guideline

European Society of Endocrinology and Endocrine Society Joint Clinical Guideline: Diagnosis and Therapy of Glucocorticoid-induced Adrenal Insufficiency

Felix Beuschlein,[1,2,3,*] Tobias Else,[4,*] Irina Bancos,[5,6] Stefanie Hahner,[7] Oksana Hamidi,[8] Leonie van Hulsteijn,[9,10] Eystein S. Husebye,[11,12] Niki Karavitaki,[13,14,15] Alessandro Prete,[13,14,16] Anand Vaidya,[17] Christine Yedinak,[18] and Olaf M. Dekkers[10,19,20]



Diagnosis and therapy of glucocorticoid-induced adrenal insuffisiency. *JCEM*. 2024

	Glucocorticoid withdrawal syndrome	Adrenal insufficiency
Symptoms	General malaise, fatigue, nausea, muscle and joint pain, sleep disturbances, mood change	General malaise, fatigue, nausea, muscle and joint pain
Signs	Cushingoid features common, especially earlier in the glucocorticoid taper	Weight loss[a], hypotension, orthostasis
Timing of symptoms and signs occurrence	At any point during glucocorticoid taper, usually when prednisone is decreased <15 mg/day Higher risk with long-term supraphysiologic glucocorticoid therapy	Only when not treated with optimal glucocorticoid therapy (subphysiologic glucocorticoid dose, increased glucocorticoid requirements due to sickness)
Biochemistry	Normal electrolytes Glucocorticoid-induced hyperglycemia may be present	Hyponatremia, hypoglycemia
HPA axis	Testing is not recommended If tested, ACTH and cortisol are usually undetectable	Initially, low ACTH and cortisol Later in recovery: normal-elevated ACTH, low cortisol
Risk of adrenal crisis	Unlikely, if glucocorticoids are administered (as patients with glucocorticoid withdrawal syndrome also have adrenal insufficiency)	Yes, if not optimally treated with glucocorticoid therapy

Diagnosis and therapy of glucocorticoid-induced adrenal insuffisiency. *JCEM*. 2024

Facteurs de risque pour développer une insuffisance corticotrope

Factors	Risk for adrenal insufficiency and crisis		
	Low	**Moderate**	**High**
Glucocorticoid potency	Hydrocortisone Cortisone acetate Deflazacort	Prednisone Prednisolone Methylprednisolone Triamcinolone	Dexamethasone Betamethasone Fluticasone
Administration Route	Nasal Topical Ophthalmic	Inhaled	Systemic (oral, intramuscular, I intravenous) Intra-articular Concurrent use of differently aadministered glucocorticoid
Dose	Low	Medium	High
Duration of use	<3-4 weeks	3-4 weeks-3 months	>3 months
Body Mass Index (64)	Normal	Overweight	Obese
Age (65)	Younger adults		Older adults

Diagnosis and therapy of glucocorticoid-induced adrenal insuffisiency. *JCEM*. 2024

RHNe

Table 1. Pharmacologic characteristics of commonly prescribed systemic glucocorticoids (19-23)

Glucocorticoids	Approximate equivalent dose[a]	Glucocorticoid potency (relative to hydrocortisone)[a, b]	Plasma half-life (min)[a, c]	Biological half-life (hours)[a]
Short-acting glucocorticoids with lower potency				
Hydrocortisone	20 mg	1.0	90-120	8-12
Cortisone acetate	25 mg	0.8	80-120	8-12
Deflazacort	7.5 mg	1.0	70-120	Not defined
Intermediate-acting glucocorticoids with moderate potency				
Prednisone	5 mg	4.0	60	12-36
Prednisolone	5 mg	4.0	115-200	12-36
Triamcinolone	4 mg	5.0	30	12-36
Methylprednisolone	4 mg	5.0	180	12-36
Long-acting glucocorticoids with highest potency				
Dexamethasone	0.5 mg	30-60	200	36-72
Betamethasone	0.5 mg	25-40	300	36-72

Diagnosis and therapy of glucocorticoid-induced adrenal insuffisiency. *JCEM*. 2024

Schéma dégressif

- Traitement < 3-4 semaines => pas d'indication de schéma dégressif si CCS de courte durée d'action, peu importe la dose
- Remplacement des corticoïdes de longue durée d'action (dexamethasone) par une forme de courte durée d'action (prednisone)

Table 4. Suggested tapering regimen depending on glucocorticoid dose

Patient's current daily prednisone equivalent dose	Suggested prednisone decrements	Time interval
>40 mg	5-10 mg decrease	Every week
20-40 mg	5 mg decrease	Every week
10-20 mg	2.5 mg decrease	Every 1-4 weeks
5-10 mg	1 mg decrease	Every 1-4 weeks
5 mg	In absence of clinical symptoms or negative testing for adrenal insufficiency continue 1 mg decrease (if low dosage prednisolone preparations are not available, alternative: 20 mg hydrocortisone with 5 mg decrease)	Every 4 weeks

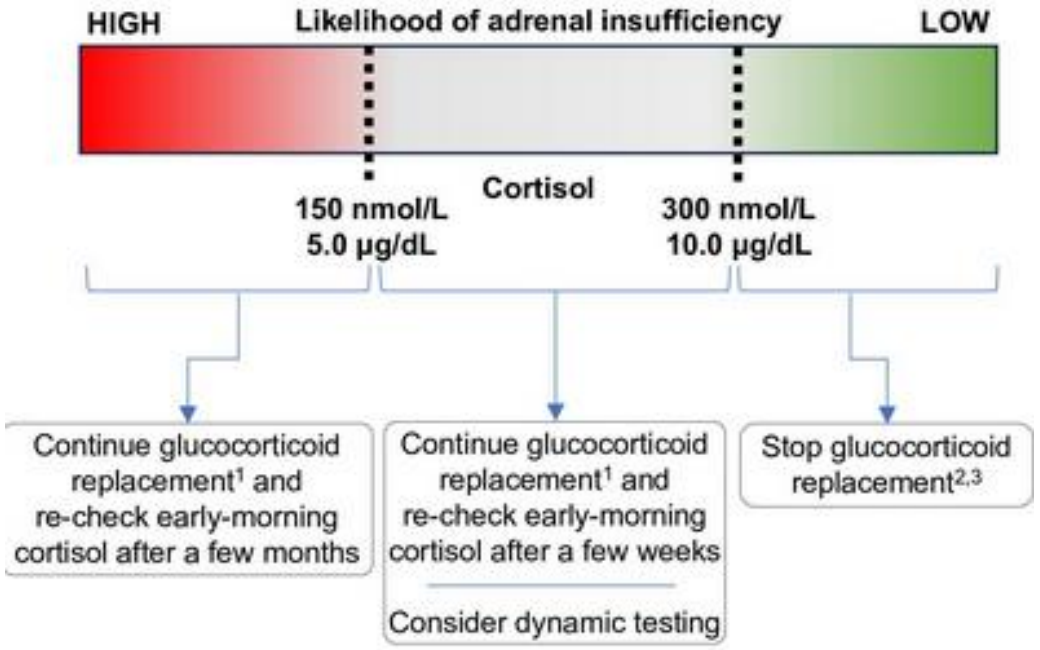
Diagnosis and therapy of glucocorticoid-induced adrenal insuffisiency. *JCEM*. 2024

Dose équivalente à 5mg de prednisone

Schéma dégressif jusqu'à arrêt total de la substitution

Monitoring clinique

Dosage cortisol matinal



Diagnosis and therapy of glucocorticoid-induced adrenal insuffisiency. *JCEM*. 2024

Adaptation en cas de stress durant le traitement

	General considerations	Examples	Suggested regimen
Minor stress	If the patient is already taking hydrocortisone ≥40 mg daily prednisone ≥10 mg daily, or dexamethasone ≥1 mg daily, there is typically no need to increase the dose unless there are signs of hemodynamic instability	• Illness requiring bed rest • Illness with fever (out of hospital) • Illness requiring treatment with antibiotics (out of hospital) • Significant emotional stress (eg, bereavement)	If not on daily glucocorticoids: give hydrocortisone 40 mg total daily dose, to be given in three divided doses (eg, 20 mg on rising, 10 mg 12 midday, 10 mg 5pm). Continue for 2-5 days until well (or for the duration of antibiotic treatment). If on hydrocortisone <40 mg total daily dose: increase to 40 mg total daily dose, to be given in three divided doses (eg, 20 mg on rising, 10 mg 12 midday, 10 mg 5pm). Continue for 2-5 days until well (or for the duration of antibiotic treatment). If on prednisone <10 mg total daily dose: increase to 10 mg total daily dose, to be given in one or two divided doses. Continue for 2-5 days until well (or for the duration of antibiotic treatment). If on dexamethasone <1 mg total daily dose: increase to 1 mg once daily. Continue for 2-5 days until well.
		Minor surgery including any procedure requiring local anesthesia	If not on daily glucocorticoids: give oral hydrocortisone 40 mg total daily dose, to be given in three divided doses (eg, 20 mg one hour prior to the procedure, 10 mg six hours after the procedure, 10 mg after a further six hours). Continue glucocorticoids in patients who remain unwell after the procedure until clinically stable. If on hydrocortisone <40 mg total daily dose: increase to 40 mg total daily dose, to be given in three divided doses (eg, 20 mg one hour prior to the procedure, 10 mg six hours after the procedure, 10 mg after a further six hours). Continue increased dose in patients who remain unwell after the procedure until clinically stable. If on prednisone <10 mg total daily dose: increase to 10 mg total daily dose, to be given one hour prior to the procedure. Continue increased dose in patients who remain unwell after the procedure until clinically stable. If on dexamethasone <1 mg total daily dose: increase to 1 mg total daily dose, to be given one hour prior to the procedure. Continue increased dose in patients who remain unwell after the procedure until clinically stable.
		Bowel procedures not carried out under general anesthesia	If not on daily glucocorticoids: give hydrocortisone 20 mg total daily dose, to be given in three divided doses (eg, 10 mg one hour prior to the procedure, 5 mg six hours after the procedure, 5 mg after a further six hours). If on daily glucocorticoids: continue normal glucocorticoid dose. Give an equivalent I.V. dose if prolonged nil by mouth.

Diagnosis and therapy of glucocorticoid-induced adrenal insuffisiency. *JCEM*. 2024

Take home message

- Prévalence importante des incidentalomes, le plus souvent bénins et ne nécessitant pas de surveillance systématique
- Toujours exclure un MACS, autres dosages hormonaux selon situations
- Plus d'indication de test au synacthen pour les insuffisances corticotropes secondaire à une corticothérapie
- Informer les patients de la nécessité de majorer la corticothérapie en cas de stress