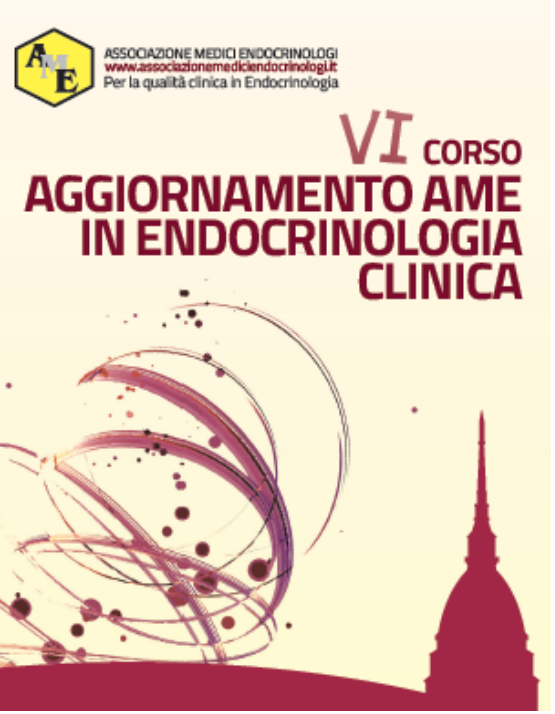


# Come non perdersi nell'imaging: dalla teoria ai casi clinici. Gara a quiz tra gruppi.

## Quiz 1

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# CONFLICT OF INTEREST

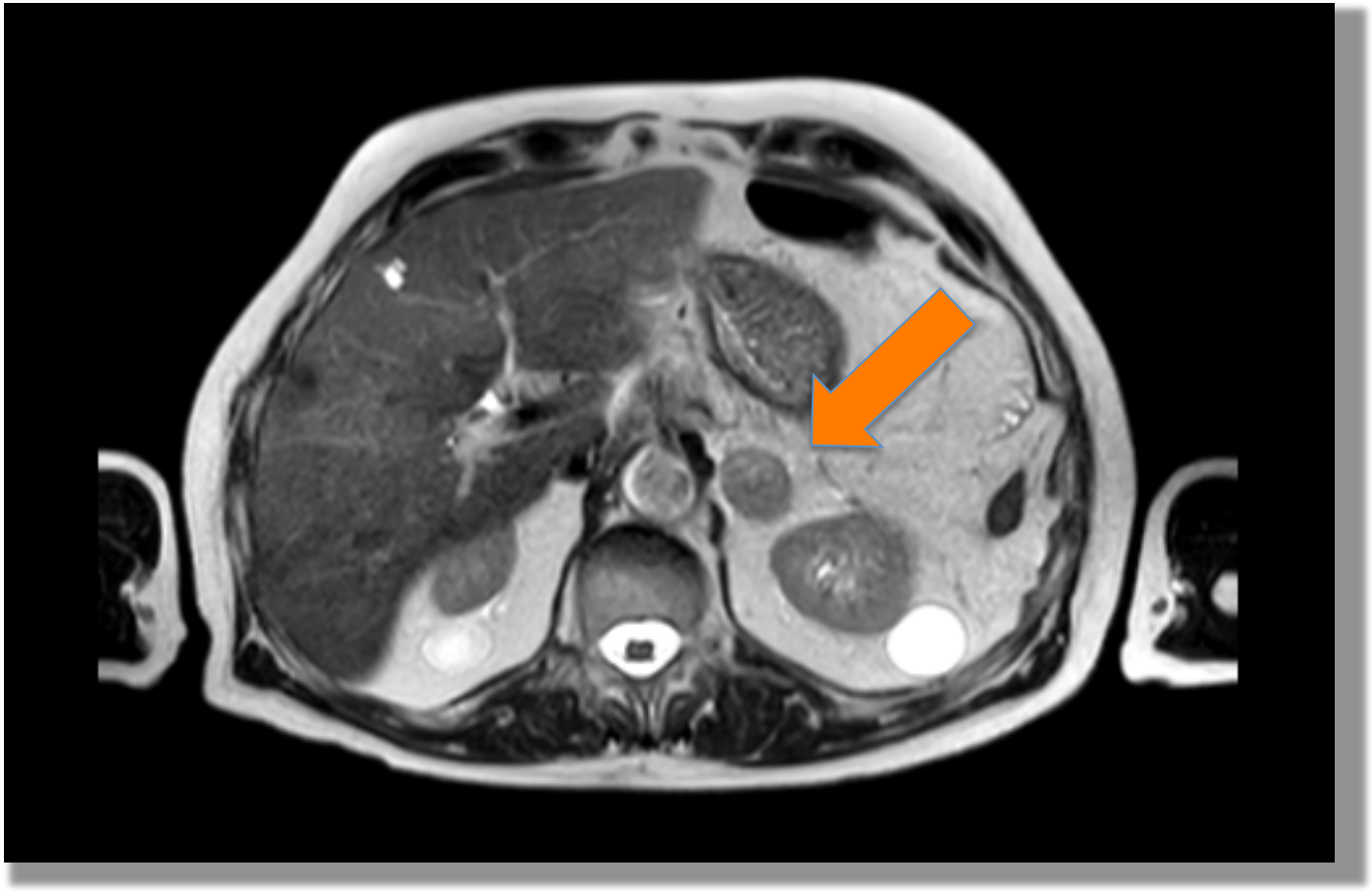
- HRA Pharma: advisory board, research grant
- Corcept: consultant
- Atterocor: consultant

# Quiz per immagini

??

- Adenoma
- Carcinoma
- Iperplasia
- Metastasi
- Feocromocitoma
- Cisti

# Maschio di 84 aa



## MRI 1/15

# TEST MENU

- Anamnesi
- Esame obiettivo
- Precedenti radiologici
- 1-mg DST
- ACTH
- UFC
- Cortisolo h.08
- NSC
- 2-mg DST
- 8-mg DST
- DHEAS
- 17-OHP
- P-MN
  P-NMN
- U-MN
  U-NMN
- U-VMA
- CgA
- U-A
  U-NA
- P-A
  P-NA
- TB TC
- Enhanced CT
- FDG-PET
- MIBG
- FNAB

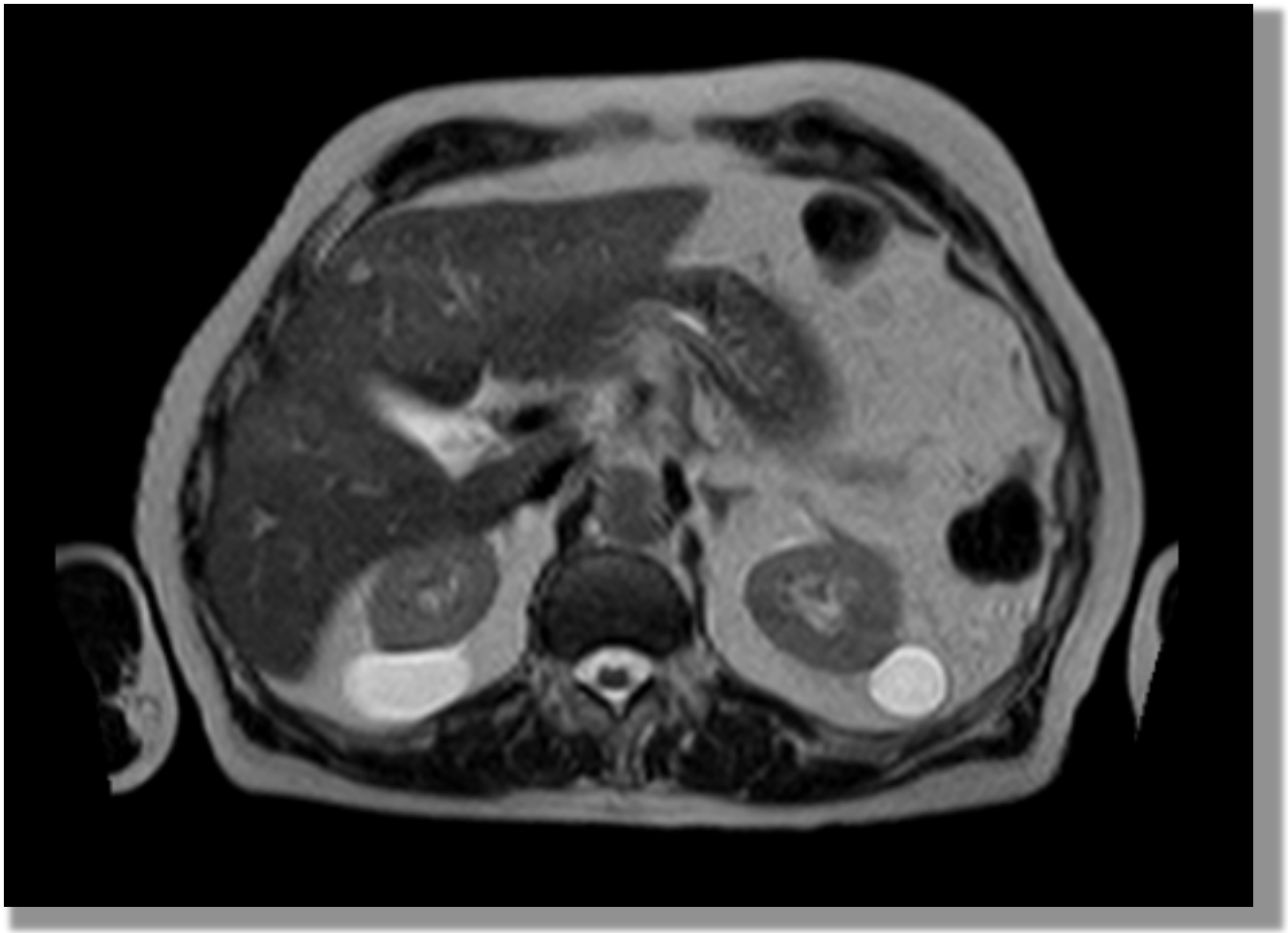
# ANAMNESI

- 1/2011: NeCA a cellule di Merkel del gluteo sin asportato (R0, Ki-67: 40%)
- 4/2013: Linfadenectomia inguinale per mts (R0)
- 11/2013: Pancreasectomia laparoscopica per recidiva pancreatica (R0)
- Follow-up d'immagine negativo
- Non assume alcun farmaco

# ESAME OBIETTIVO

- Paziente normotipo, in discrete condizioni generali
- PA 140/85 mmHg, polso di 90 bpm R, BMI 23
- Rimanente EO anodino

# MRI 9/14



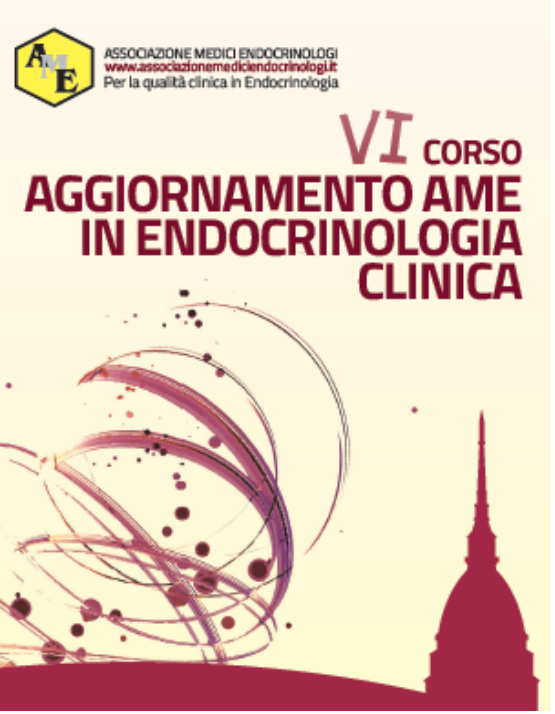
- **TEST NON EFFETTUATO**

# CgA

- 253 ng/mL (v.n. <100)

# FDG-PET

- **Captazione (SUV 8) in sede surrenalica sin**




# Come non perdersi nell'imaging: dalla teoria ai casi clinici. Gara a quiz tra gruppi.

## Quiz 2

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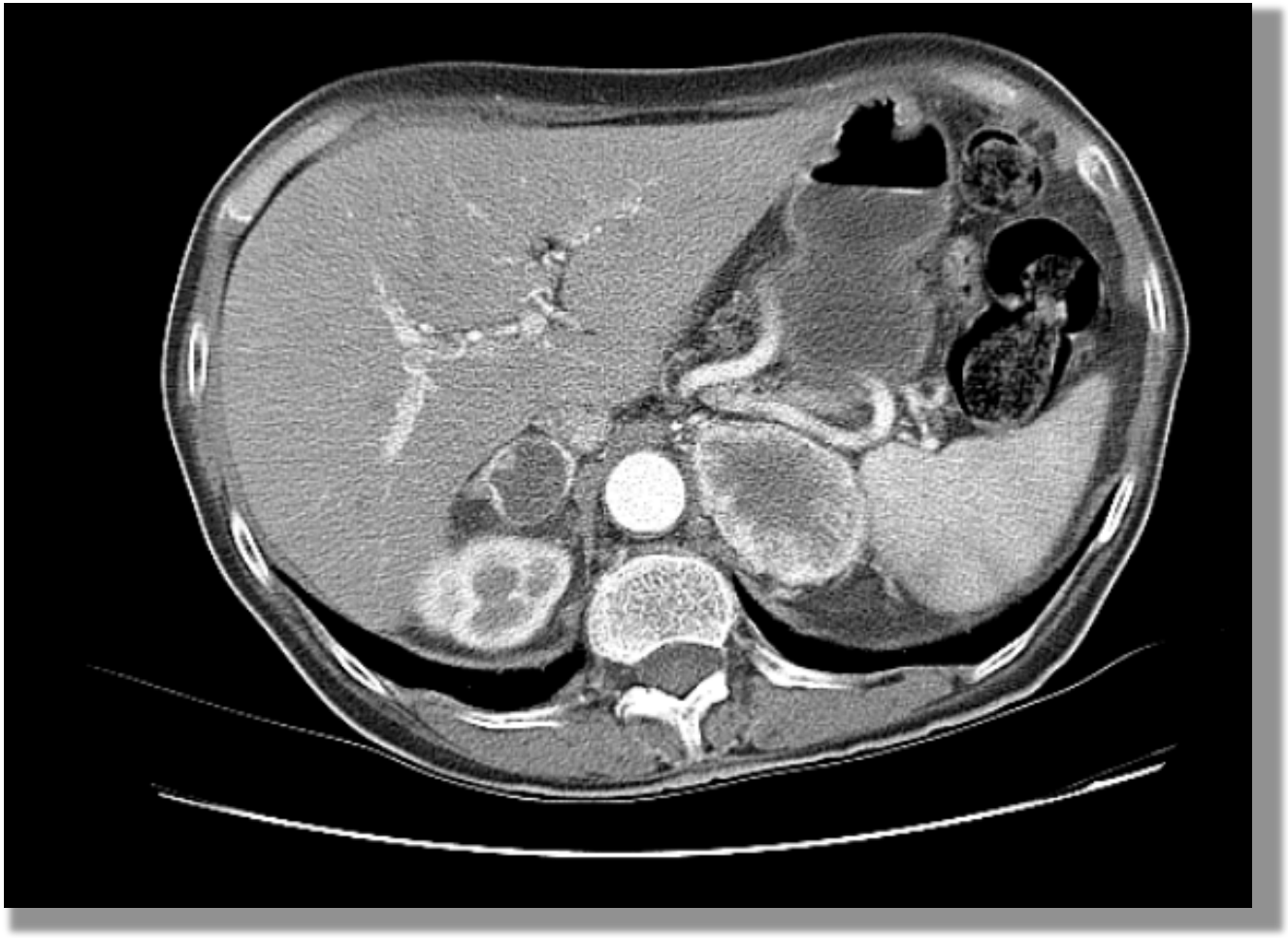
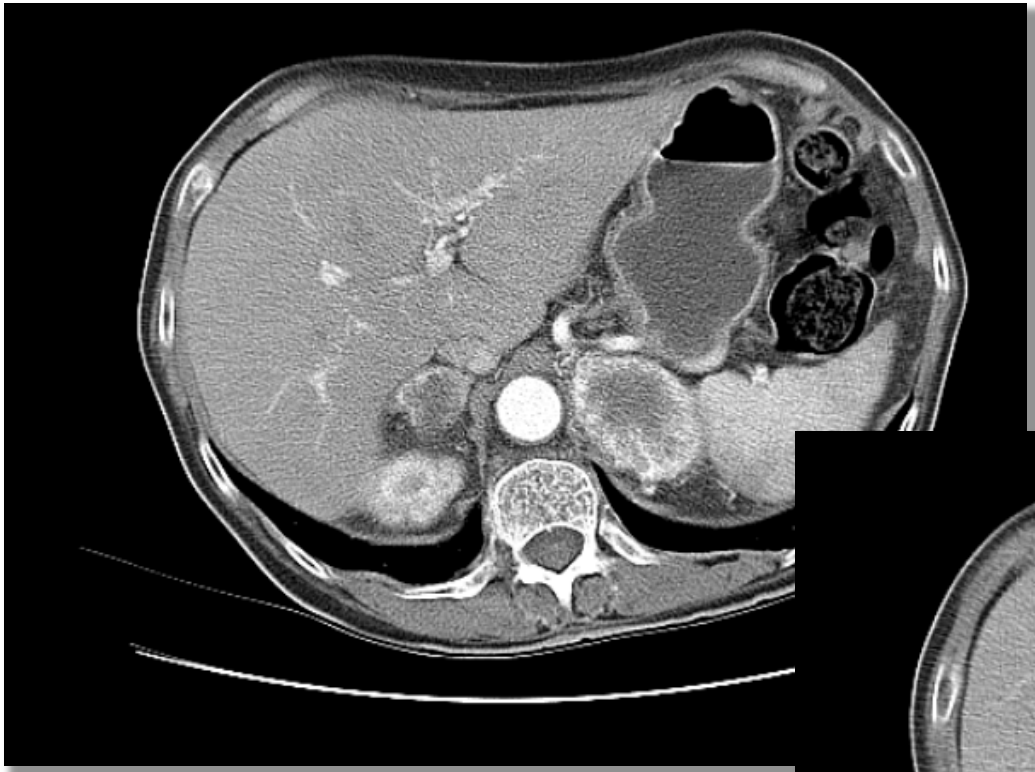
# DON’T SHOOT

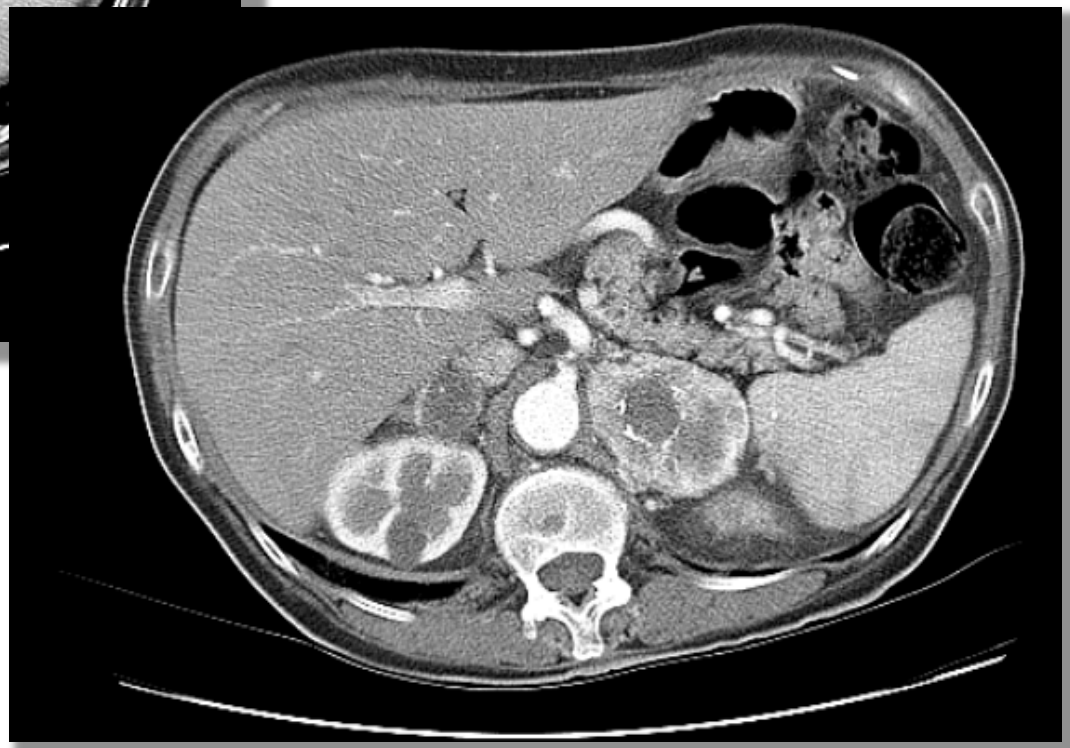
# Donna di 63 aa



## CT 3/11

# Donna di 63 aa





# TEST MENU

- Anamnesi
- Esame obiettivo
- PRA Aldo
- 1-mg DST
- ACTH
- UFC
- Cortisolo h.08
- NSC
- 2-mg DST
- SIT
- DHEAS
- 17-OHP
- P-MN P-NMN
- U-MN U-NMN
- U-VMA
- CgA
- U-A U-NA
- P-A P-NA
- TB TC
- Enhanced CT
- MRI addome
- FDG-PET
- MIBG
- FNAB

# ANAMNESI

- 12/2009: diagnosi di HTN e ipertiroidismo subclinico; terapia: CCB e HTZ
- 2/2011: HTN non controllata, scompenso cardiaco, insorgenza di FA, TVP giugulare ext, TSH 1.2 mU/L
- 3/2011: FE: 28%, PTCA + BMS su stenosi critica del ramo intermedio
- Terapia : furosemide, ACE-I, BB, TAO, PPI

# ESAME OBIETTIVO

- Paziente normotipo, in discrete condizioni generali
- PA 150/90 mmHg, polso di 90 bpm AR, BMI 28
- Crepitii basali, modesti edemi declivi

- **PRA: 8.23 ng/ml/h  (v.n. 0.8 – 6.0)**
- **Aldosterone: 110 pg/ml (v.n. 50 – 300)**

- **TEST NON EFFETTUATO**

# CgA

- 800 ng/mL (v.n. <100)

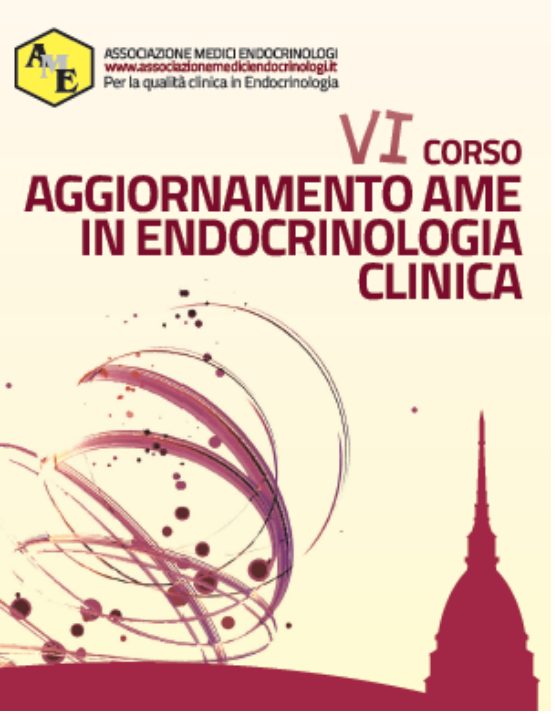
# MIBG

- **Iperaccumulo patologico a livello del surrene di sinistra**

- **Cortisolo: 12.7 mcg/dL**

- **U-MN: 180 mcg/24h (v.n. 20-345)**
- **U-NMN: 1647 mcg/24h (v.n. 30-440)**

- **U-A: 1.2 mcg/24h (v.n. <25)**
- **U-NA: 417 mcg/24h (v.n. <86)**




# Come non perdersi nell'imaging: dalla teoria ai casi clinici.
# Gara a quiz tra gruppi.

## Soluzione & discussione

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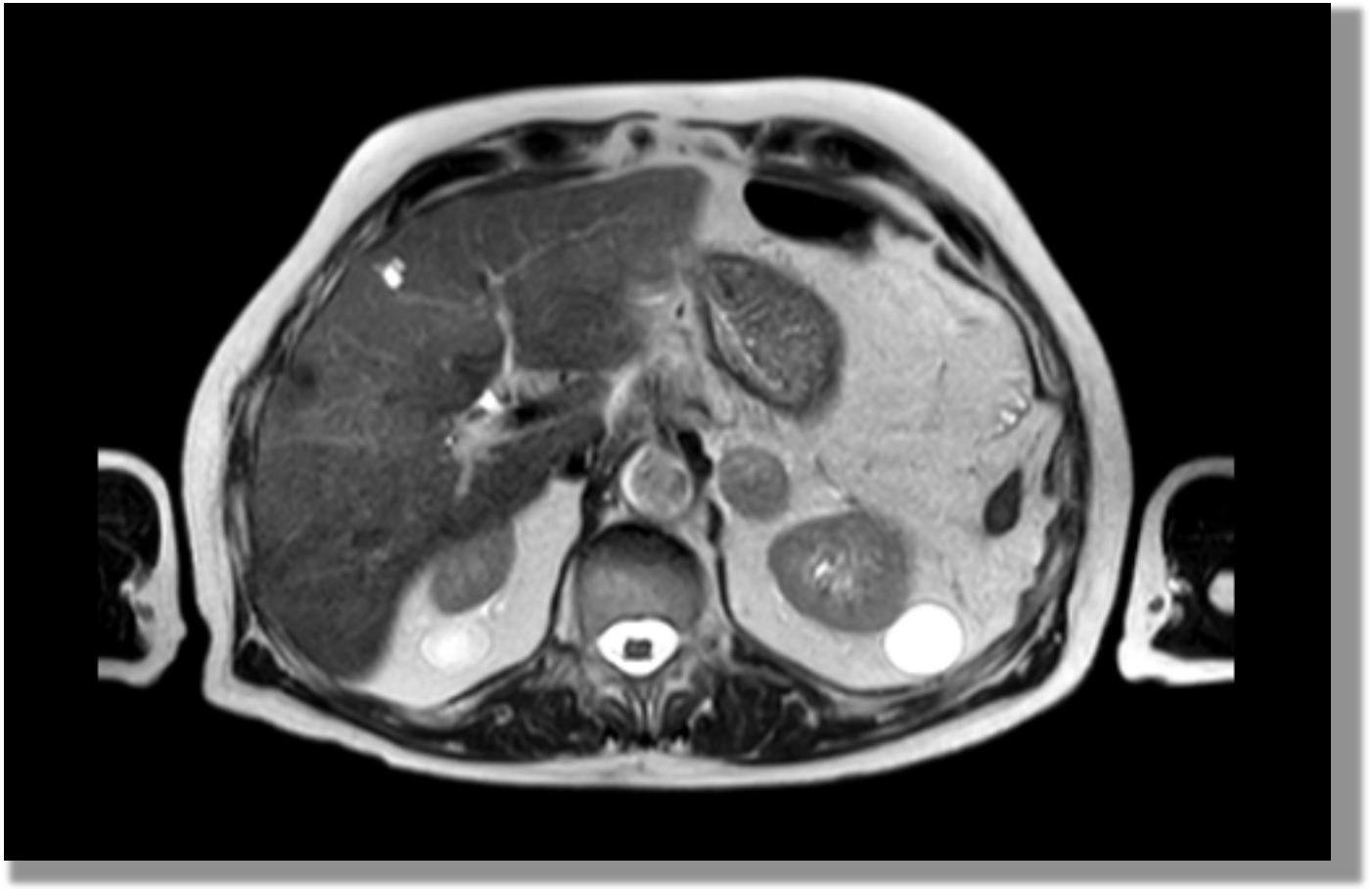
# Maschio di 84 aa



# Quiz per immagini


- **Metastasi**

# TEST MENU

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| +5 | Anamnesi | -2 | Cortisolo h.08 | +2 | P-MN<br>P-NMN | +1 | TB TC |
| +5 | Esame obiettivo | -2 | NSC | +2 | U-MN<br>U-NMN | +1 | Enhanced CT |
| +2 | Precedenti radiologici | -5 | 2-mg DST | -2 | U-VMA | +5 | FDG-PET |
| -2 | 1-mg DST | -5 | 8-mg DST | +2 | CgA | -5 | MIBG |
| -2 | ACTH | -2 | DHEAS | -2 | U-A<br>U-NA | ** | FNAB |
| -2 | UFC | -2 | 17-OHP | -2 | P-A<br>P-NA | | |

+5 Se dopo imaging e MN/NMN

-5 Se da sola

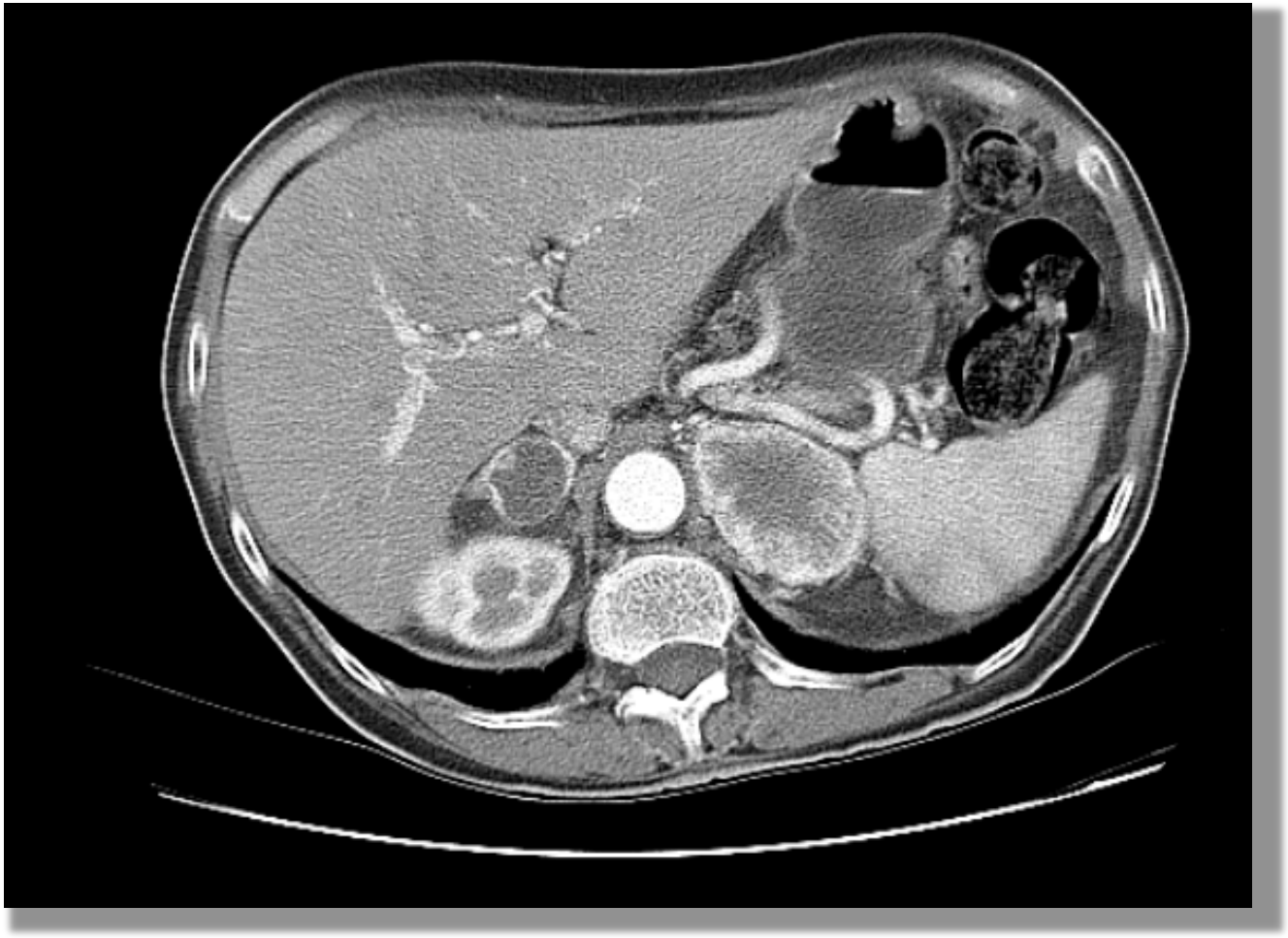
# KEY POINTS

- **Storia di neoplasia attiva**
- **Nuova comparsa della lesione**
- **Criticità: imaging subottimale, caratteristiche non chiaramente dirimenti**

# Adrenal mass in a cancer patient

- Prevalence of adrenal mets in cancer patients varied between 10% and 25%
- ...he
- **An adrenal mass in a cancer patient is not invariably a metastasis !**
- Solitary mets are difficult to differentiate from primary adrenal pathology
- Biopsy may be useful in selected cases

# Donna di 63 aa



# Quiz per immagini


- **Feocromocitoma bilaterale**

# TEST MENU

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| +5 | Anamnesi | +1 | Cortisolo h.08 | +5 | P-MN<br>P-NMN | +1 | TB TC |
| +5 | Esame obiettivo | -2 | NSC | +5 | U-MN<br>U-NMN | -2 | Enhanced CT |
| -2 | PRA Aldo | -5 | 2-mg DST | -2 | U-VMA | -2 | MRI addome |
| -2 | 1-mg DST | -10 | SIT | +2 | CgA | +2 | FDG-PET |
| -2 | ACTH | -2 | DHEAS | -2 | U-A<br>U-NA | +1 | MIBG |
| -2 | UFC | +1 | 17-OHP | -2 | P-A<br>P-NA | -10 | FNAB |

# KEY POINTS

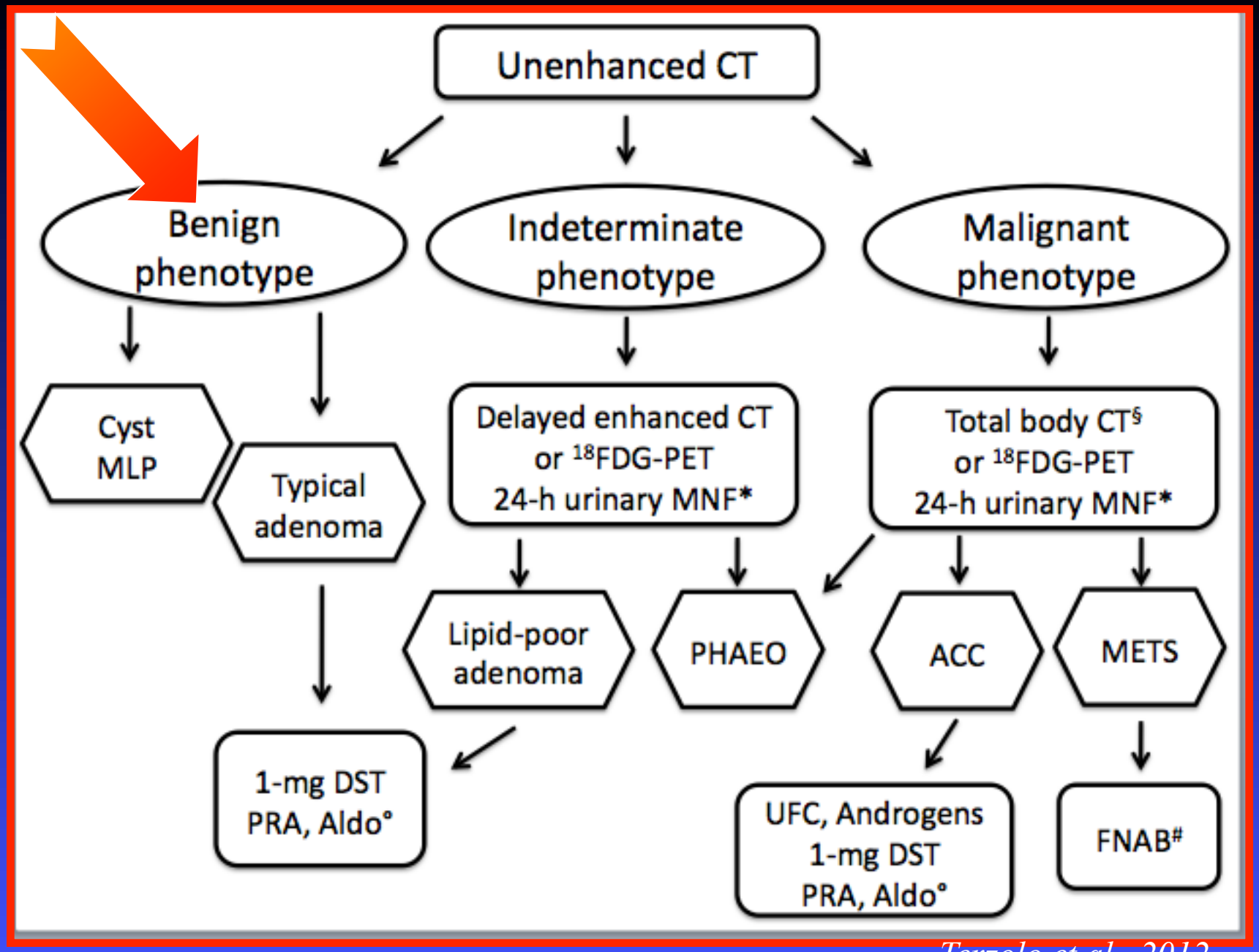
- **Storia di ipertensione non controllata, complicata da eventi. Sindrome da ipercoagulabilità (?!).**
- **Criticità: TC con mdc amplifica le caratteristiche “maligne”, lesioni bilaterali.**

# Unenhanced CT is the primary imaging test

Table 3. Characteristics of Adrenal Incidentalomas on Imaging (Imaging Phenotype).*

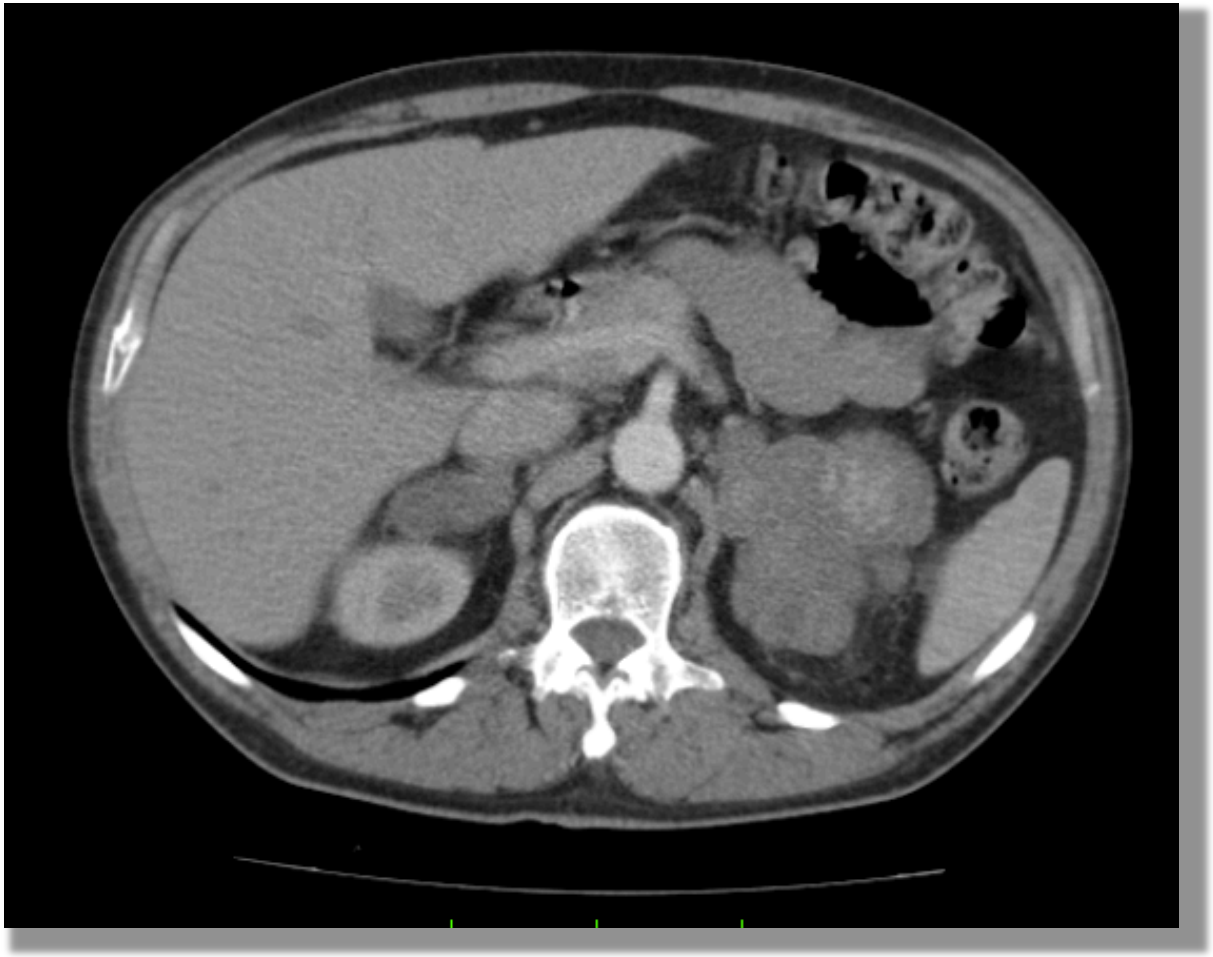
| Variable | Adrenocortical Adenoma | Adrenocortical Carcinoma | Pheochromocytoma | Metastasis |
|---|---|---|---|---|
| Size | Small, usually ≤3 cm in diameter | Large, usually >4 cm in diameter | Large, usually >3 cm in diameter | Variable, frequently <3 cm |
| Shape | Round or oval, with smooth margins | Irregular, with unclear margins | Round or oval, with clear margins | Oval or irregular, with unclear margins |
| Texture | Homogeneous | Heterogeneous, with mixed densities | Heterogeneous, with cystic areas | Heterogeneous, with mixed densities |
| Laterality | Usually solitary, unilateral | Usually solitary, unilateral | Usually solitary, unilateral | Often bilateral |
| Attenuation (density) on unenhanced CT | ≤10 Hounsfield units | >10 Hounsfield units (usually >25) | >10 Hounsfield units (usually >25) | >10 Hounsfield units (usually >25) |
| Vascularity on contrast-enhanced CT | Not highly vascular | Usually vascular | Usually vascular | Usually vascular |
| Rapidity of washout of contrast medium | ≥50% at 10 minutes | <50% at 10 minutes | <50% at 10 minutes | <50% at 10 minutes |
| Appearance on MRI† | Isointense in relation to liver on $T_2$-weighted image | Hyperintense in relation to liver on $T_2$-weighted image | Markedly hyperintense in relation to liver on $T_2$-weighted image | Hyperintense in relation to liver on $T_2$-weighted image |
| Necrosis, hemorrhage, or calcifications | Rare | Common | Hemorrhage and cystic areas common | Occasional hemorrhage and cystic areas |
| Growth rate | Usually stable over time or very slow (<1 cm per year) | Usually rapid (>2 cm per year) | Usually slow (0.5 cm to 1.0 cm per year) | Variable, slow to rapid |

*Young, 2007*

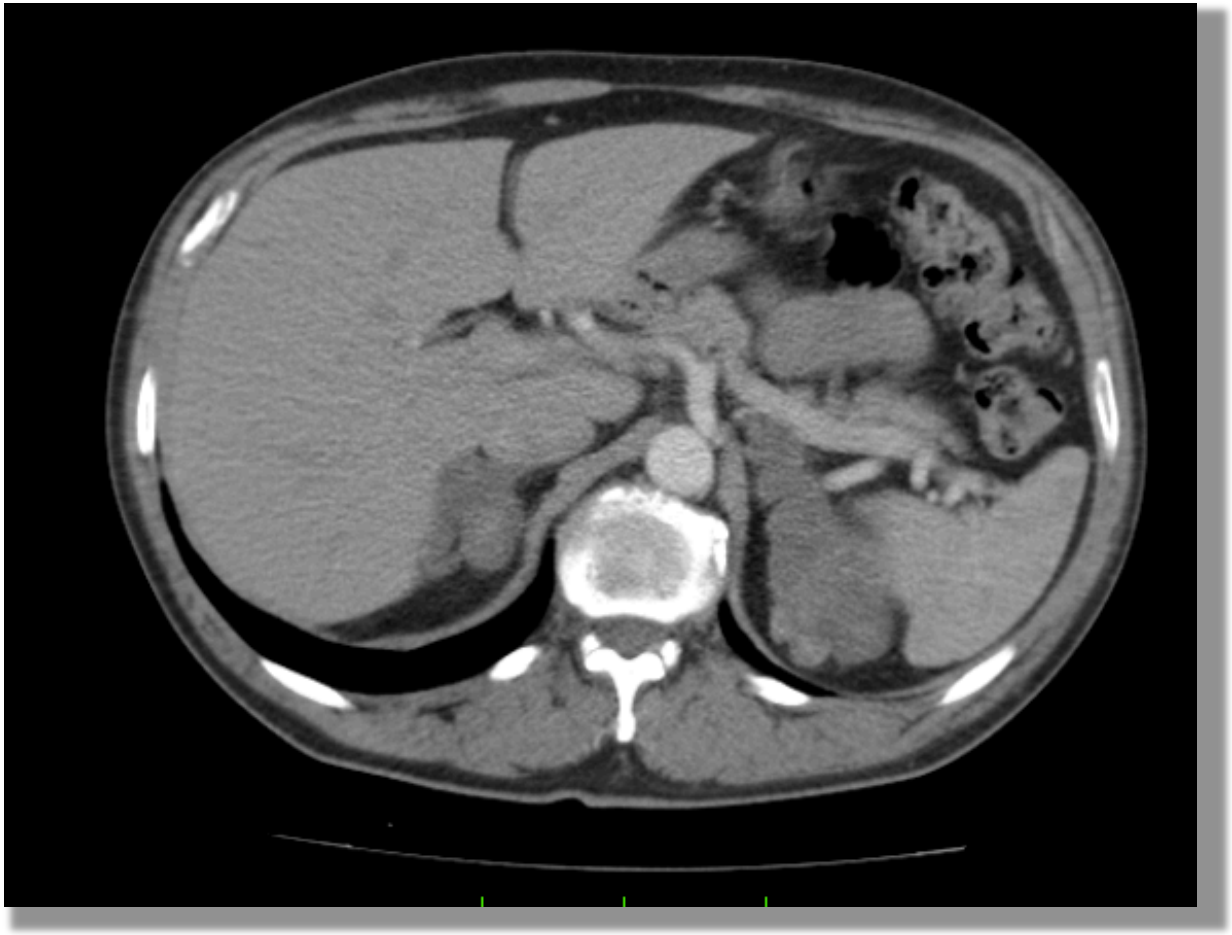



*Terzolo et al., 2012*

# Maschio, 58 aa



# Maschio, 58 aa



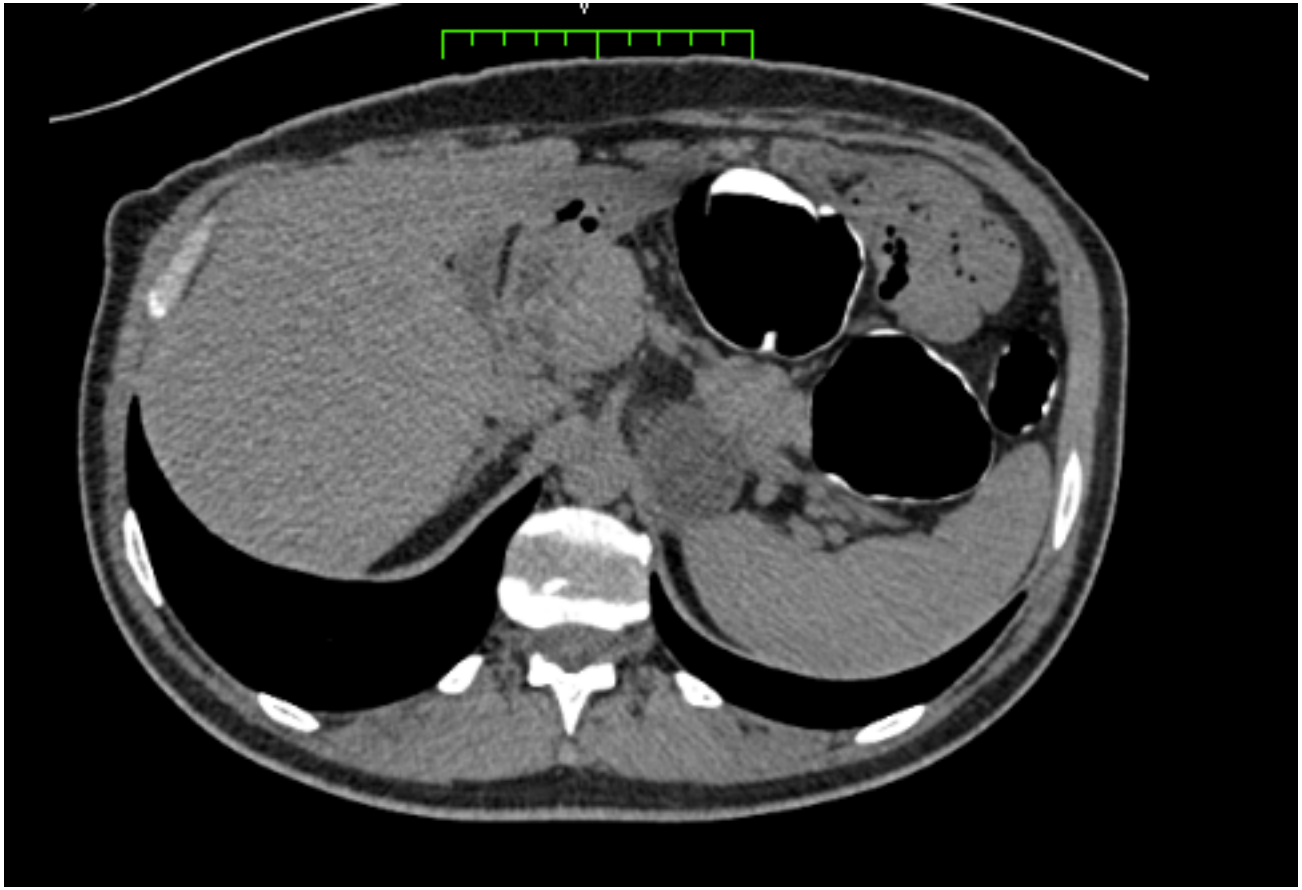
# Quale dei seguenti profili ormonali è più probabile?

- 1-mg DST 3.5 mcg/dL, ACTH 8 ng/mL (v.n. 6-60), UFC 80 mcg/24h (v.n. 10-100)
- DHEAS 897 mcg/dL (v.n 70-390), 17-OHP 12 ng/mL (v.n. 0.5-2.1), androstenedione 7 ng/mL (0.6-3.1)
- UMN 1100 mcg/24h (v.n. <345); UNMN 1600 mcg/24h (v.n. <440)
- PRA 0.1 ng/ml/h (v.n. 0.8-6.0), aldosterone 140 ng/mL (v.n. 15-150), RAA 1400 (v.n. <400)

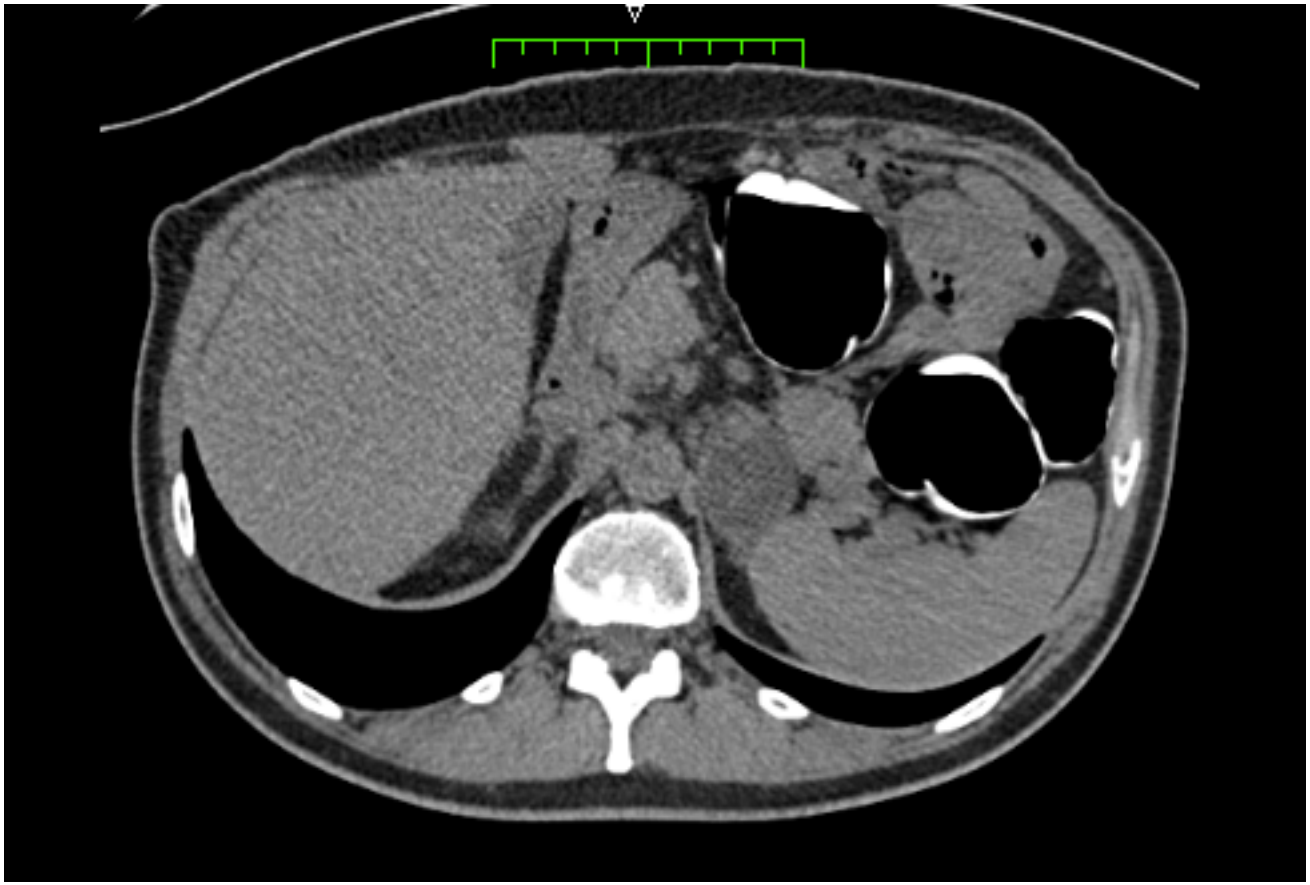
# Quale dei seguenti outcome è più probabile?

- Crisi ipertensiva
- Metastatizzazione a distanza
- Ipopotassiemia grave
- Sviluppo di IGT

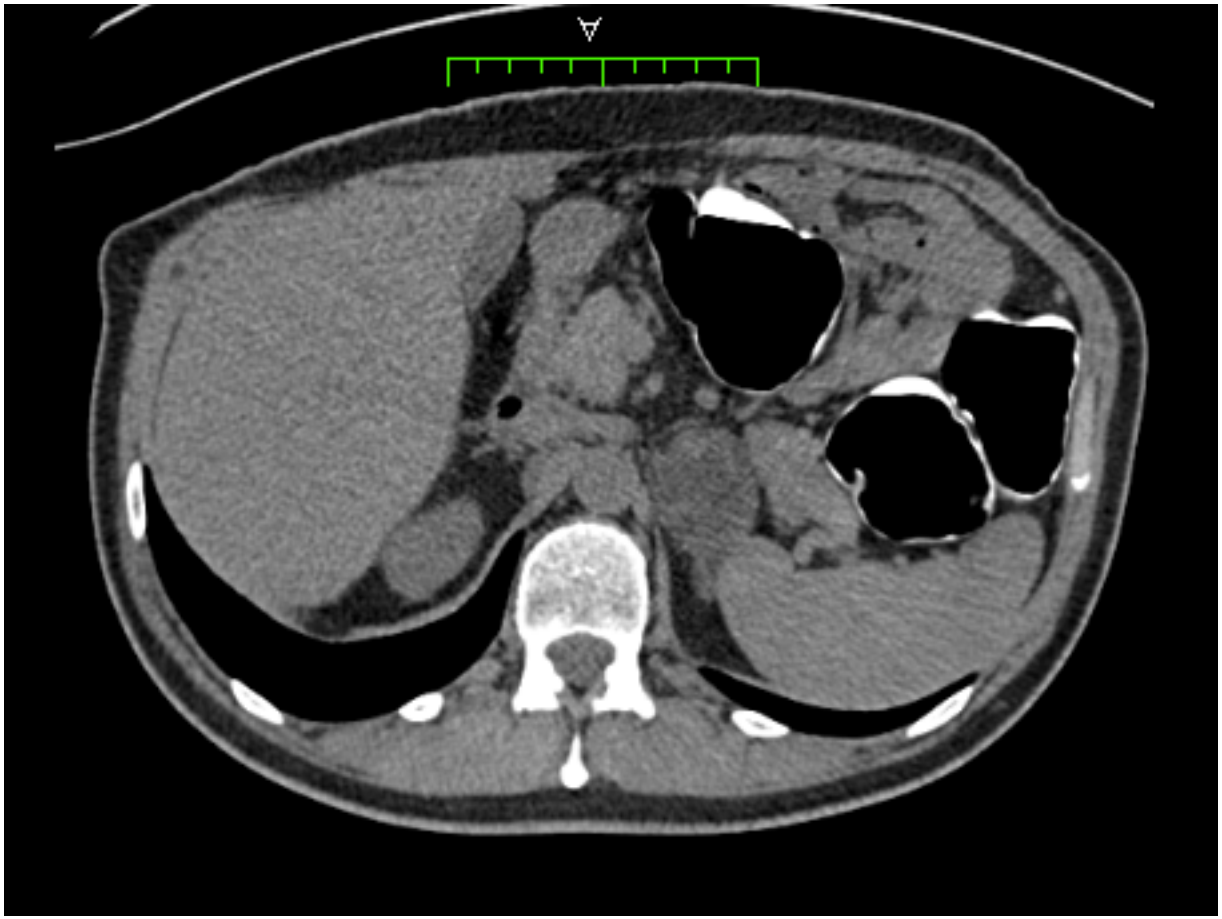
# Massa dx



# Massa dx



# Massa dx



# Se la massa è in un paziente di 59 aa, cosa fareste?

- Delayed-enhanced CT
- MRI con studi in opposizione di fase
- FNAB (screening per feo negativo)
- FDG-PET
- Ripetere TC a 3 mesi
- Ripetere TC a 12 mesi
- Intervento (screening per feo negativo)

# E’ stata effettuata FDG-PET, che non ha rilevato captazione, e ora?

- Delayed-enhanced CT
- MRI con studi in opposizione di fase
- FNAB (screening per feo negativo)
- Ripetere TC a 3 mesi
- Ripetere TC a 12 mesi
- Intervento (screening per feo negativo)

# Quale dei seguenti outcome è più probabile?

- Crisi ipertensiva
- Metastatizzazione a distanza
- Ipopotassiemia grave
- Sviluppo di IGT