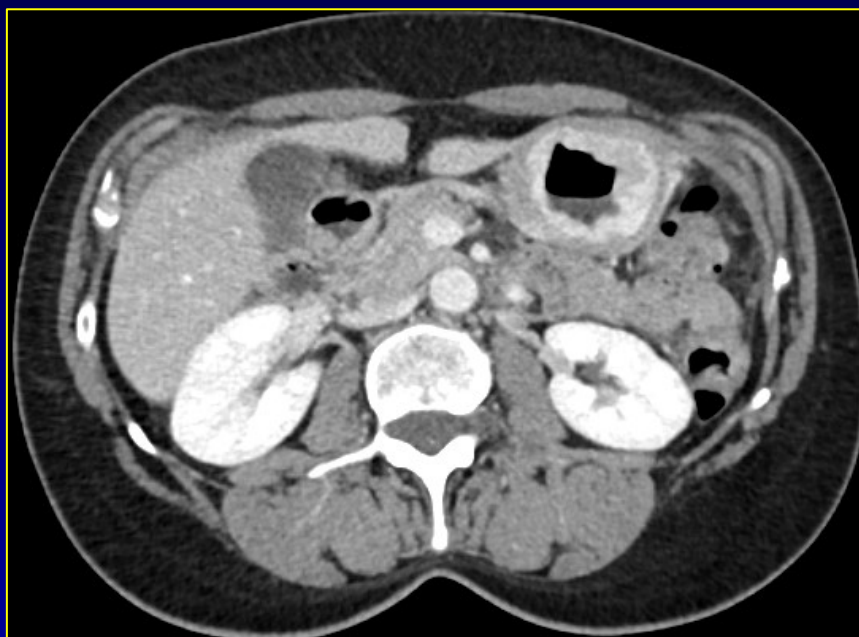


DIAGNOSI E TERAPIA DEL CANCRO DELLO STOMACO: COSA FARE NEL 2022

STADIAZIONE TAC TORACO-ADDOMINALE



A. Zanello
U.O. Radiologia
Humanitas Castelli-Gavazzeni
Bergamo



HUMANITAS
GAVAZZENI



Ordine dei Medici Chirurghi
e Odontoiatri
della provincia di Bergamo

MERCOLEDÌ 2 MARZO 2022

**DIAGNOSI
E TERAPIA DEL
CANCRO DELLO
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RESPONSABILE SCIENTIFICO

Prof. Giovanni Dapri
Direttore Chirurgia Mini-Invasiva Generale
e Oncologica, Humanitas Gavazzeni, Bergamo

www.humanitasedu.it

RUOLO IMAGING RADIOLOGICO

IDENTIFICAZIONE

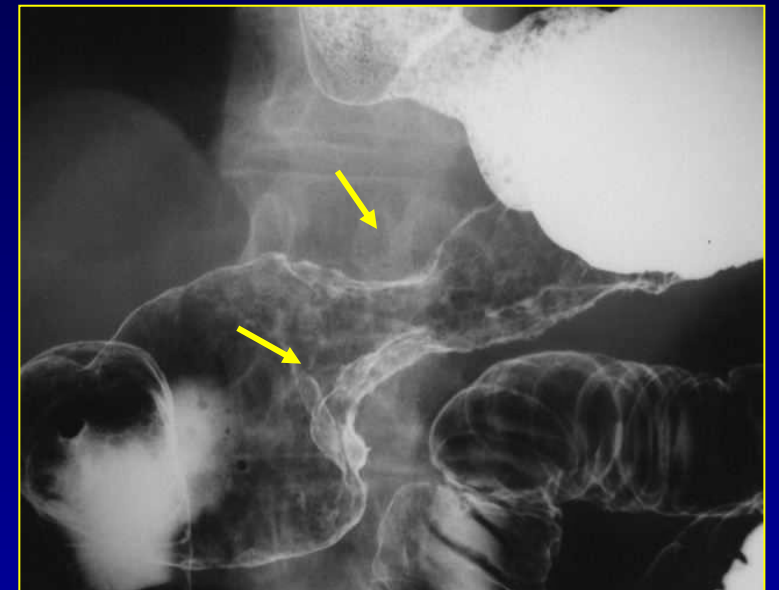
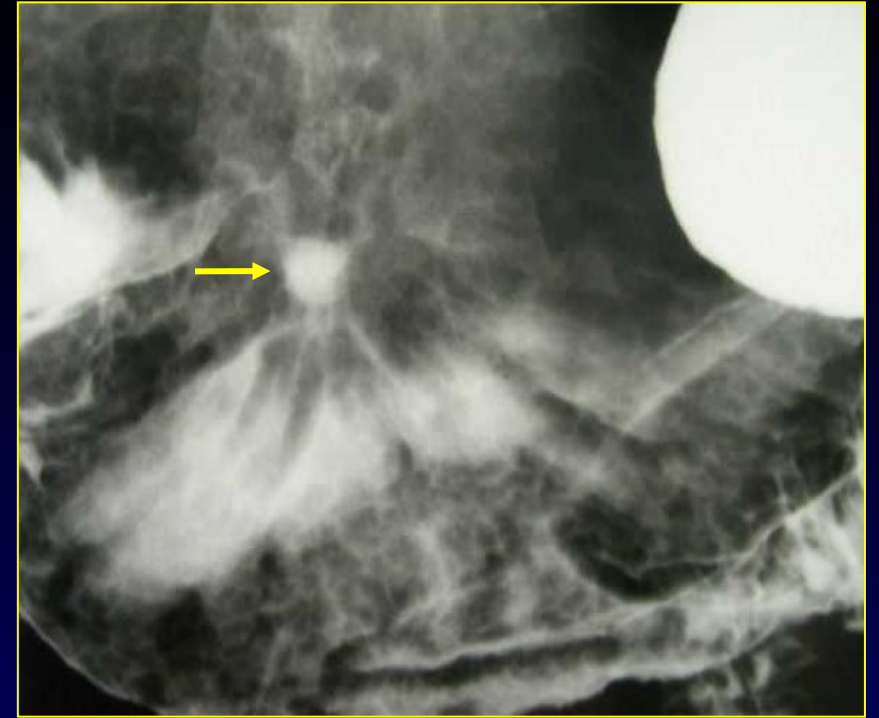
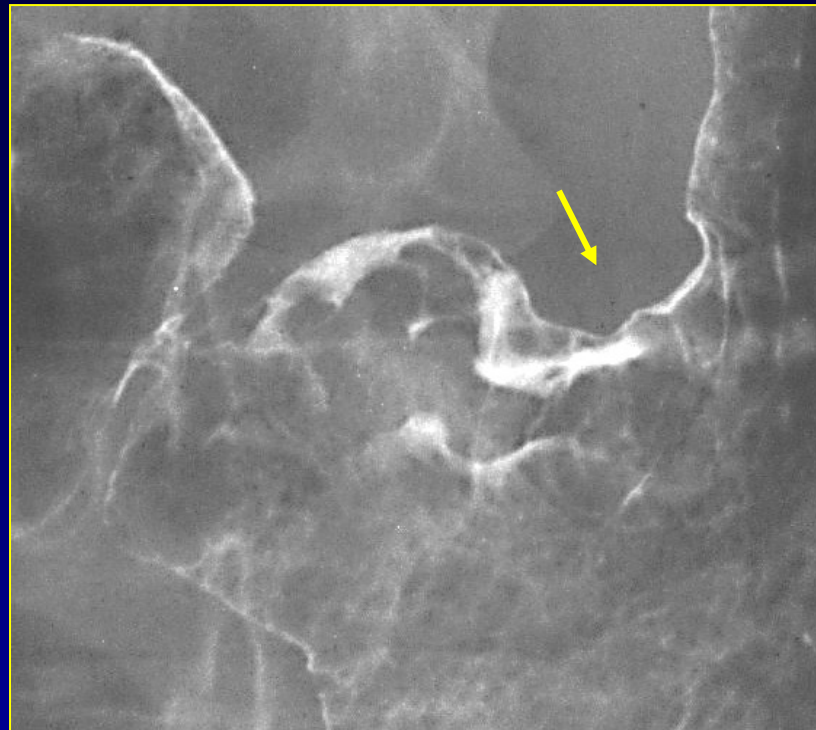
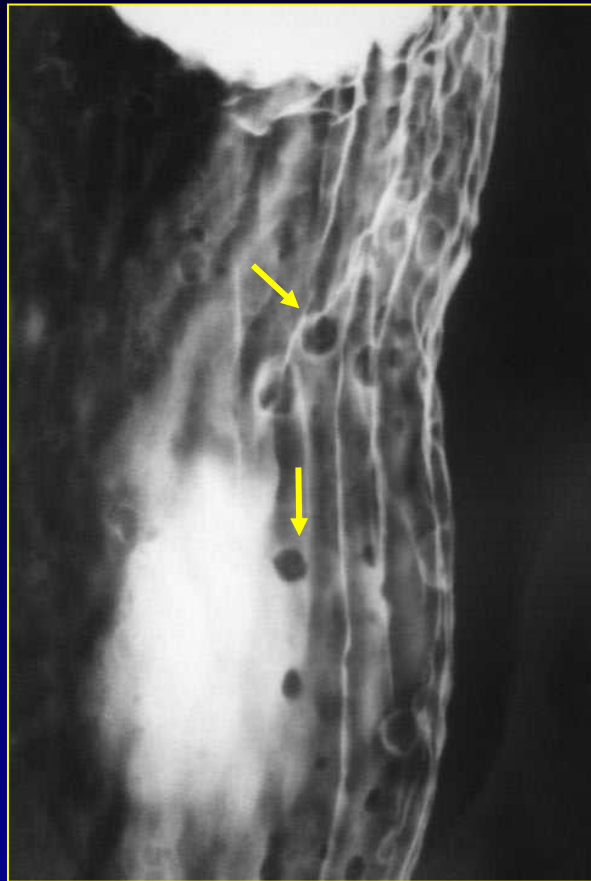
CARATTERIZZAZIONE

STADIAZIONE

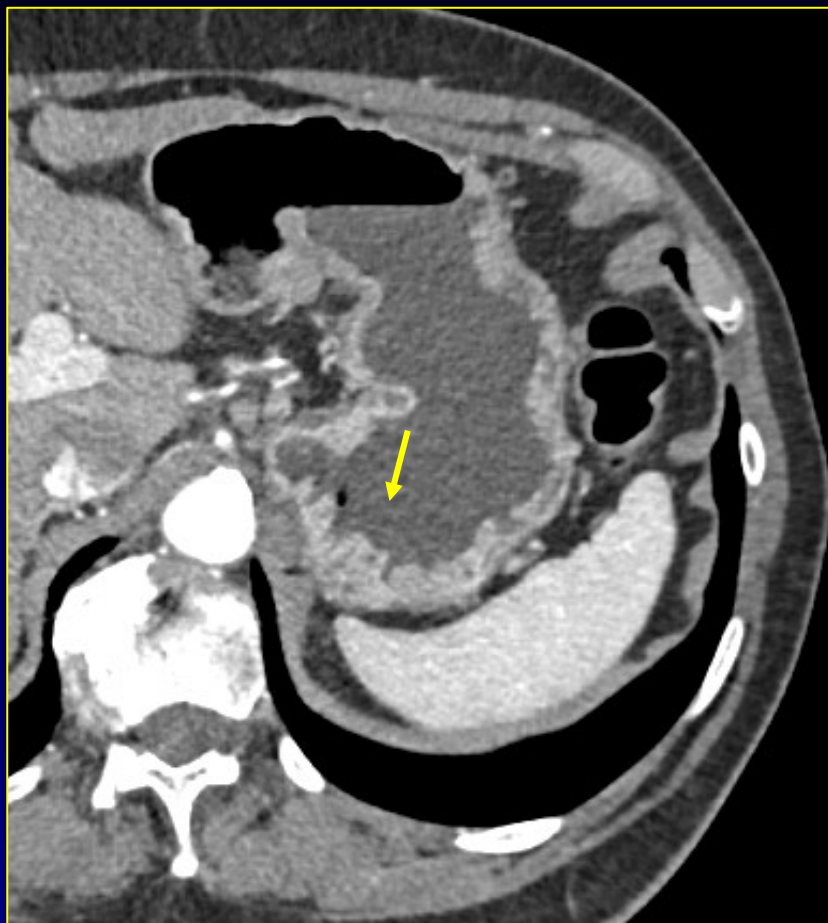
FOLLOW-UP

RUOLO IMAGING

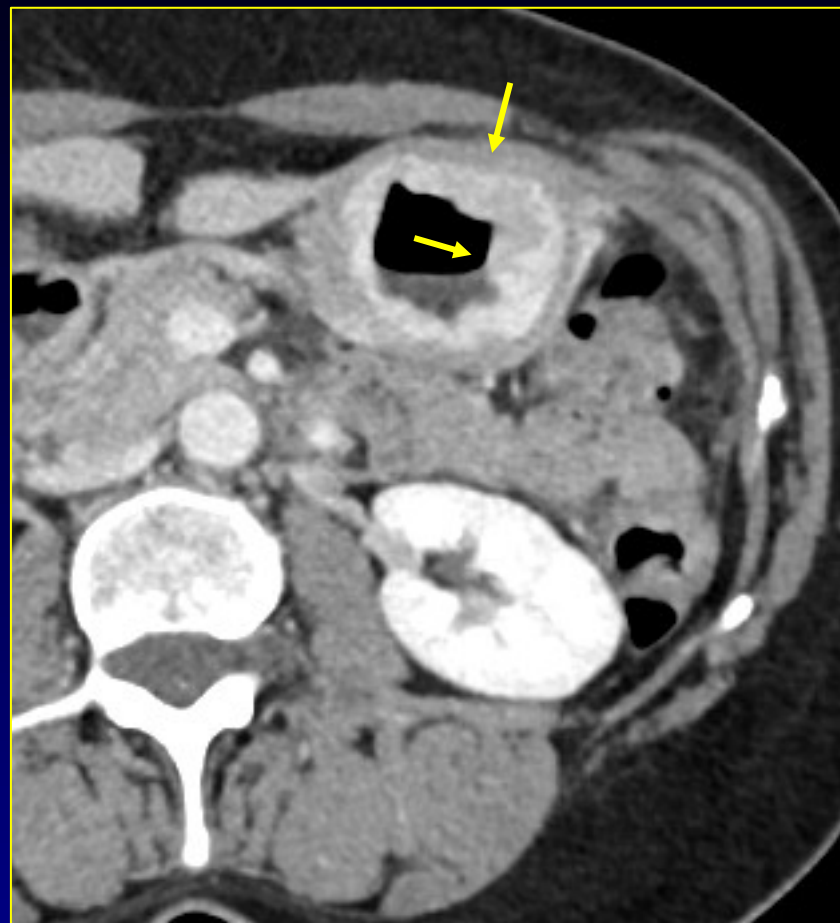
IDENTIFICAZIONE



IDENTIFICAZIONE

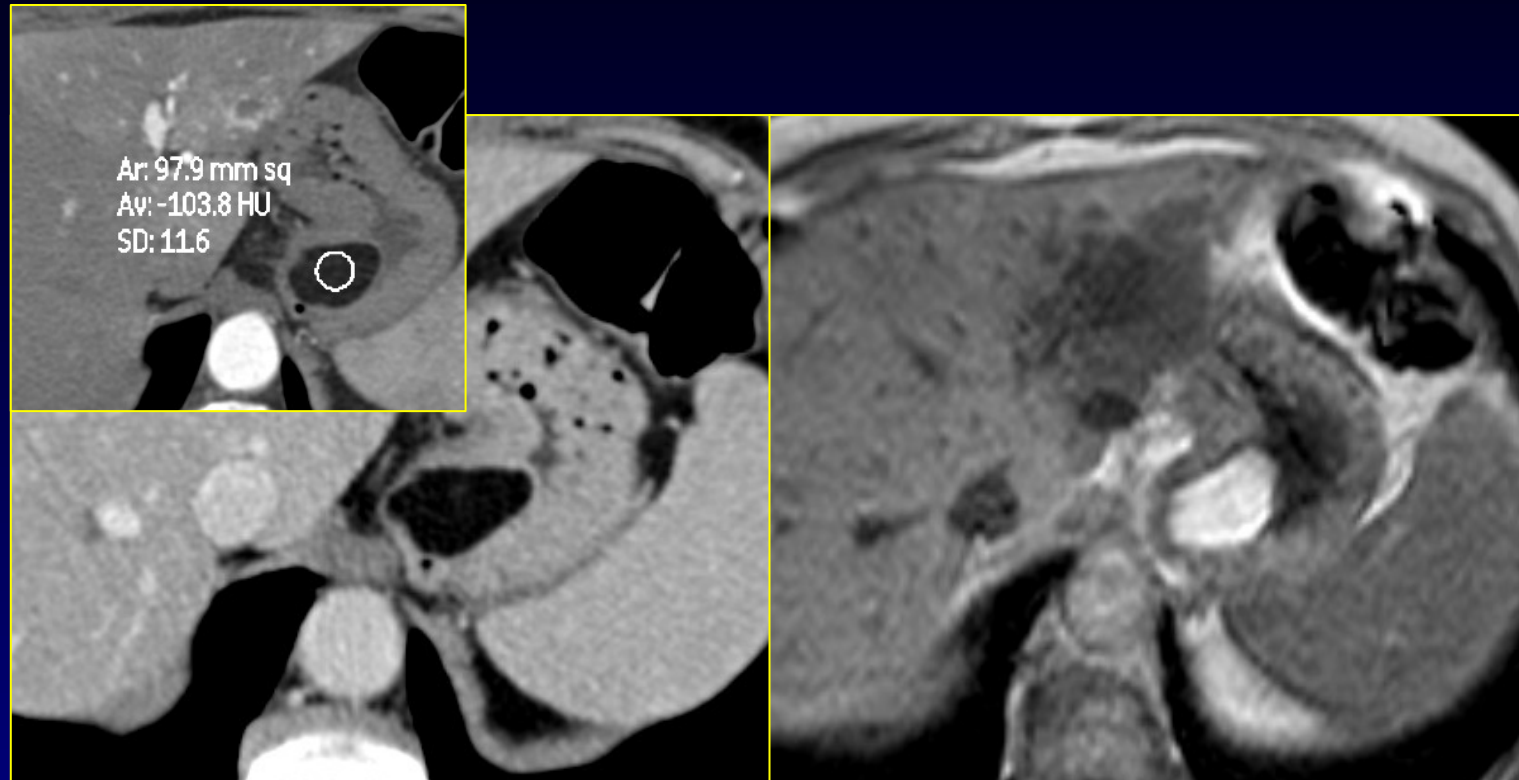


Stomaco normale



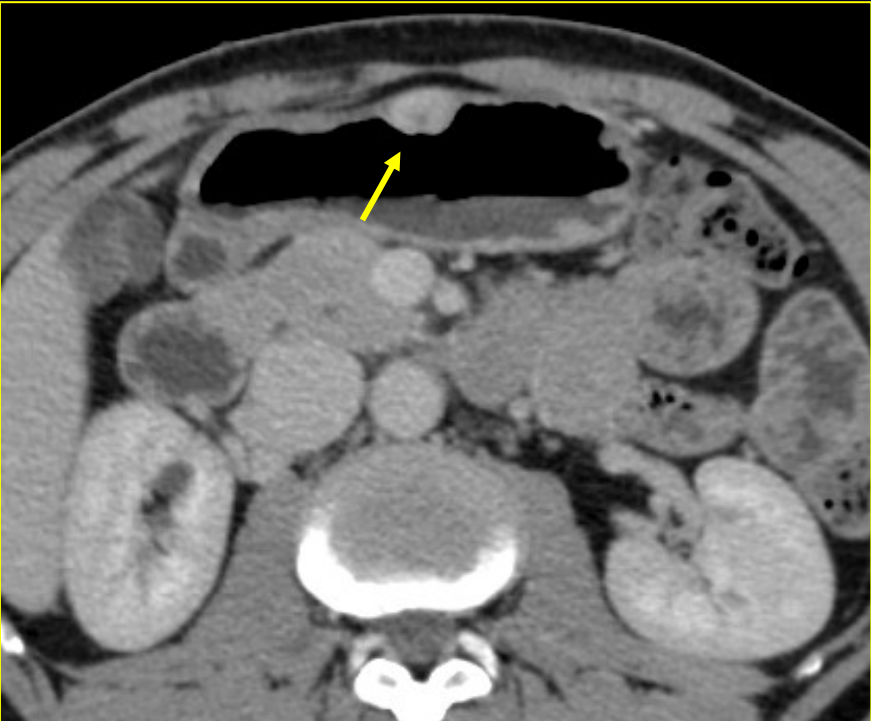
Stomaco patologico

CARATTERIZZAZIONE



Lipoma

CARATTERIZZAZIONE



GIST

STADIAZIONE

(adenok > 2 cm dalla giunzione esofago-gastrica)

- T1(a;b) fino alla sottomucosa
- T2 invasione muscolare propria
- T3 invade connettivo sottosieroso senza superare il peritoneo
- T4(a;b) oltre il peritoneo viscerale e/o strutture adiacenti
- N0 Assenza di metastasi linfonodali
- N1 Metastasi in 1-2 linfonodi
- N2 Metastasi in 3-6 linfonodi regionali
- N3 (a;b) Metastasi in 7 o più linfonodi regionali
- M0 Assenza di metastasi
- M1 Presenza di metastasi a distanza

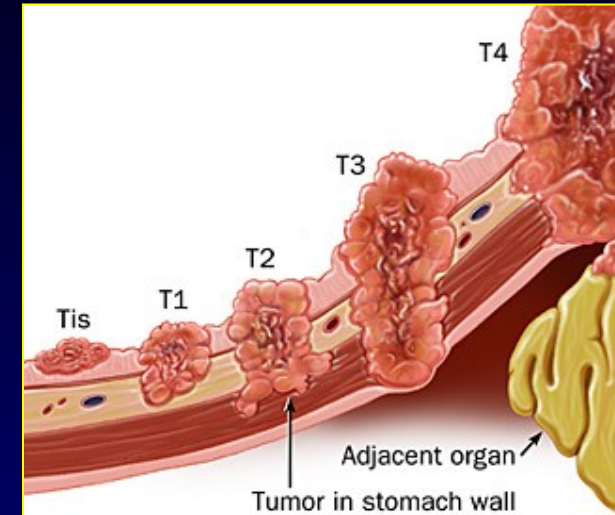
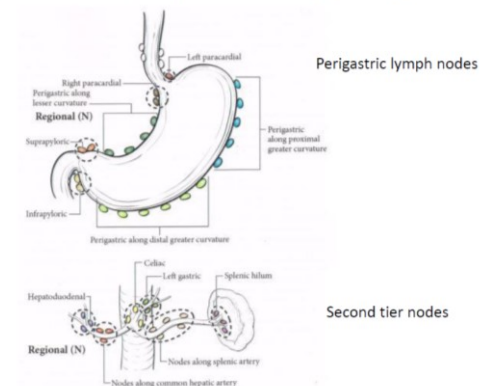


Diagram of lymph node groups



Ann Surg Oncol 2010 17:3077-3079
AJCC 8th

LA STADIAZIONE RADIOLOGICA

TC con mdc (orale e ev)

Table 1

CT Criteria for T and N Staging of Gastric Cancer

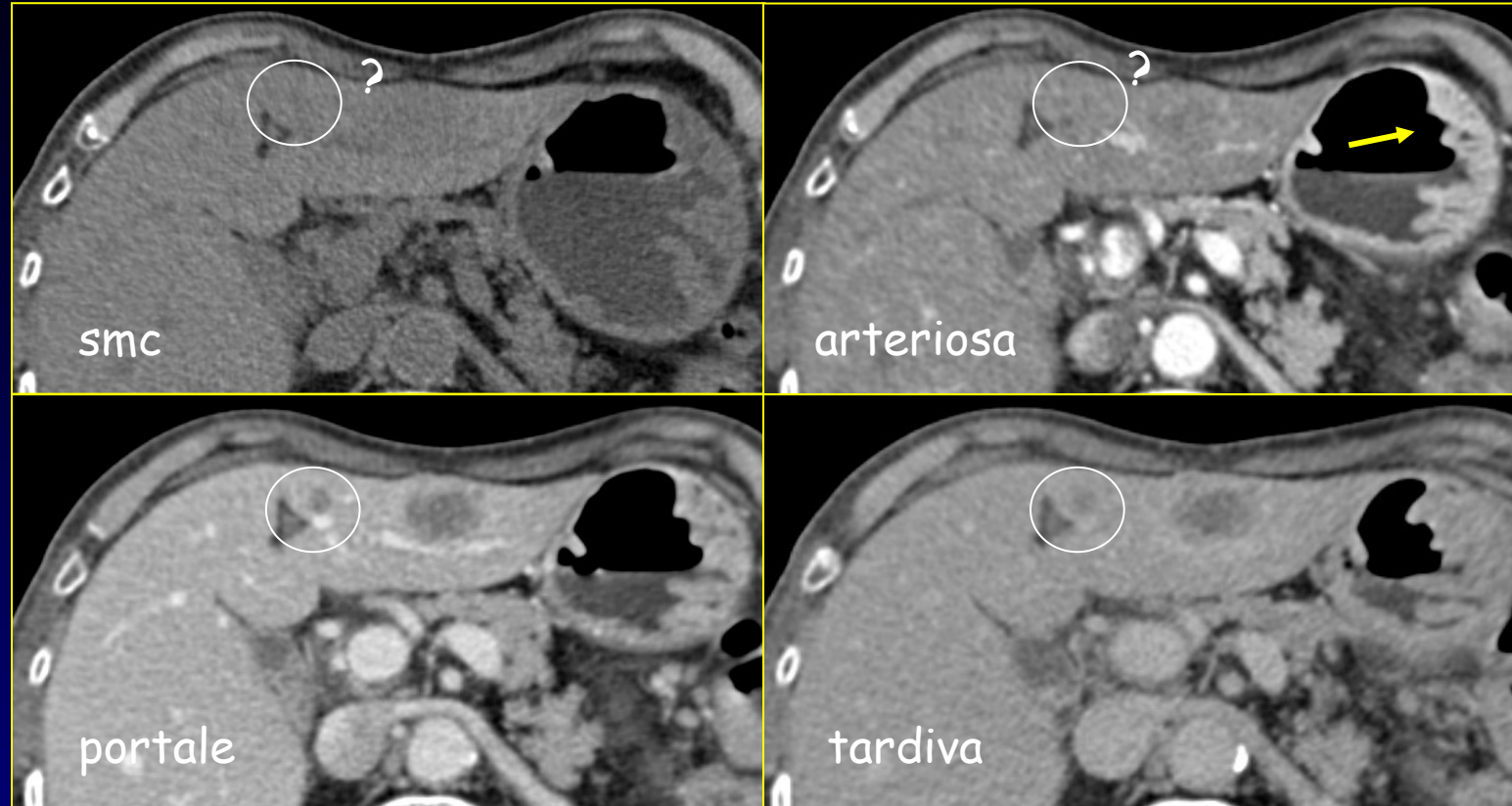
Stage	CT Criteria
T stage*	
T1	Neoplasm shows focal thickening of inner layer, is almost well enhanced, and has visible low-attenuation-strip outer layer of gastric wall and clear fat plane around tumor
T2	Neoplasm shows focal or diffuse thickening of gastric wall with transmural involvement, is almost well enhanced, and has smooth outer wall border and clear fat plane around tumor
T3	Transmural tumor with irregular or nodular outer border and/or perigastric fat infiltration
T4	Obliteration of fat plane between gastric tumor and adjacent organ or invasion of adjacent organ
N stage†	
N0	No regional lymph node metastases
N1	Metastases in 1–6 regional lymph nodes
N2	Metastases in 7–15 regional lymph nodes
N3	Metastases in >15 regional lymph nodes

* T stage indicates degree of mural invasion of cancer in gastric wall.

† N stage indicates degree of nodal metastasis.

RUOLO IMAGING

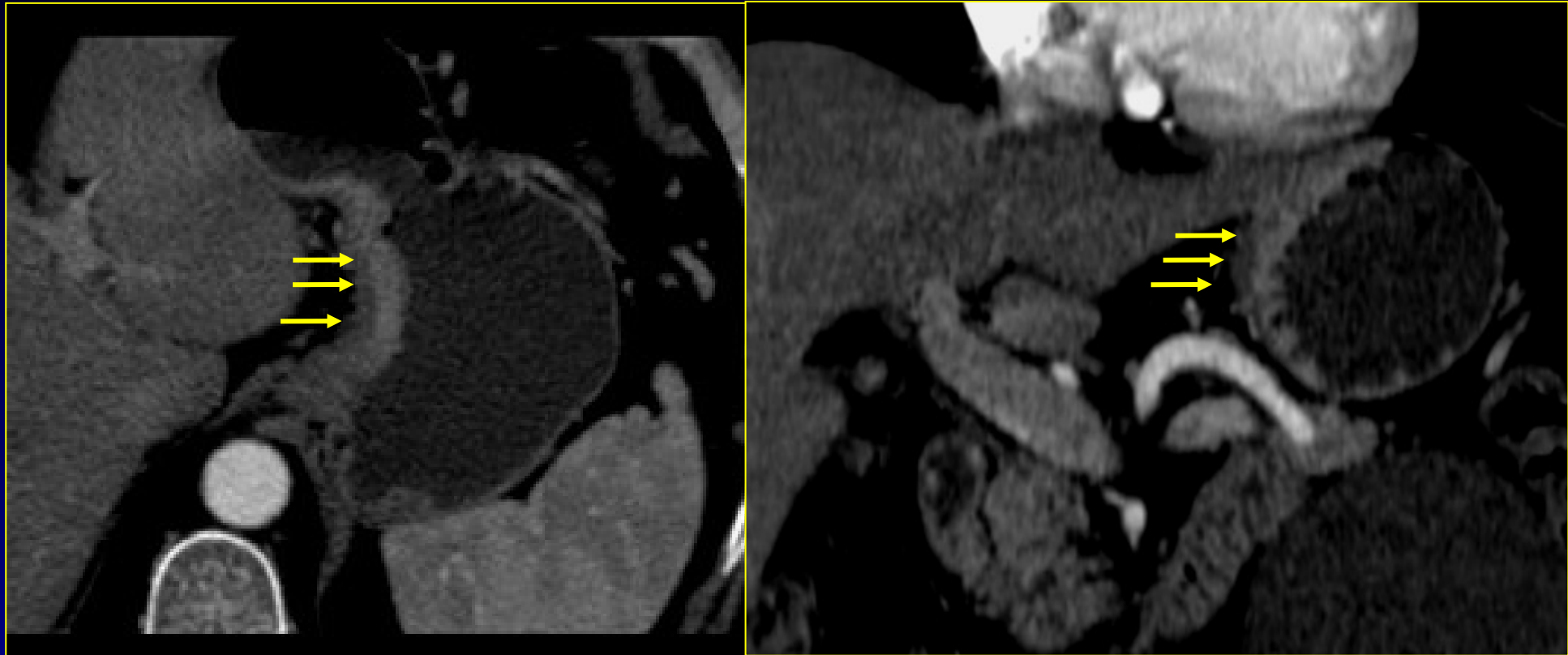
PERCHE' IL MEZZO di CONTRASTO ?



MDC nella GIUSTA QUANTITA' - ACQUISIZIONE NELLA FASE CORRETTA

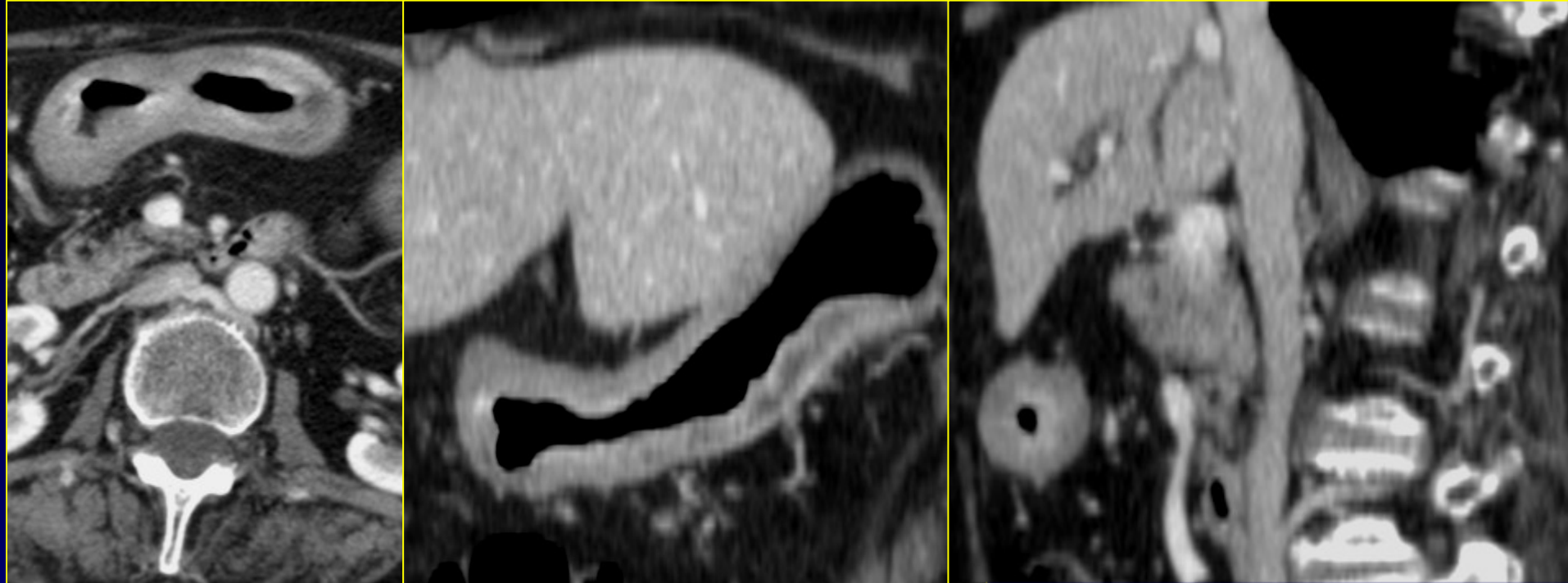
Tetsuya Fujigai et al
Optimal dose of contrast medium for depiction of.....
European Journal of Radiology 81 (2012) 2978- 2983

LA STADIAZIONE RADIOLOGICA



Tumore confinato alla mucosa e alla sottomucosa pT1

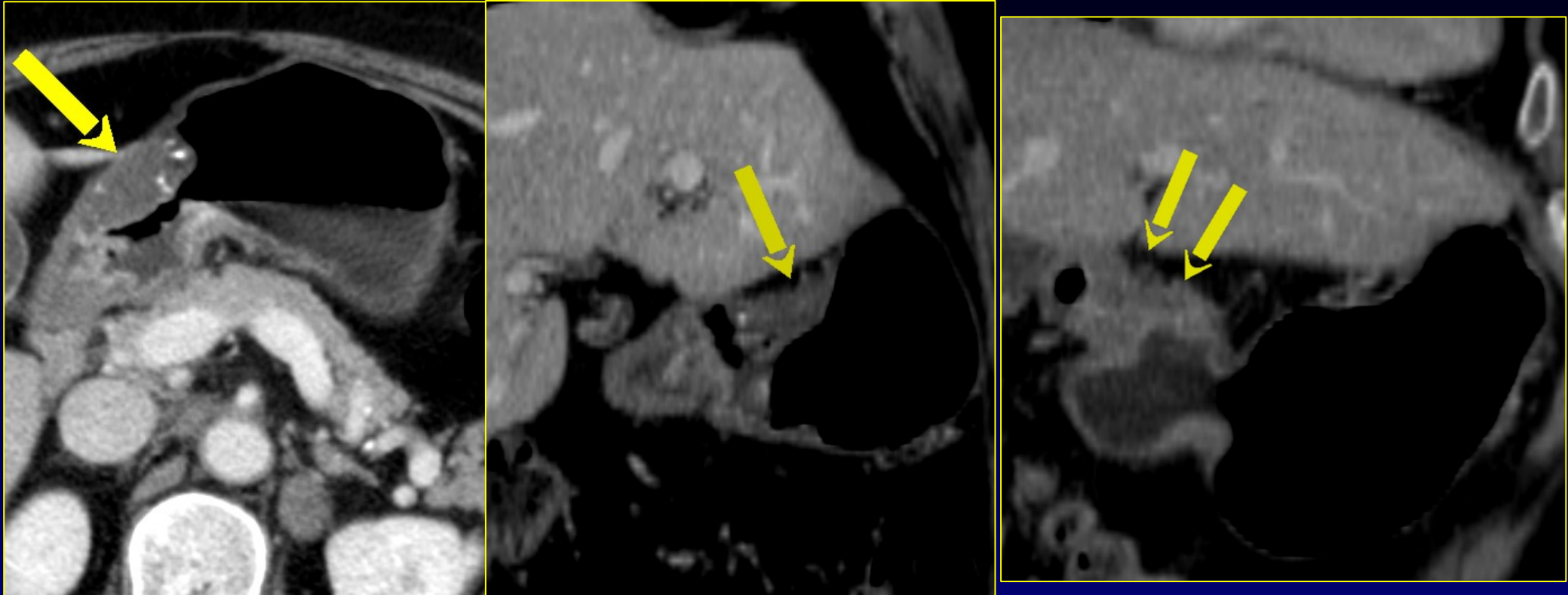
LA STADIAZIONE RADIOLOGICA



AP: PT2 Tumore confinato alla muscolare o alla sottosierosa.

TC: Ispessimento focale con enhancement della parete in toto, con contorno esterno arrotondato.

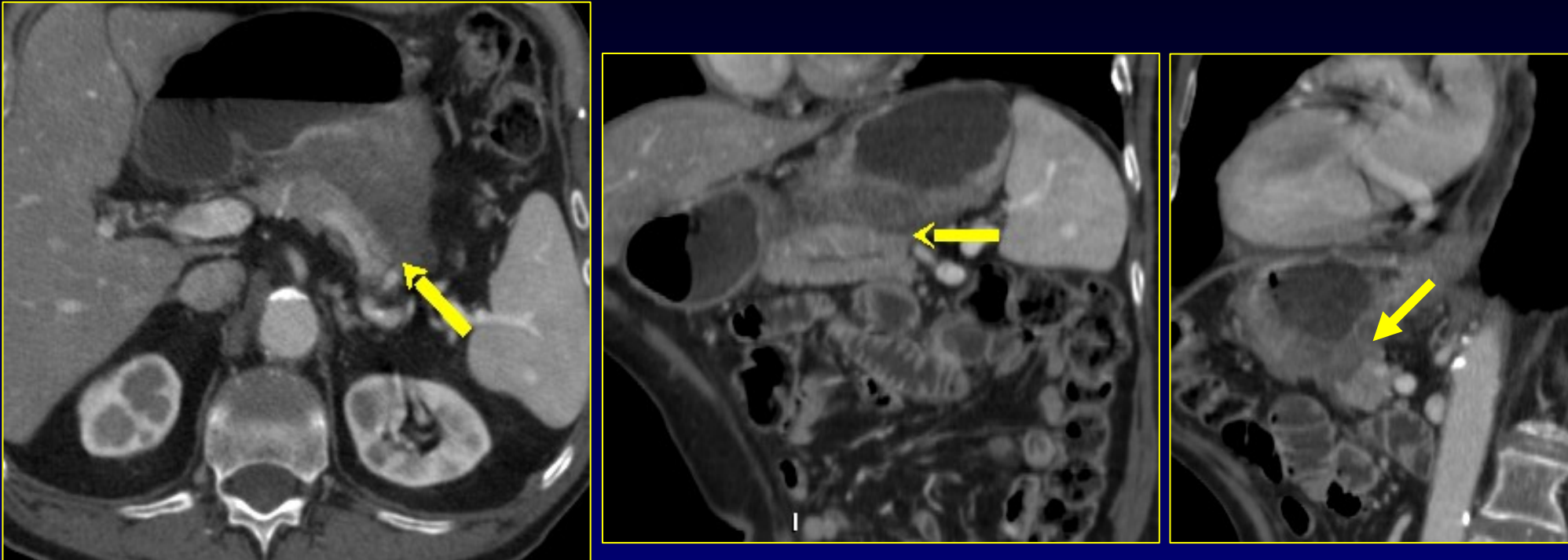
LA STADIAZIONE RADIOLOGICA



AP: PT3 Tumore esteso alla sierosa.

TC: Ispessimento focale con enhancement della parete in toto con contorno esterno **spiculato nel tessuto adiposo**

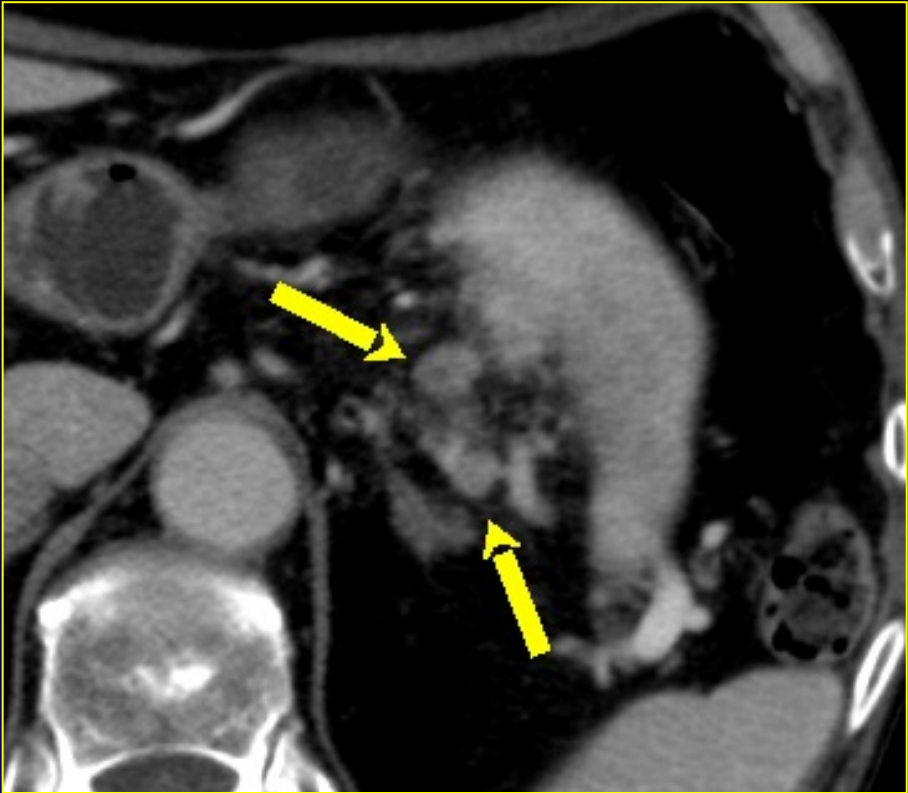
LA STADIAZIONE RADIOLOGICA



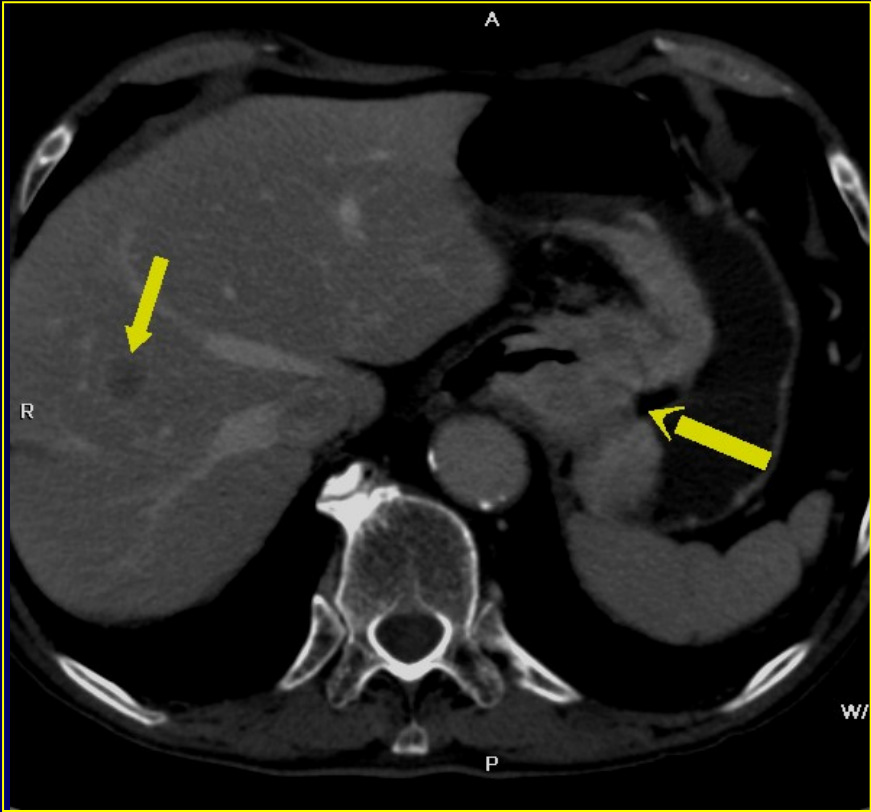
AP: PT4 Tumore esteso a strutture contigue.

TC: Ispessimento focale con enhancement della parete in toto con scomparsa del piano adiposo o infiltrazione di organo adiacente.

LA STADIAZIONE RADIOLOGICA

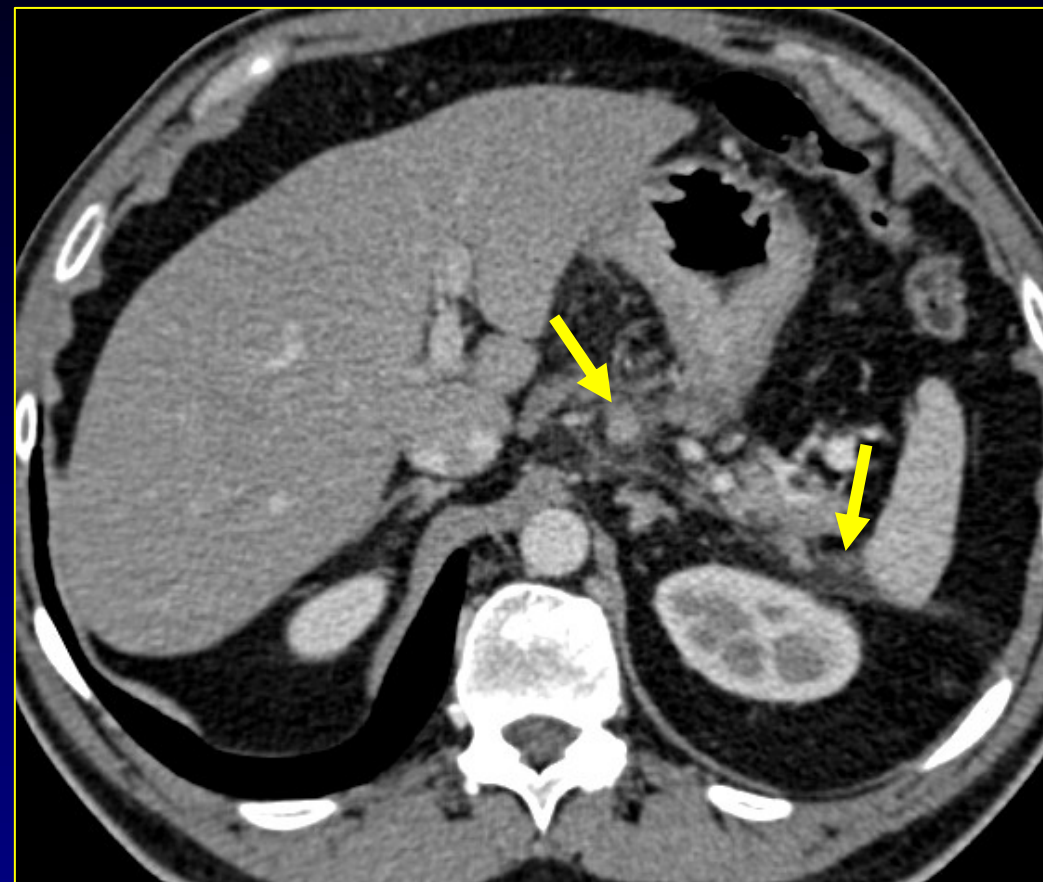
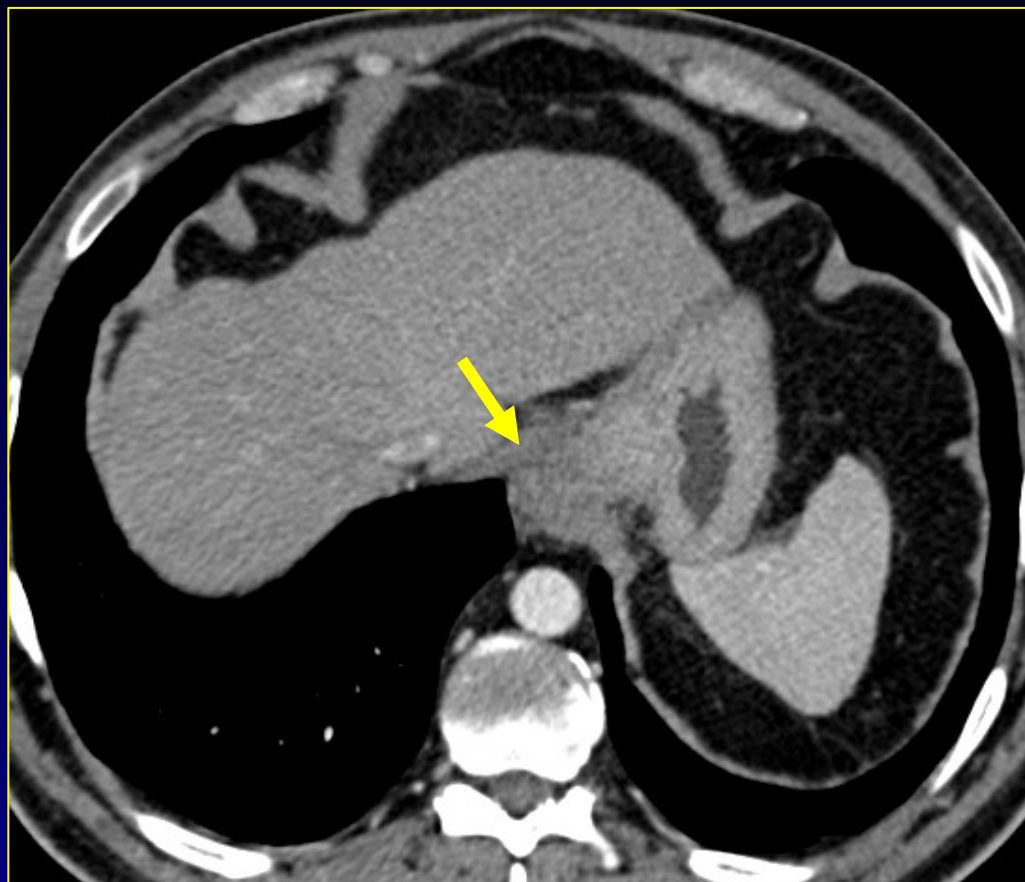


N+



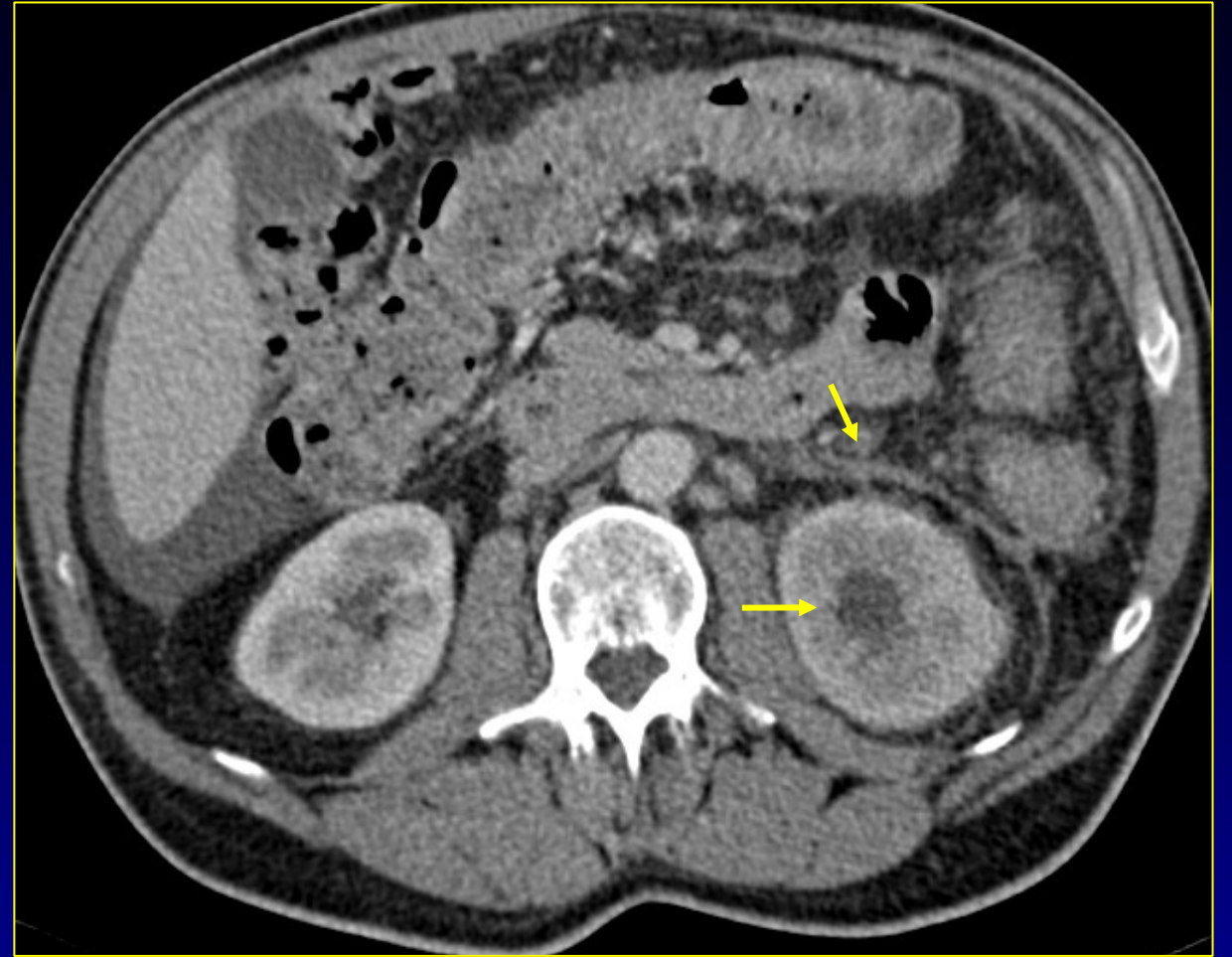
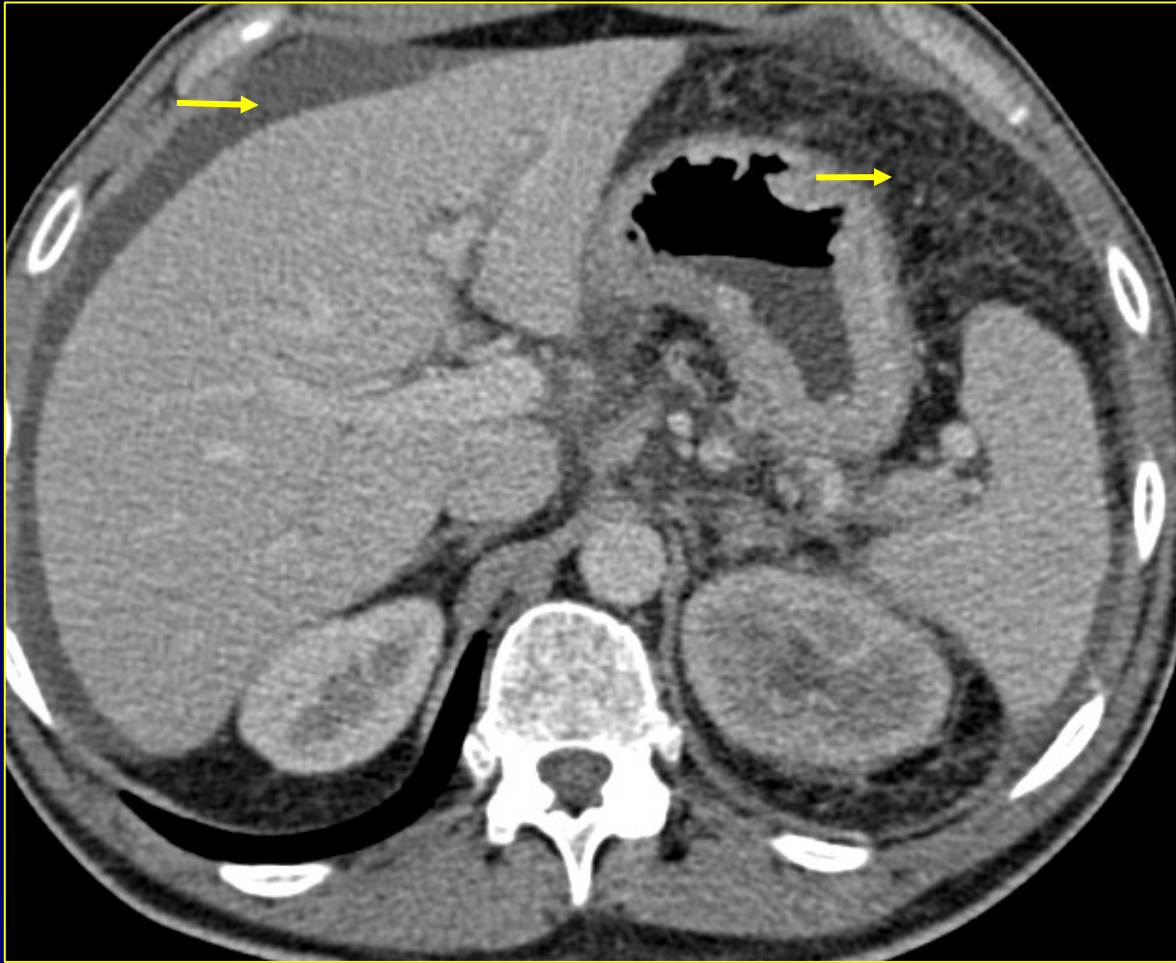
M+

LA STADIAZIONE RADIOLOGICA



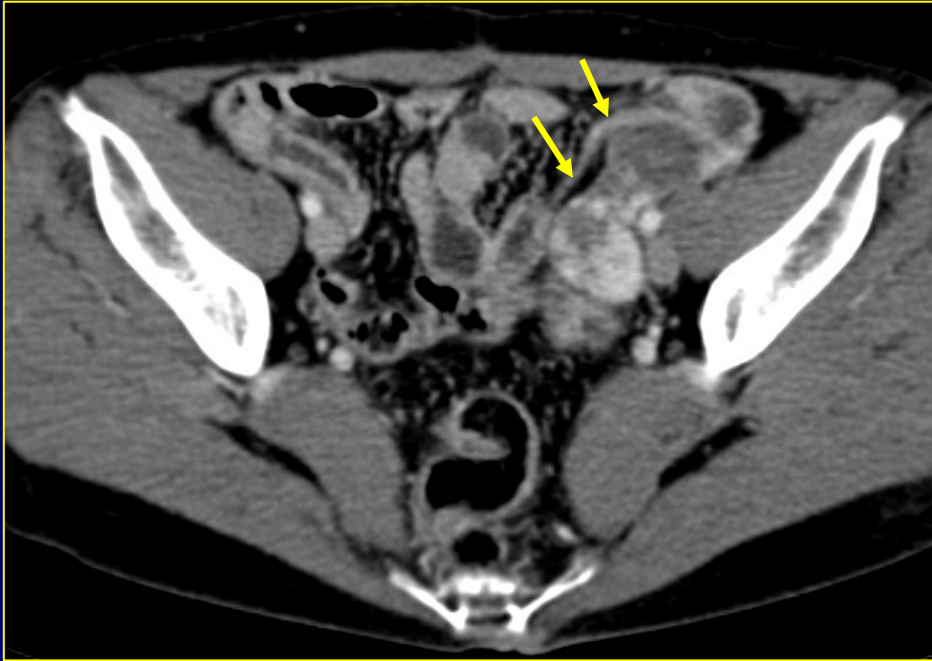
Adenoca del cardias infiltrante il diaframma con adenopatie e carcinosi peritoneale

LA STADIAZIONE RADIOLOGICA

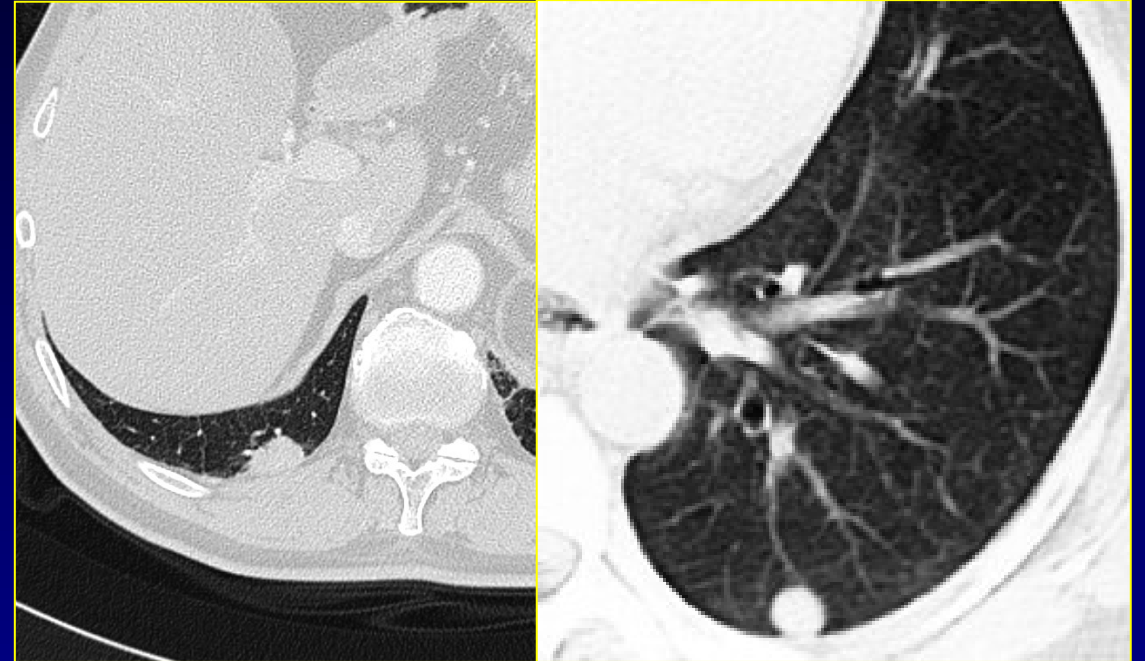


Carcinosi e idronefrosi sinistra

LA STADIAZIONE RADIOLOGICA

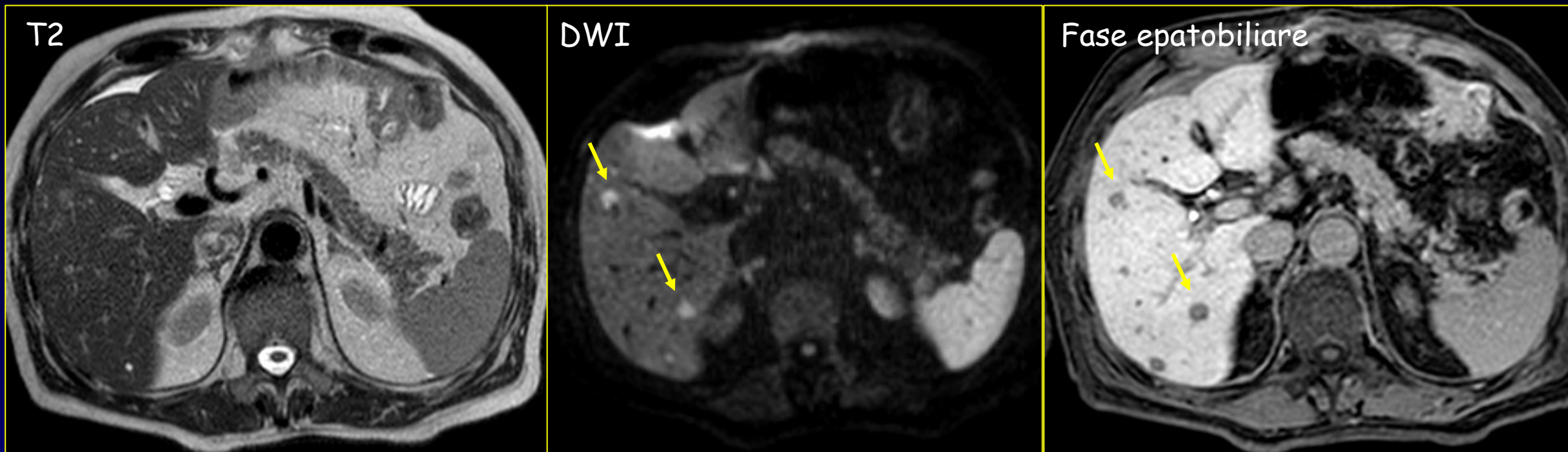


Kruckenberg



Noduli singoli o multipli
più frequenti alle basi ed in periferia

LA STADIAZIONE RADIOLOGICA



RM con mdc ad escrezione epatobiliare

K Gastrico misto (30% adeno 70% NET)
TC con mdc negativa per secondarismi epatici

LA STADIAZIONE RADIOLOGICA

TCMS cmc con ricostruzioni 2D MPR

ACCURATEZZA

Detezione della lesione (91 -98 %)

T: 73% (assiali) ---- 89% (MPR)

N: 71% (assiali) ---- 78% (MPR)

M+: 96 %

Kim YN, Choi D, Kim SH, et al: Gastric Cancer at isotropic MDCT including coronal and sagittal MPR images: endoscopically diagnosed early vs advanced gastric cancer *Abdominal Imaging* 2008

LIMITI

Carcinosi peritoneale (accuratezza 60-80%).

N: (?) si utilizza criterio dimensionale

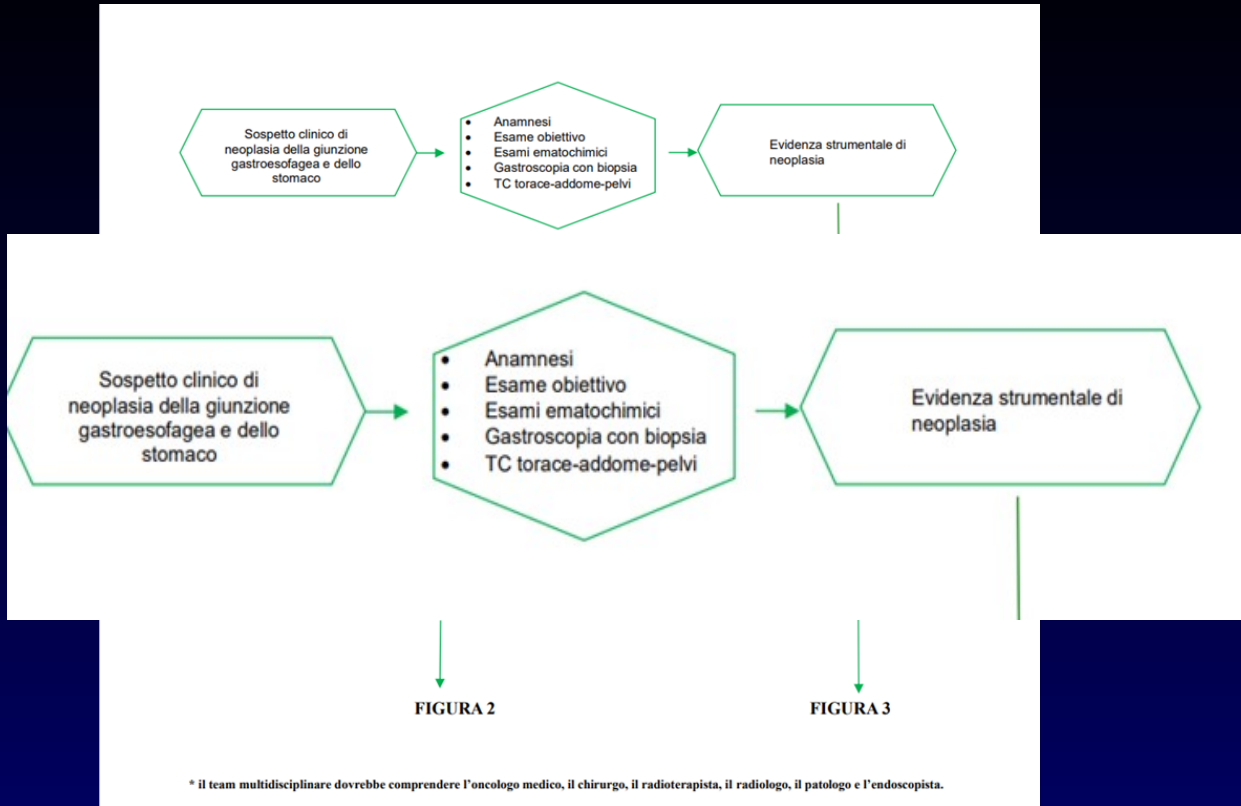
Eur Radiol 2012; 22:1479-1487

Abdom Imaging 2012; 37:834-842

RUOLO IMAGING

WORKUP	CLINICAL STAGE ⁱ	ADDITIONAL EVALUATION
<ul style="list-style-type: none"> • H&P • Upper GI endoscopy and biopsy^a • Chest/abdomen/pelvic CT with oral and IV contrast 		

WORKUP	CLINICAL STAGE ⁱ
<ul style="list-style-type: none"> • H&P • Upper GI endoscopy and biopsy^a • Chest/abdomen/pelvic CT with oral and IV contrast <p>suspected^{d,e}</p> <p>If sufficient tissue is available after the above testing has been completed, next-generation sequencing (NGS) may be considered</p>	<p>Medically fit^j</p> <p>Management (see GAST-9)</p>



Linee Guida AIOM 2021

Multidisciplinary review preferred^m → [See GAST-2](#)

Team multidisciplinare*
Eventuali esami di secondo livello:
PET-TC
Ecoendoscopia

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CONCLUSIONI

Paziente con tumore gastrico:

- A) fare TC torace-addome con mdc
- B) Casi dubbi epatici: RM
- C) Valutazione multidisciplinare
- D) Follow up :TC con mdc



GRAZIE PER L'ATTENZIONE!
alessandro.zanello@gavazzeni.it