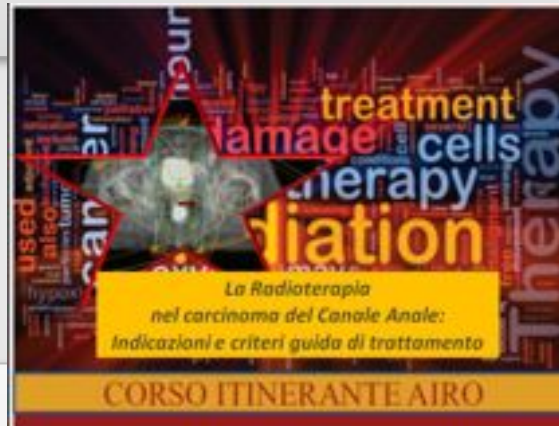


Carcinoma Canale Anale

Ruolo dell'Ecoendoscopia



Rionero in V. 31 OTTOBRE 2014

Dott Orazio Ignomirelli

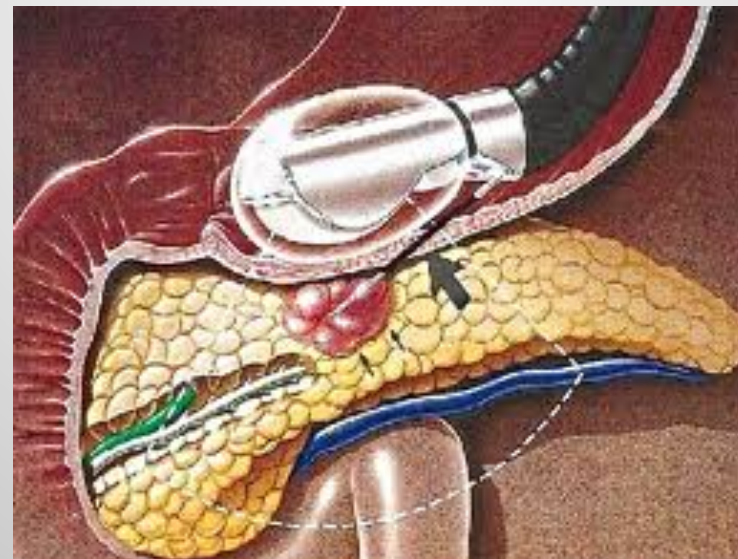
IRCCS Ospedale Oncologico Regionale di Basilicata

Unità Operativa Endoscopia

IRCCS- CROB



EUS



*U.O. Endoscopia
Ircs - CROB*

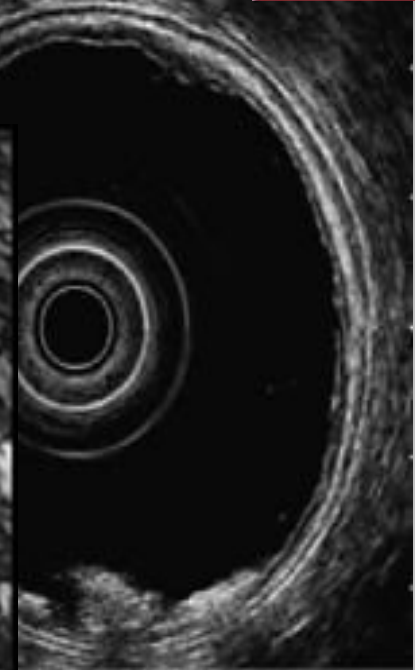
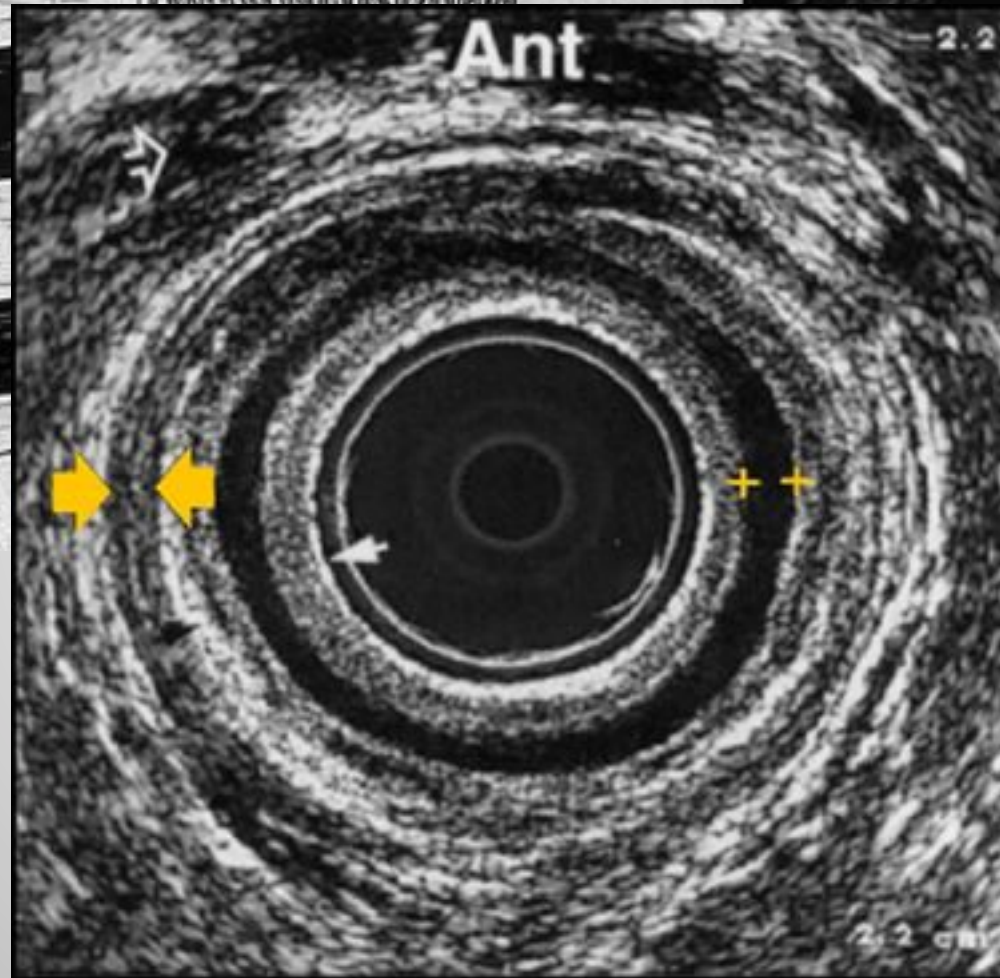


NORMAL GI WALL

EUS HISTO

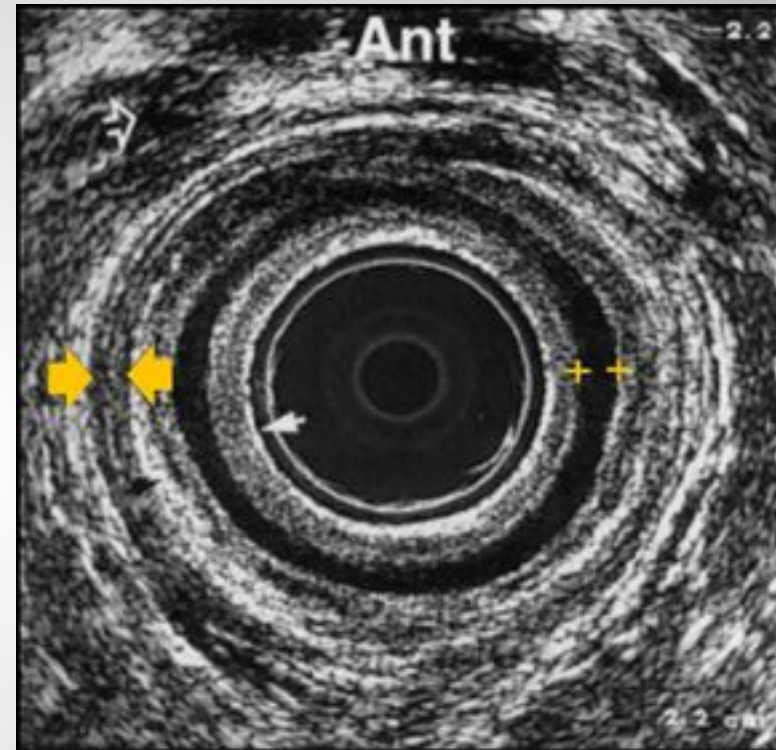
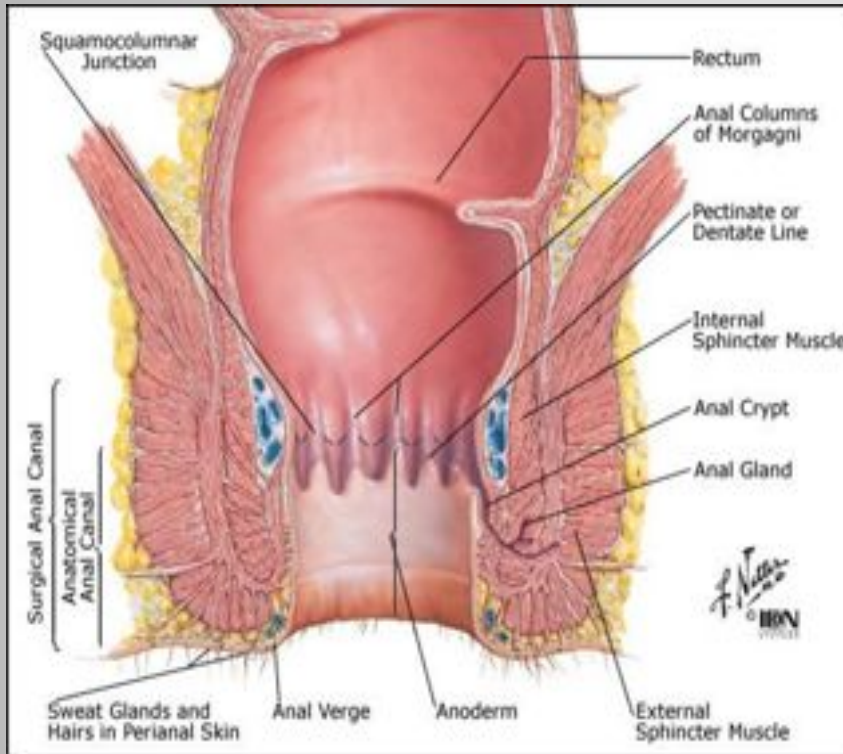


GASTROENTEROLOGIA-UNIVERSITA' DI
CORPUS





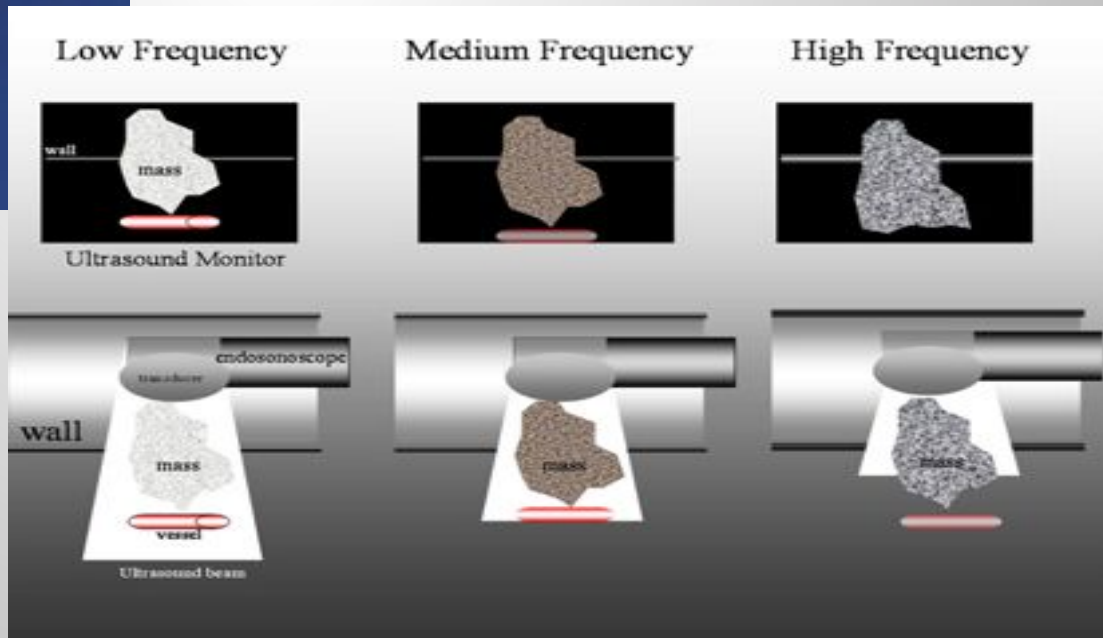
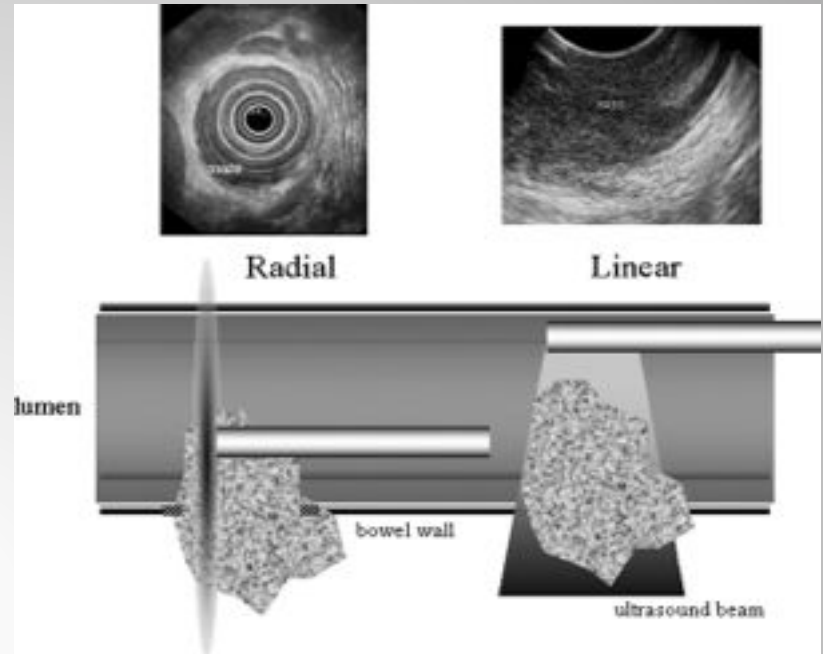
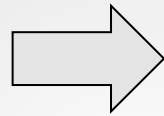
ANATOMIA CANALE ANALE

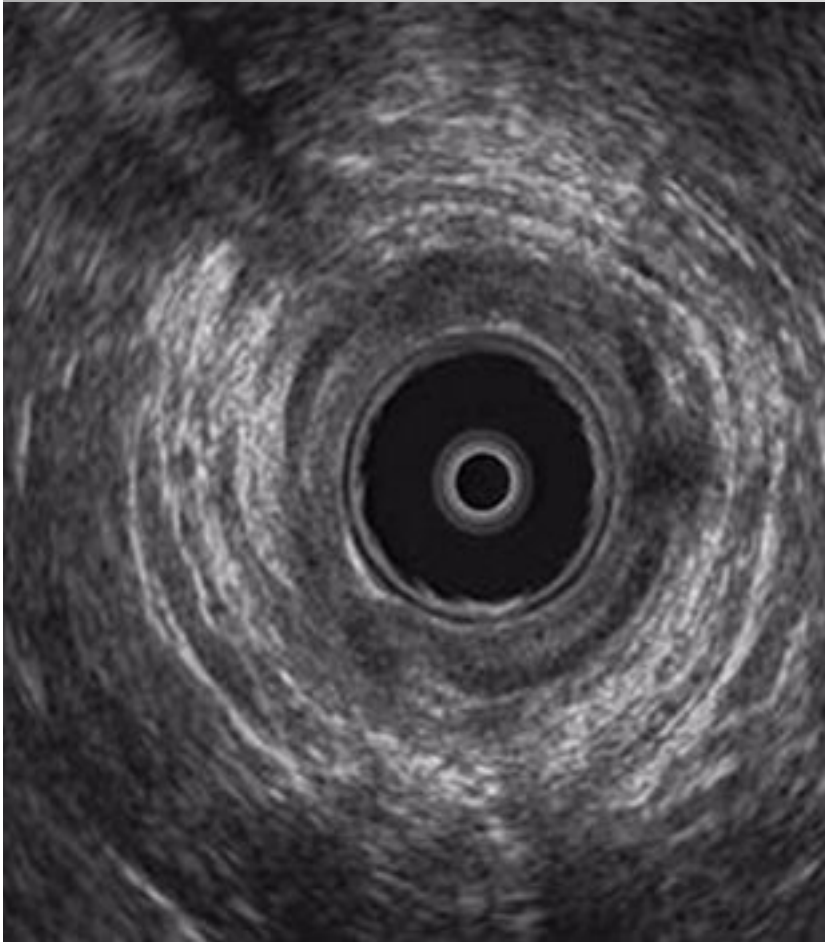


All'EUS la mucosa anale non è visualizzabile come strato singolo

La sottomucosa appare con uno strato moderatamente riflettente ipercogeno

Lo sfintere interno appare come un anello ipoecogeno in continuazione con lo strato circolare della muscularis propria del retto





HITACHI P:H MI ⏏
FR:29 EUSR ➡ '14/10/24 12:54:21

H 000

No.61/61

BG:5 65/H/2/4/0/A/5
FG-PRB 7.5M Endoscope 35mm

1 Review 2 SPD; 3 ODM 4 5 Volume 6 Ratio-Dis 7 Ratio-Area

This panel displays the HITACHI EUSR endoscopic system interface. It features a top status bar with the brand name, a patient ID field, and system parameters. The main area shows a wide-field endoscopic view of a vessel lumen with a vertical scale bar on the left. A bottom control bar contains various function keys for navigation and measurement.



CANCRO ANO

VALUTAZIONE CLINICA ED ESPLORAZIONE

- CT
- MRI
- EUS
- PET

*U.O. Endoscopia
Ircs - CROB*



DIAGNOSI CANCRO ANO

Rosch et al. Am.J.Gastro. 2000, Sep

	% SENS	% SPEC
VALUTAZ CLIN*	94	35
CT	75%	78
EUS	93	94

* Esplorazione rettale

*U.O. Endoscopia
Irccs - CROB*



RMN

	MRI
Sensib	93-95
Specif	95

Koelblinger K et al; Radiology 2011;259;757-66

*U.O. Endoscopia
Ircs - CROB*



TNM

TNM

- **T1** : tumore < 2 cm
- **T2** : tumore fra 2 e 5 cm
- **T3** : tumore > a 5 cm
- **T4** : invasione organi adiacenti
- **N1** : adenopatie perirettali
- **N2** : adenopatie inguinali, ipogastriche monolaterali
- **N3** : adenopatie bilaterali



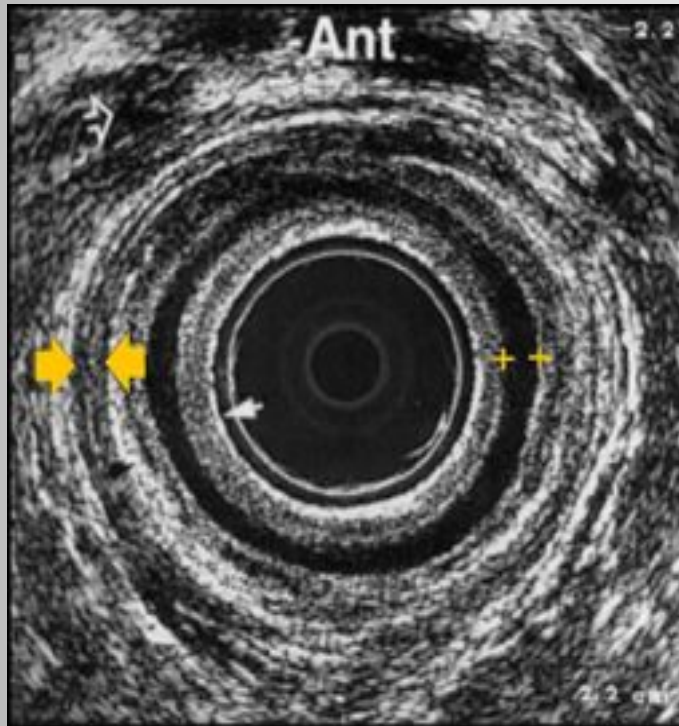
EUS-TNM

- **uT1** : infiltrazione sottomucosa
- **uT2a**: infiltrazione sfintere interno
- **uT2b**: infiltrazione sfintere esterno
- **uT3** : infiltrazione tessuti perianali
- **uT4** : infiltrazione organi vicini

(Tarantino e Bernstein 2002)



STUDIO DEL T



Lesione ipoecogena vascolarizzata

Invasione profonda fino alla sottomucosa T1

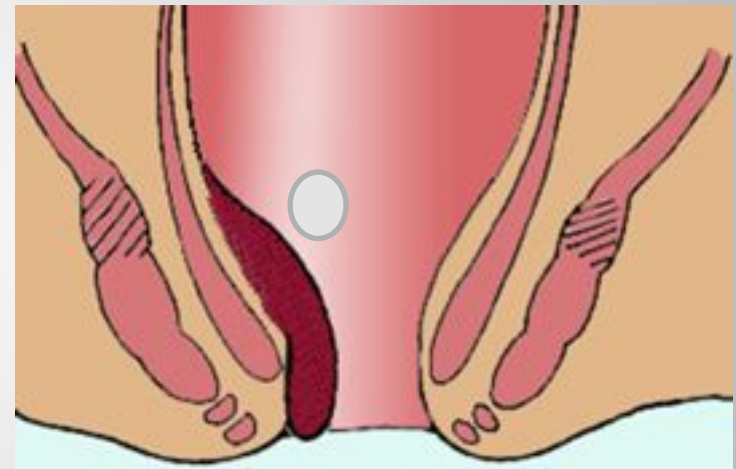
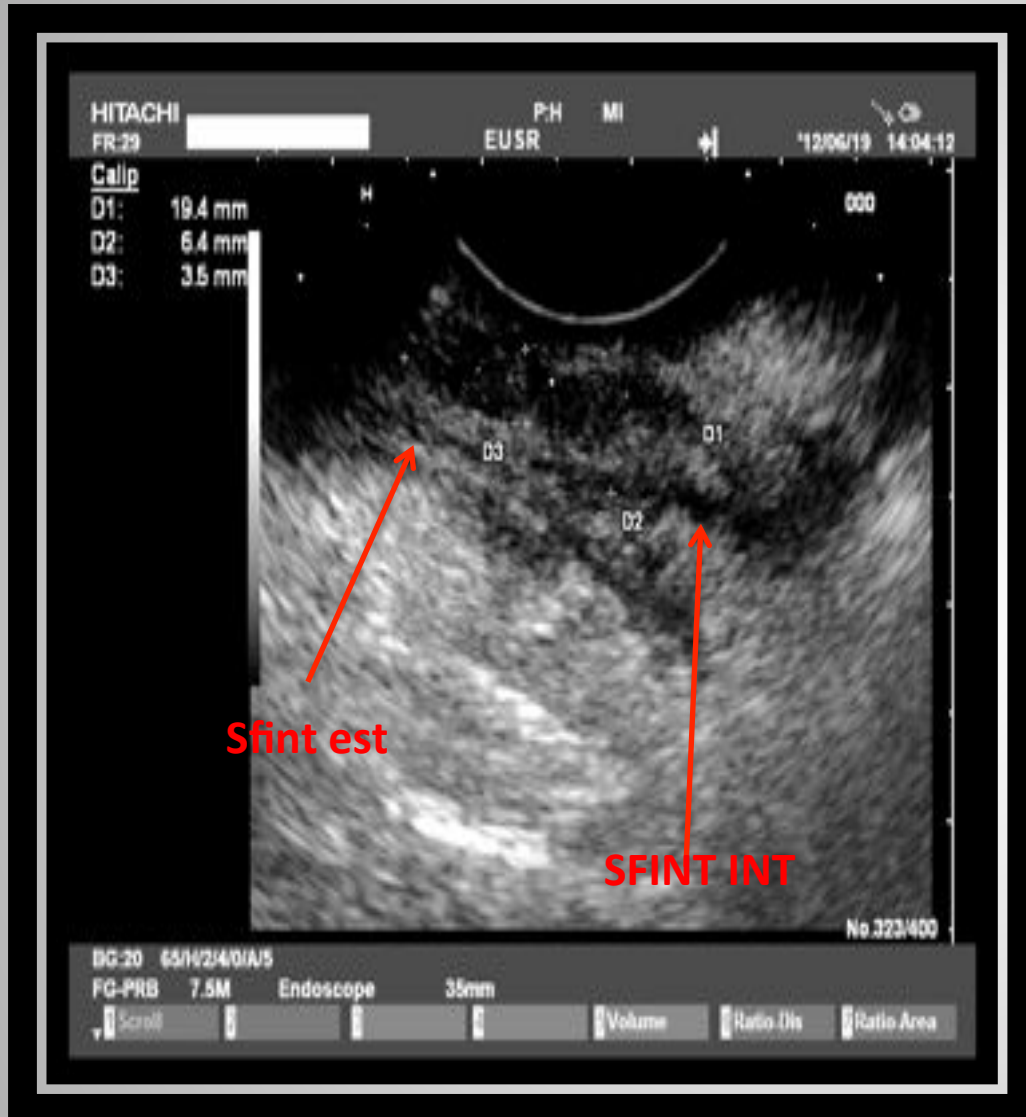
Invasione fino allo sfintere interno T2a

Invasione fino allo sfintere esterno T2 b

Invasione dei tessuti circostanti T3

Invasione di organi circostanti T4

L'Eus è la migliore tecnica di indagine per lo studio della lesioni piccole e superficiali



HITACHI

FR:29

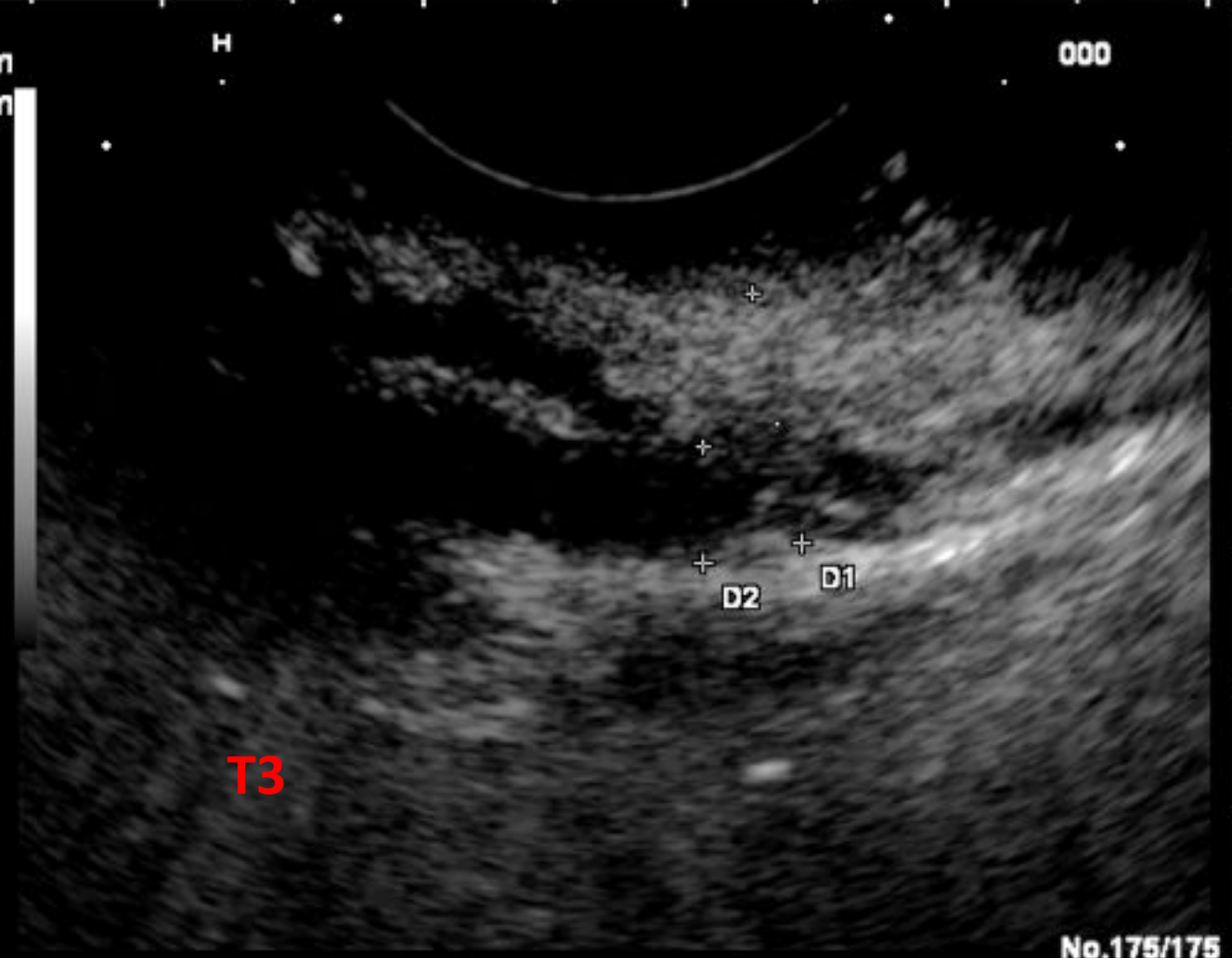
P:H MI
EUSR

'12/06/19 14:02:42

Calip

D1: 9.5 mm

D2: 4.3 mm



T3

No.175/175

BG:12 65/H/2/4/0/A/5

FG-PRB 7.5M

Endoscope

35mm

1 Scroll

2

3

4

5 Volume

6 Ratio-Dis

7 Ratio-Area

HITACHI
FR:29

P:H MI
EUSR

'14/10/24 09:58:38

H

000

↓ PARETE CAN ANALE

↑ VAGINA

No.337/400

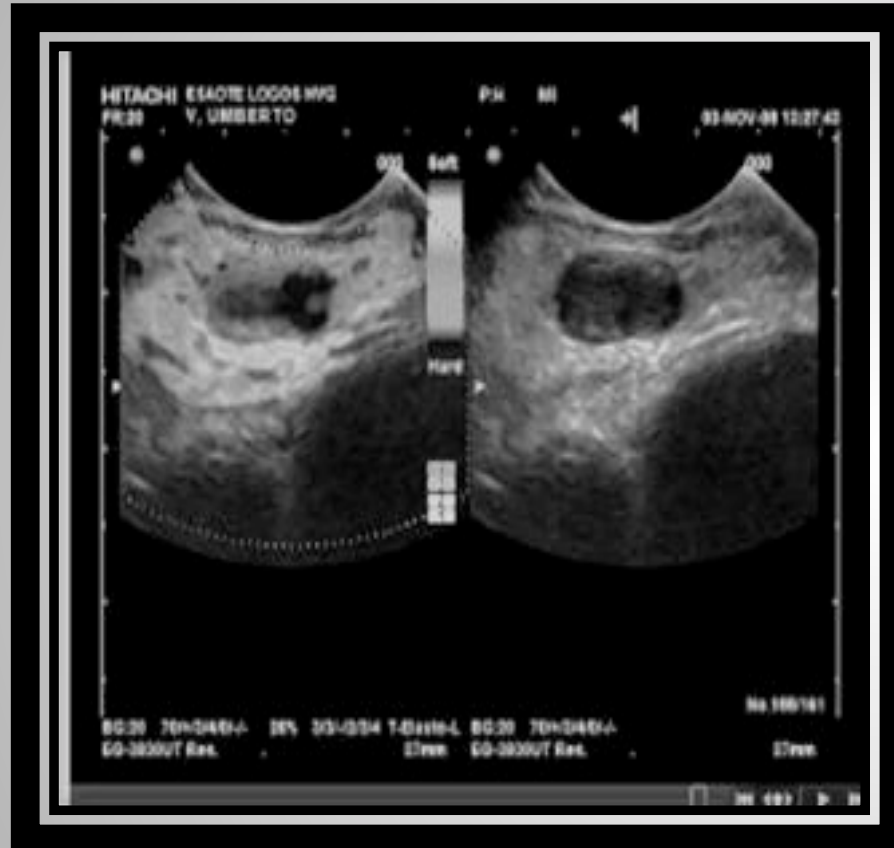
BG:5 65/H/2/4/0/AJ5

FG-PRB 7.5M Endoscope 35mm

1 Review 2 SPD; 3 ODM 4  5 Volume 6 Ratio-Dis 7 Ratio-Area



STUDIO DELL' N



TNM

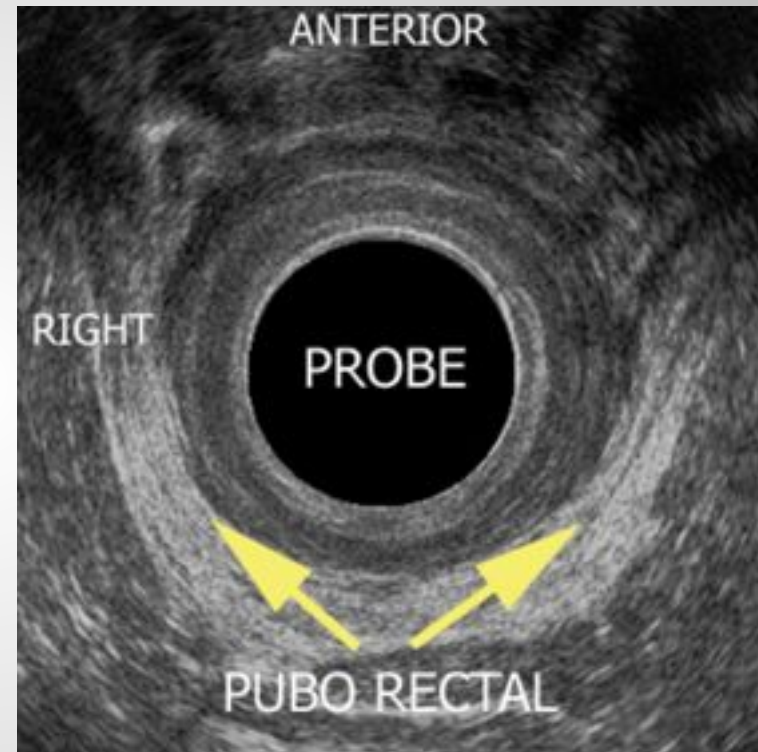
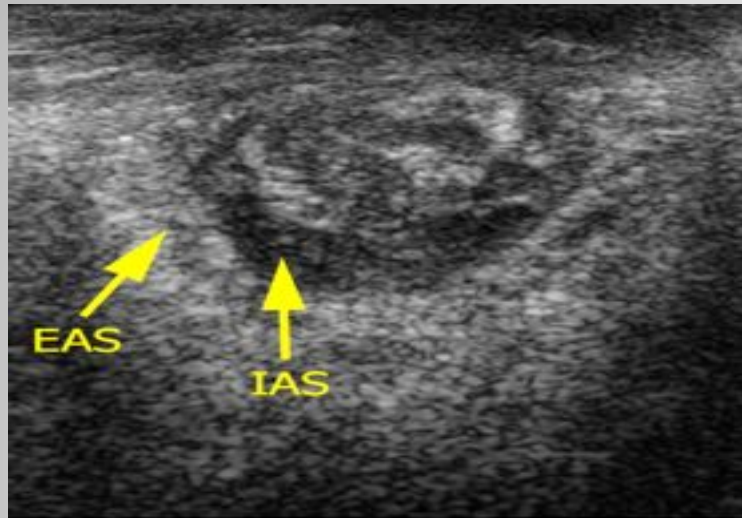
N1 : adenopatie perirettali

N2 : adenopatie inguinali,
ipogastriche monolaterali

N3 : adenopatie bilaterali

Necessità di integrazione con RMN e/o TC

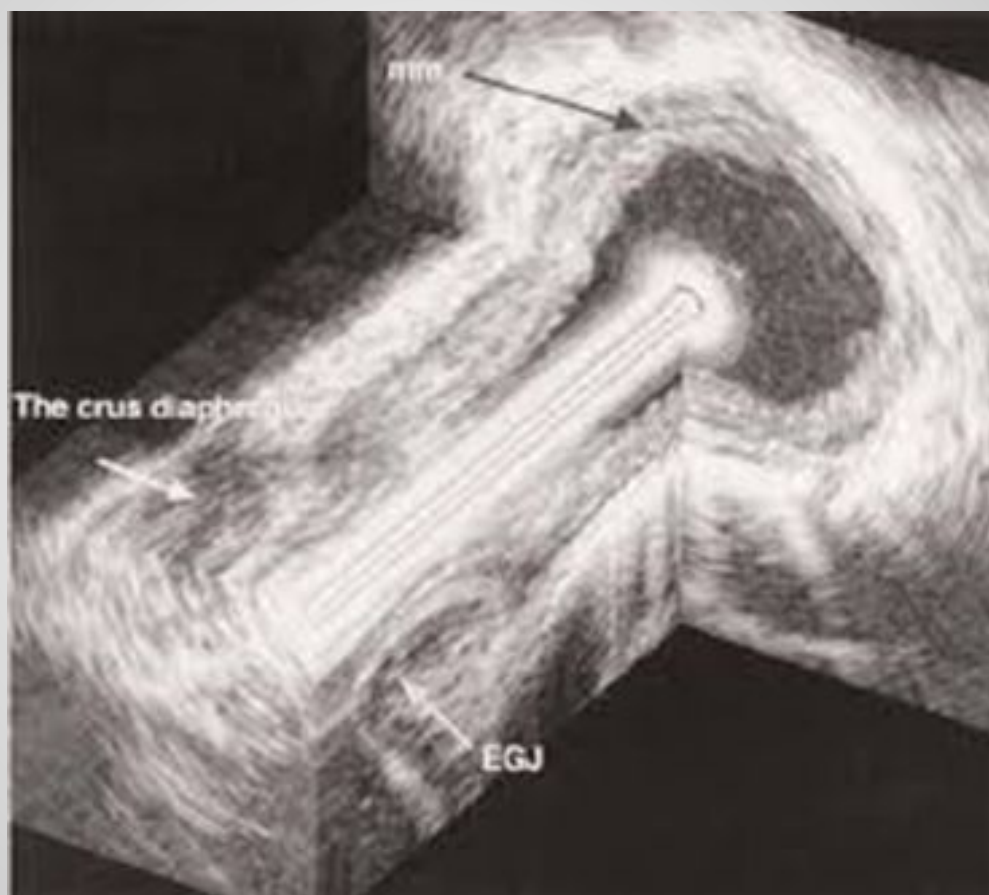
STUDIO DELL'APPARATO SFINTERIALE



*U.O. Endoscopia
Ircs - CROB*

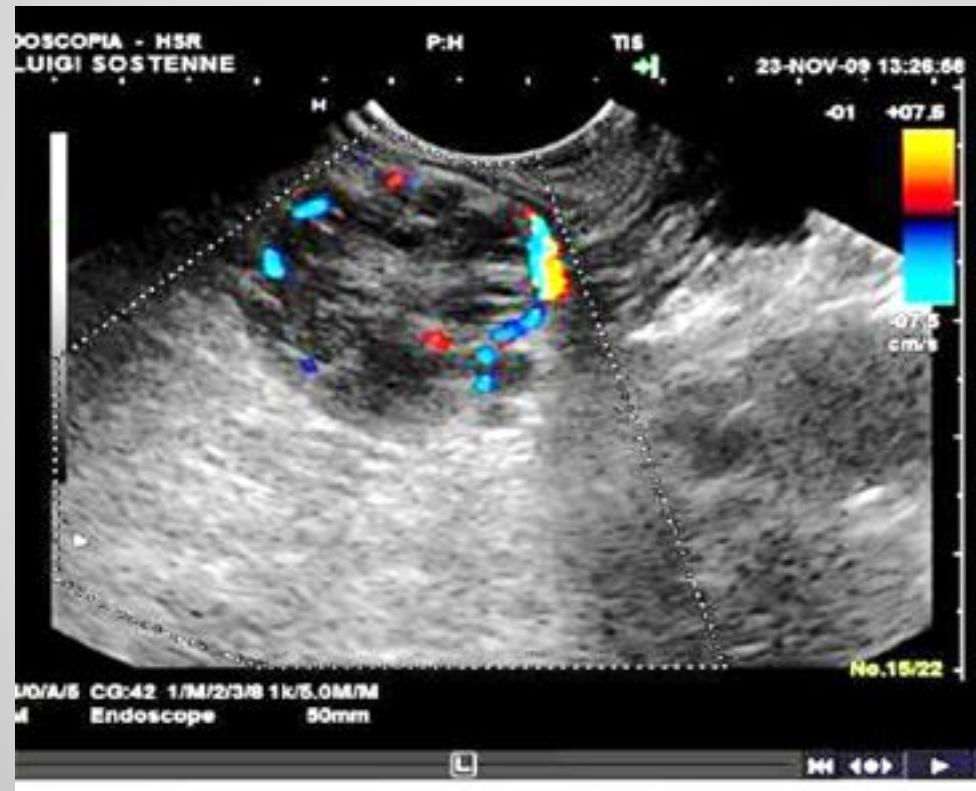


EUS 3D



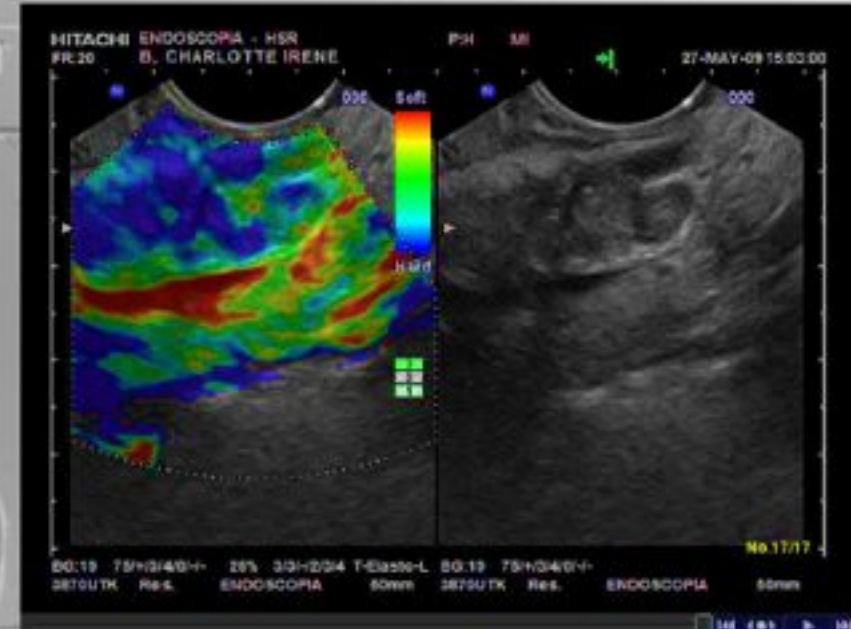
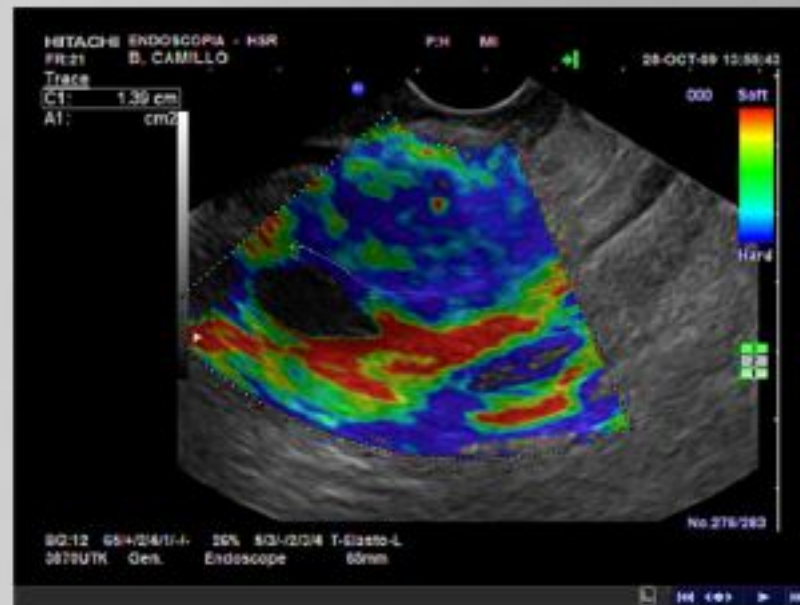


Vascularizzazione



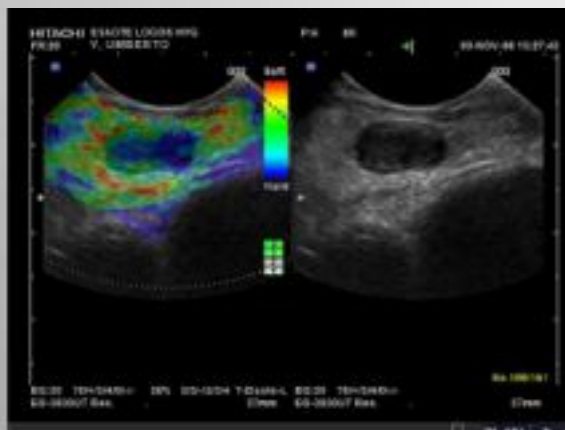
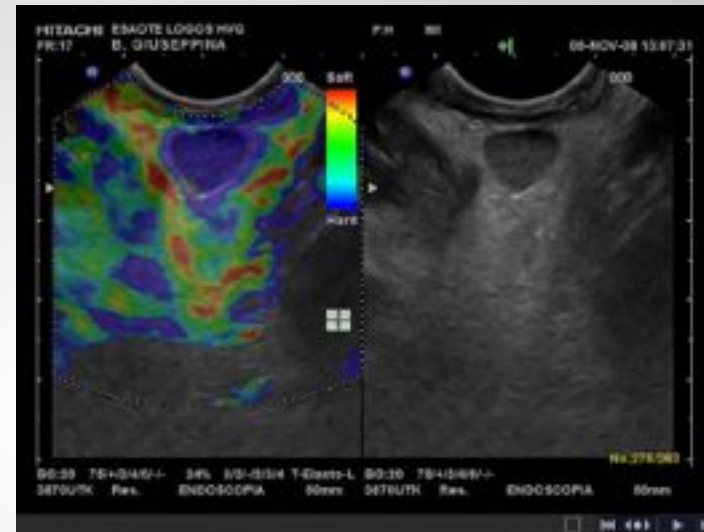


ELASTOSONOGRAFIA





ELASTOGRAFIA LINFONODI



	Conventional EUS	EUS elastography	EUS-FNA
Accuracy	52,6	88,5	96,4

Saftiou et al.; GIE 2007;66:291-300

U.O. Endoscopia
Irccs - CROB





EUS-FNA

L'EUS FNA ha significativamente aumentato la performance diagnostica della sola EUS



*U.O. Endoscopia
Irccs - CROB*



EUS-FNA



*U.O. Endoscopia
Ircs - CROB*



EUS-FNA

Nuovi aghi



ORIGINAL ARTICLE: Clinical Endoscopy

Feasibility and yield of a new EUS histology needle: results from a multicenter, pooled, cohort study

Julio Iglesias-Garcia, MD, Jan-Werner Poley, MD, Alberto Larghi, MD, PhD, Marc Giovannini, MD, PhD, Maria Chiara Peirone, MD, Ihab Abdulkader, MD, PhD, Genevieve Monges, MD, PhD, Guido Cosmanagna, MD, PhD, Paolo Arcidiacono, MD, Katharina Eiermann, MD, PhD, Guido Rindi, MD, PhD, Erwan Bories, MD, Claudio Dogliani, MD, PhD, Marco Bruno, MD, PhD, J. Enrique Dominguez-Muñoz, MD, PhD

Santiago de Compostela, Spain

U.O. Endoscopia
Ircs - CROB





FNA?/NO FNA?

- dubbi diagnostici adenocarcinoma ? Melanoma ? GIST?
Linfoma? Neuroendocrino? : tumori trattabili con strategie terapeutiche differenti;
- sospetto di recidiva pelvica o linfonodale



*U.O. Endoscopia
Ircs - CROB*

HITACHI P:H MI
FR:25 EUSC 14/09/30 11:05:13

Calip
D1: 60.9 mm

H 000
D1

032/120s

BG:14 65/H/2/4/0/AJ5
FG-PRB 7.5M Endoscope 85mm 1

1 Scroll 2 3 4 5 6 7



EUS RETAGGING

L'accuratezza della metodica nella ristadiatura dopo trattamento CT+RT è scarsa a causa di artefatti legati al trattamento e con rischio di sovrastadiatura.



*U.O. Endoscopia
Ircs - CROB*



EUS FOLLOW-UP

Tessuto cicatriziale/Infiammazione?

Residuo di malattia?

Recidiva?



*U.O. Endoscopia
Ircs - CROB*



EUS FOLLOW-UP

- **EUS - Timing**

Non prima dei 45 giorni

Primo controllo entro i 3 mesi

Ogni 3 mesi il primo anno

Ogni 6 mesi il secondo anno

Ogni anno





EUS FOLLOW-UP

- EUS

Controllo nel tempo in modo da studiare
l'evoluzione delle lesioni sospette



*U.O. Endoscopia
Ircs - CROB*

HITACHI

FR:29

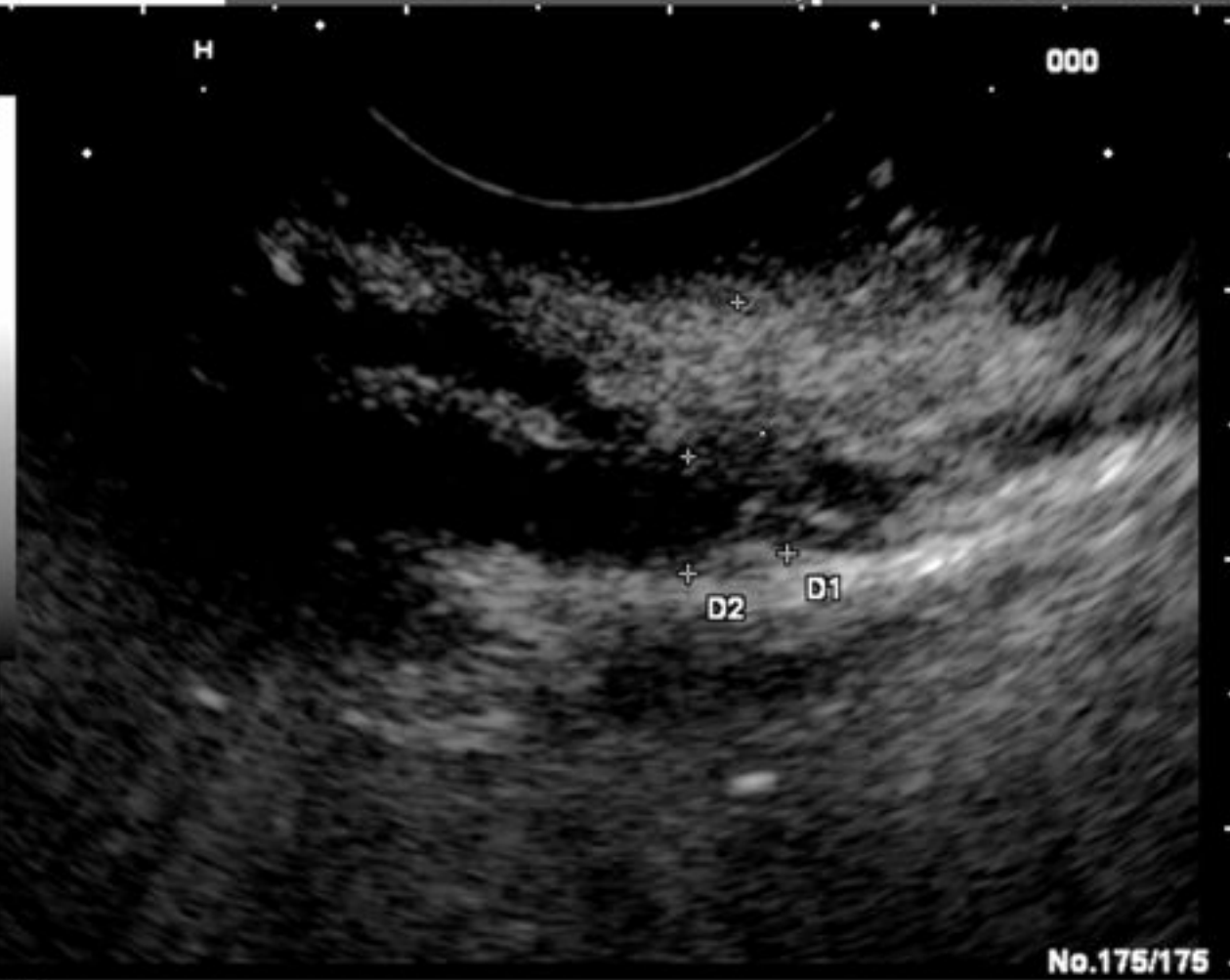
P:H MI
EUSR

'12/06/19 14:02:42

Calip

D1: 9.5 mm

D2: 4.3 mm



BG:12 65/H/2/4/0/A/5

FG-PRB 7.5M Endoscope 35mm

1 Scroll 2 3 4 5 Volume 6 Ratio-Dis 7 Ratio-Area

HITACHI

FR:29

P:H MI
EUSR

*13/05/15 14:53:07

Calip

D1: 3.1 mm

D2: 2.7 mm



No.173/173

BC:5 65/H/2/4/0/A/5

FG-PRB 7.5M Endoscope 40mm

1 Scroll

2

3

4

5 Volume

6 Ratio-Dis

7 Ratio-Area

HITACHI

FR:29

P:H MI
EUSR

'13/05/15 14:54:38

Calip

D1: 3.7 mm

H

000



No.400/400

BG:5 65/H/2/4/0/A/5

FG-PRB 7.5M Endoscope 40mm

▼ Scroll

2

0

0

0 Volume

0 Ratio-Dis

7 Ratio-Area

HITACHI

FR:29

P:H MI
EUSR

'14/10/24 12:53:58

Calip

D1: 2.2 mm

H

000



No.400/400

BG:5 65/H/2/4/0/A/5

FG-PRB 7.5M Endoscope 35mm

1 Scroll 2 3 4 5 Volume 6 Ratio-Dis 7 Ratio-Area



EUS FOLLOW-UP

EUS / Esame Clinico

Controllo nel tempo in modo da studiare
l'evoluzione delle lesioni sospette

Superiorità dell'EUS in quanto in grado di studiare bene il livello
di infiltrazione e di documentare e misurare le lesioni

Endoscopy: Giovannini et al. 2001;33(3):231-36

*U.O. Endoscopia
Ircs - CROB*





EUS FOLLOW-UP

Follow-up seriale

FIBROSI	RECIDIVA
STABILITA' ECOGENICITA' MISTA	INSTABILITA' IPOECOGENO
SCARSA VASCOLARIZZAZIONE	VASCOLARIZZATA
RIDOTTA ELASTICITA'	ANELASTICO

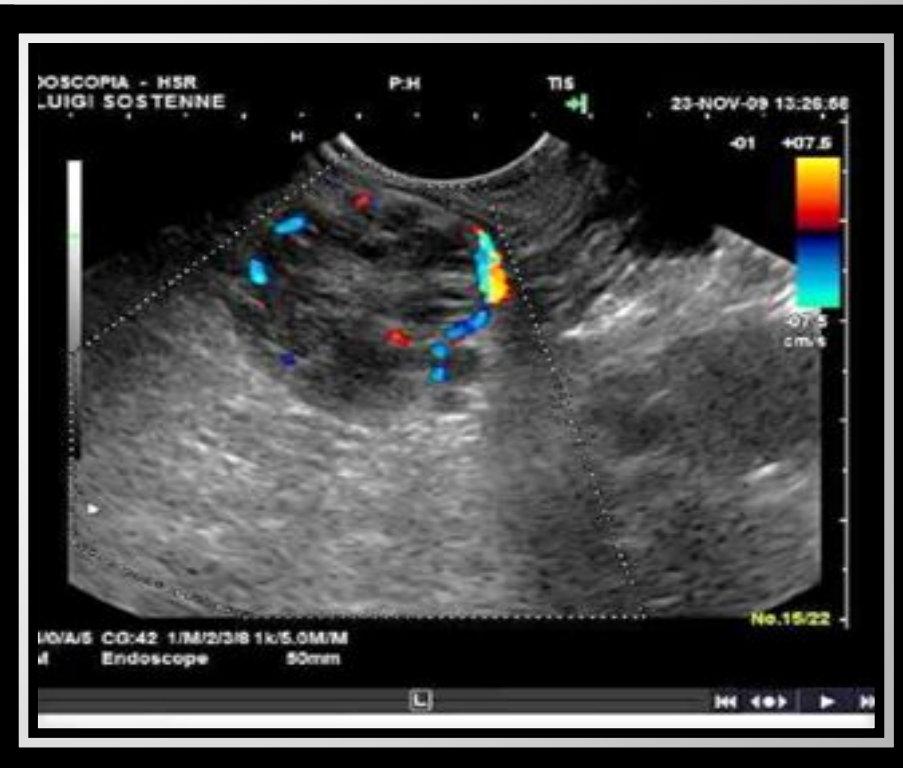
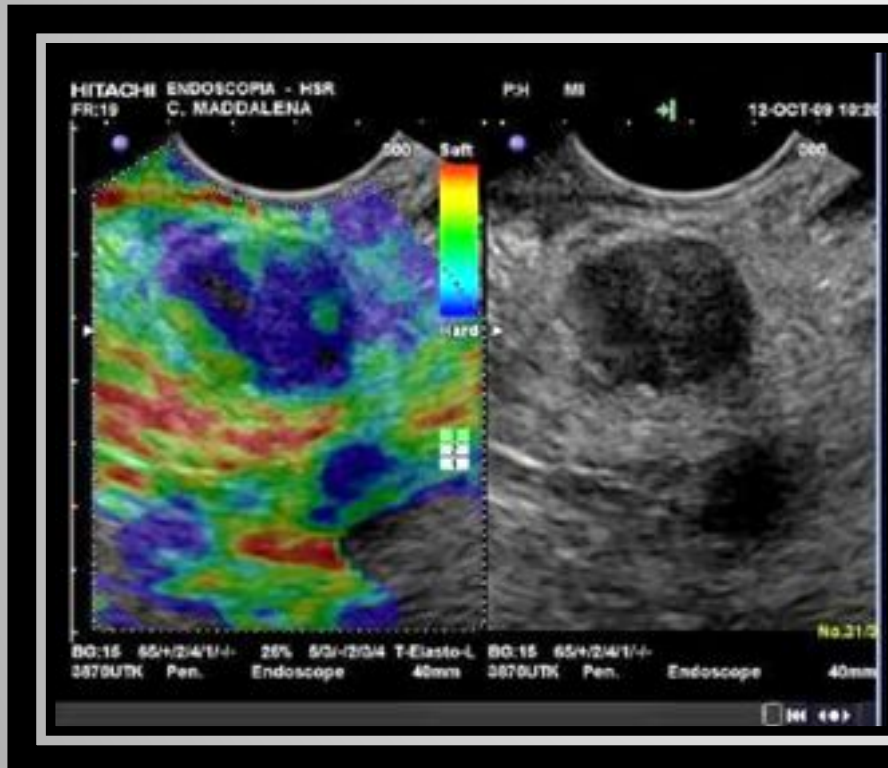


*U.O. Endoscopia
Ircs - CROB*



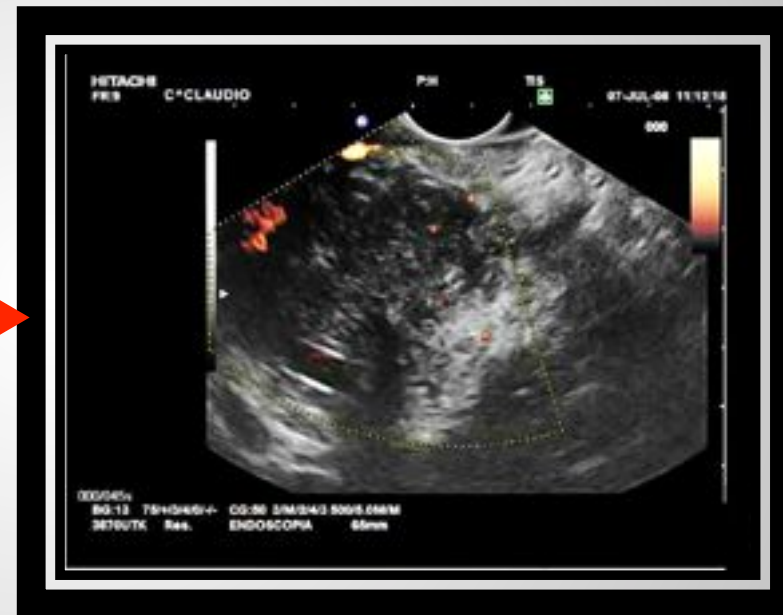
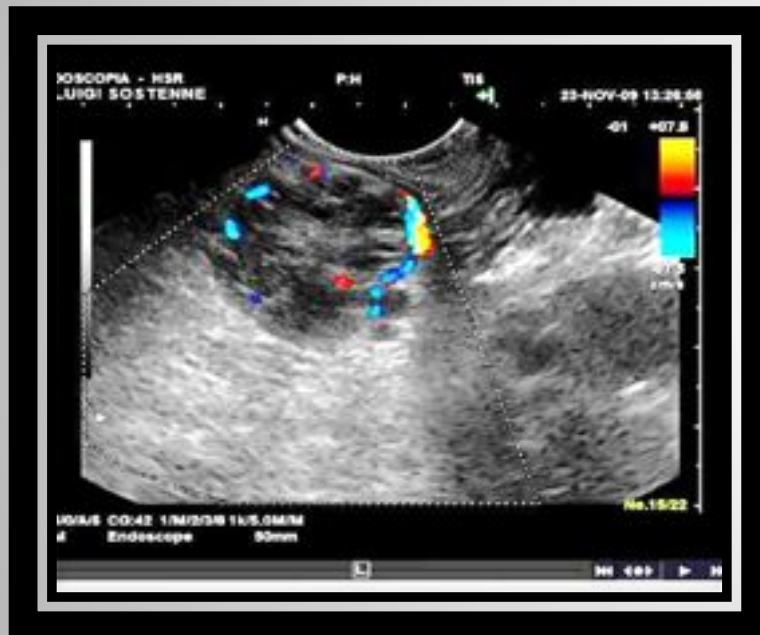
ELASTICITA'

VASCOLARIZZAZIONE





Instabilità





Trattamento

45 giorni

I° controllo EUS

regolarità

quadro dubbio

Ctr 3 mesi

controlli
trimestrali
(follow-up
seriale)

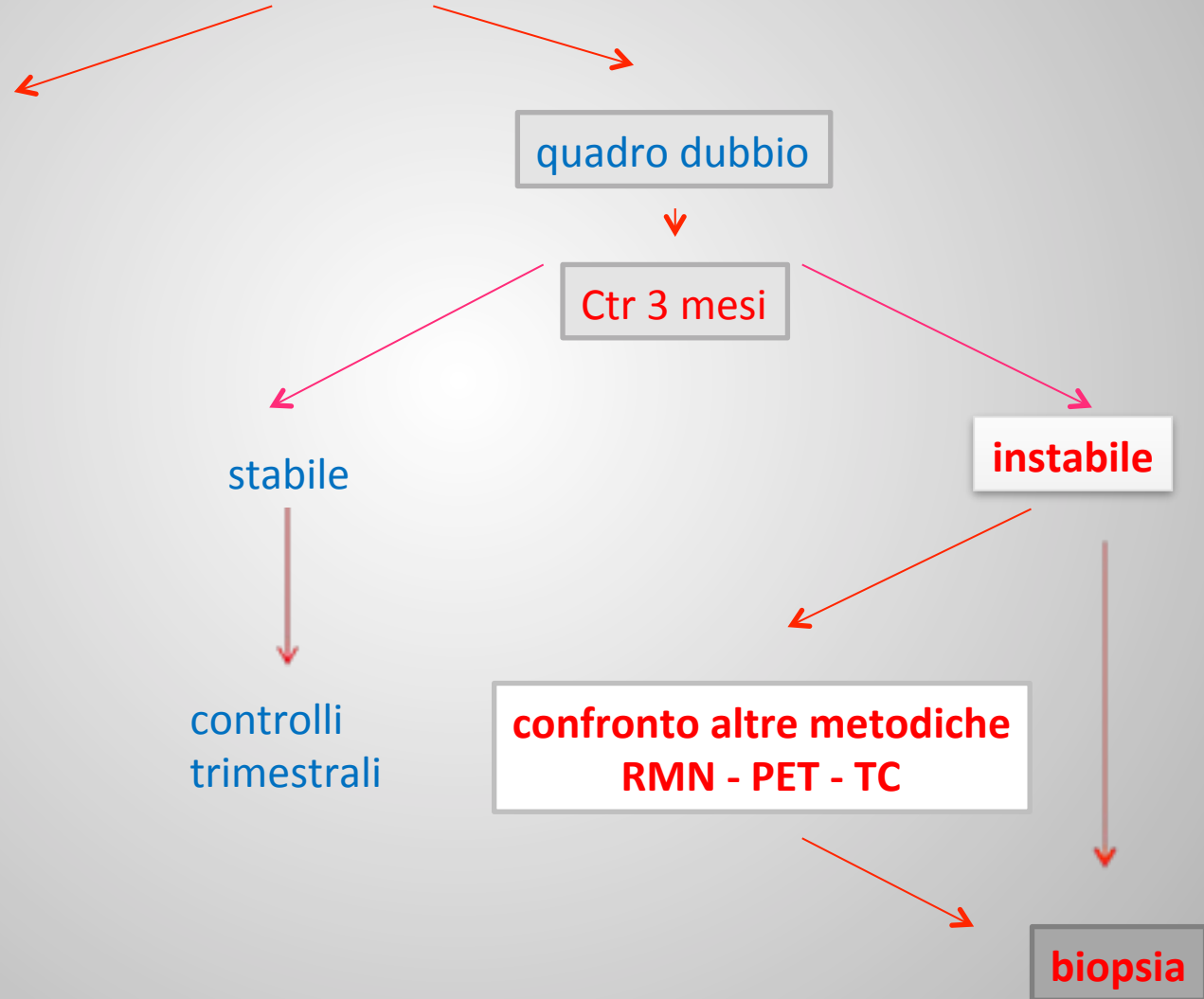
stabile

instabile

controlli
trimestrali

confronto altre metodiche
RMN - PET - TC

biopsia



HITACHI

FR:29

P:H MI
EUSR

13/05/15 14:57:17

Calip

D1: 12.9 mm

D2: 12.1 mm



BG:5 65/H/2/4/0/A/5

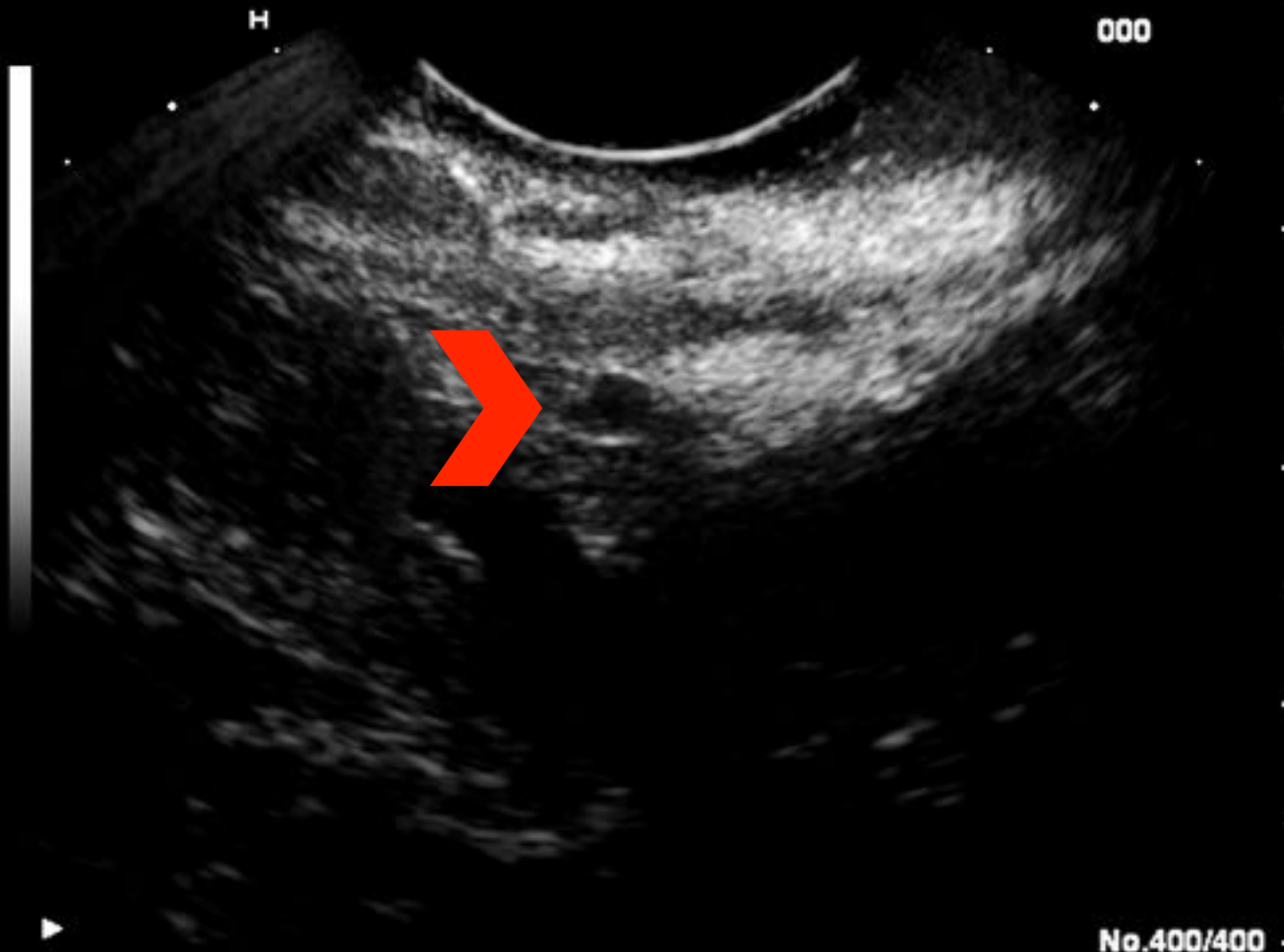
FG-PRB 7.5M Endoscope 40mm

1 Scroll 2 3 4 5 Volume 6 Ratio-Dis 7 Ratio-Area

HITACHI
FR:29

P:H MI
EUSR

'13/05/15 14:52:51

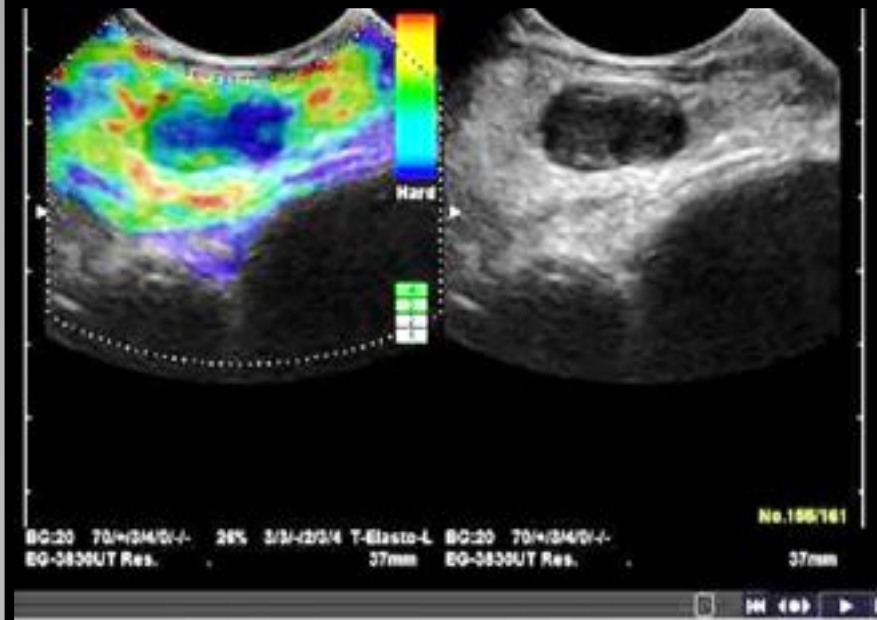


BG:5 65/H/2/4/0/AJ5

FG-PRB 7.5M Endoscope 40mm

1 Review 2 SPD; 3 ODM 4 5 Volume 6 Ratio-Dis 7 Ratio-Area

No.400/400





FUTURO

FNA



FNI



*U.O. Endoscopia
Irccs - CROB*



FUTURO - FNI



Iniezione di agenti antitumorali

- citoimplant, cellule dendritiche, virus oncolitici, Tnferade

Terapie ablative

- terapia fotodinamica, radiofrequenze, NdYag Laser

Brachiterapia e Impianto markers fiduciali

- Brachiterapia interstiziale con I-125, impianto markers in oro per stereotassica



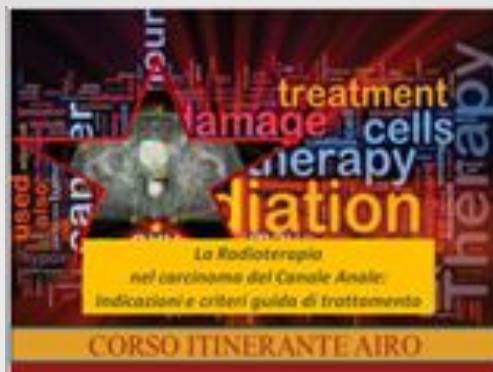


CONCLUSIONI

I migliori campi di applicazione dell'EUS nel cancro del canale anale sono:

- Stadiazione locale (studio del T)
- Interessamento dell'apparato sfinteriale
- Diagnosi di tipo (cito-istologica)
- Nel follow-up per la possibilità di biopsia di lesioni sospette





Grazie per l'attenzione







EUS LIMITI

- Pancreatite cronica
- Recente episodio di pancreatite acuta
- Forme infiltrative diffuse a prevalente sviluppo dorsale o ventrale
- Presenza di stent



EUS LIMITI

Pancreatite cronica

- è la principale causa di errore di valutazione per l'EUS
- il PPV dell'EUS per il cancro del pancreas scende al 60% in presenza di pancreatite cronica
- Anche l'EUS-FNA mostra una riduzione dell'accuratezza diagnostica in presenza di pancreatite cronica



EUS negative

Valore predittivo negativo dell'EUS in pazienti con sospetto clinico di cancro del pancreas

In un periodo di Follow-up di 25 mesi nessun paziente ha sviluppato cancro del pancreas

NPV = 100%

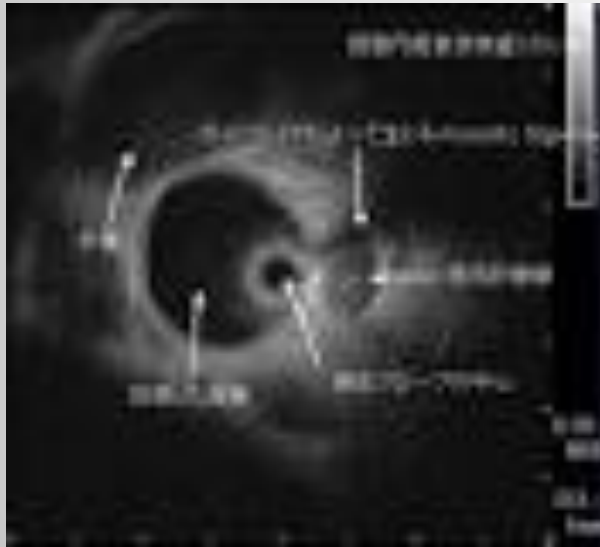


J Klapman et al; Am J Gastro 2005;100;1-4

U.O. Endoscopia
Irccs - CROB

FUTURO

IDUS



EURCP



*U.O. Endoscopia
Irccs - CROB*

EUS

procedure terapeutiche

INIEZIONE DI FARMACI ANTITUMORALI

– EUS-FNI: Tnferade

POSIZIONAMENTO DI MARKERS PER RT

EUS guided biliary drainage



CANCRO DEL PANCREAS

- Popolazione ad alto rischio
- Diagnosi precoce
- Staging accurato



EUS and EUS-FNA

	TC: masse indefinite	
	EUS	EUS-FNA
SENSIBILITA'	100	89
SPECIFICITA'	71	100
NPV	100	78
PPV	90	100
ACCURATEZZA	92	92

Agarwal B, AM J Gastro 2004



*U.O. Endoscopia
Ircs - CROB*

Impact of EUS

	1\997-2001	2001-2004	
% EUS	32	47	
% CHIRURGIA	45	24	

HCT used in 92% of patients

J. Lachter et al. Pancreas 2007;35;130-134



*U.O. Endoscopia
Ircs - CROB*

HITACHI ESAOTE LOGOS HVG

FR:26 B. PAOLO

P:H MI

10-SEP-08 13:12:01

Calip

D1: 21.9 mm

D2: 18.1 mm



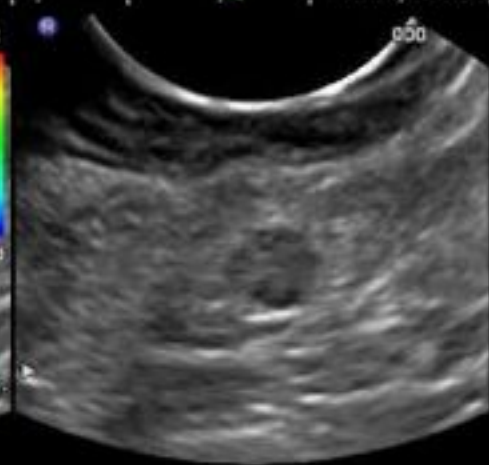
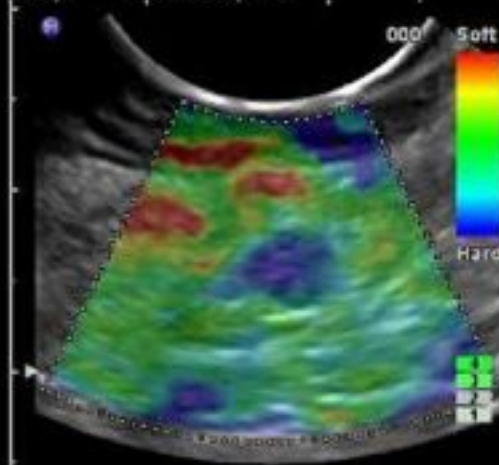
BG:7 75/+3/4/0/-/-
3870UTK Coded-G ENDOSCOPIA 40mm

HITACHI ENDOSCOPIA - HSR

FR:23 D'A, LORENZO

P:H MI

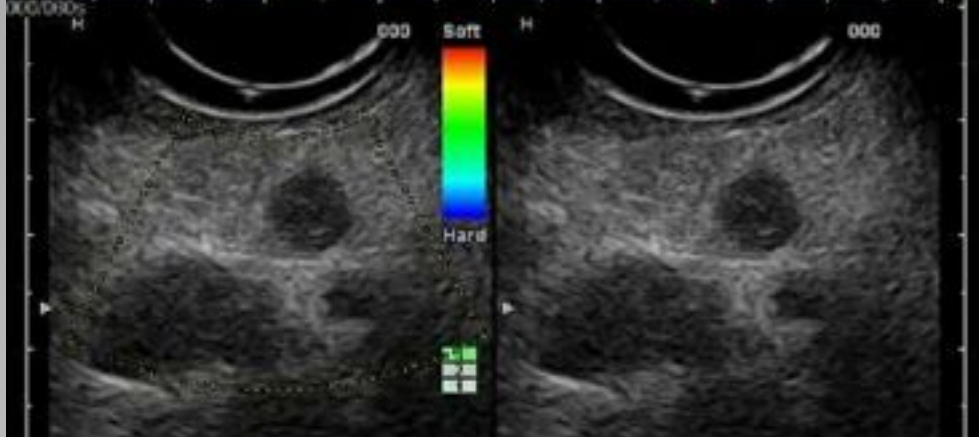
15-JAN-10 12:52:58



BG:18 65/+2/4/1/-/- 25% 5/3/-2/3/4 T-Elasto-L BG:18 65/+2/4/1/-/-
3870UTK dTHi-R Endoscope 34mm 3870UTK dTHi-R Endoscope 34mm

No.131/138

HITACHI OSP. S. RAFFAELE MILANO
FR:20 N. MARIA P:H MI 27-MAR-08 14:42:45



HITACHI ESAOTE LOGOS HVG
FR:12 G. FABIO P:H T15 06-FEB-09 11:33:28

BC:8
FC-PRB
Exit T



000/120s
BC:20 75+/3/4/0/-/- CG:38 1/M/2/3/5 1.5k/5.0M/M
3870UTK Pen. ENDOSCOPIA 85mm

HITACHI ESAOTE LOGOS HVG
FR:11 P, GIUSEPPE

P-H

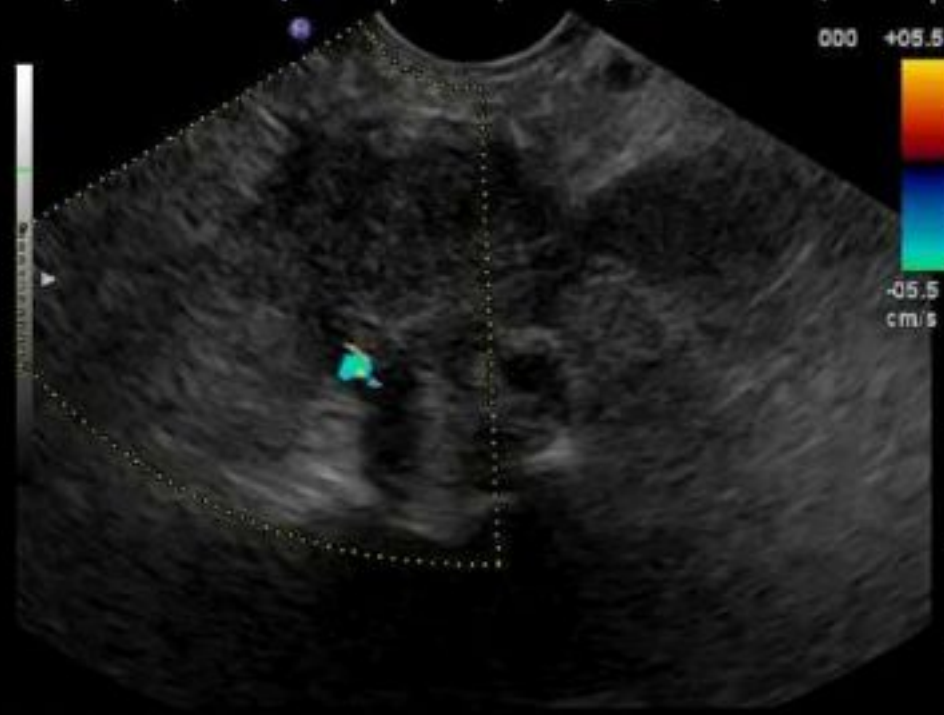
T15

24-JUL-08 14:47:56

000 +05.5



-05.5
cm/s



000/120s

BC:15 75H/3/4/0/-/- CG:40 1/M/2/3/5 800/5.0M/M
3870UTK Pen. ENDOSCOPIA 65mm

HITACHI
FR:72

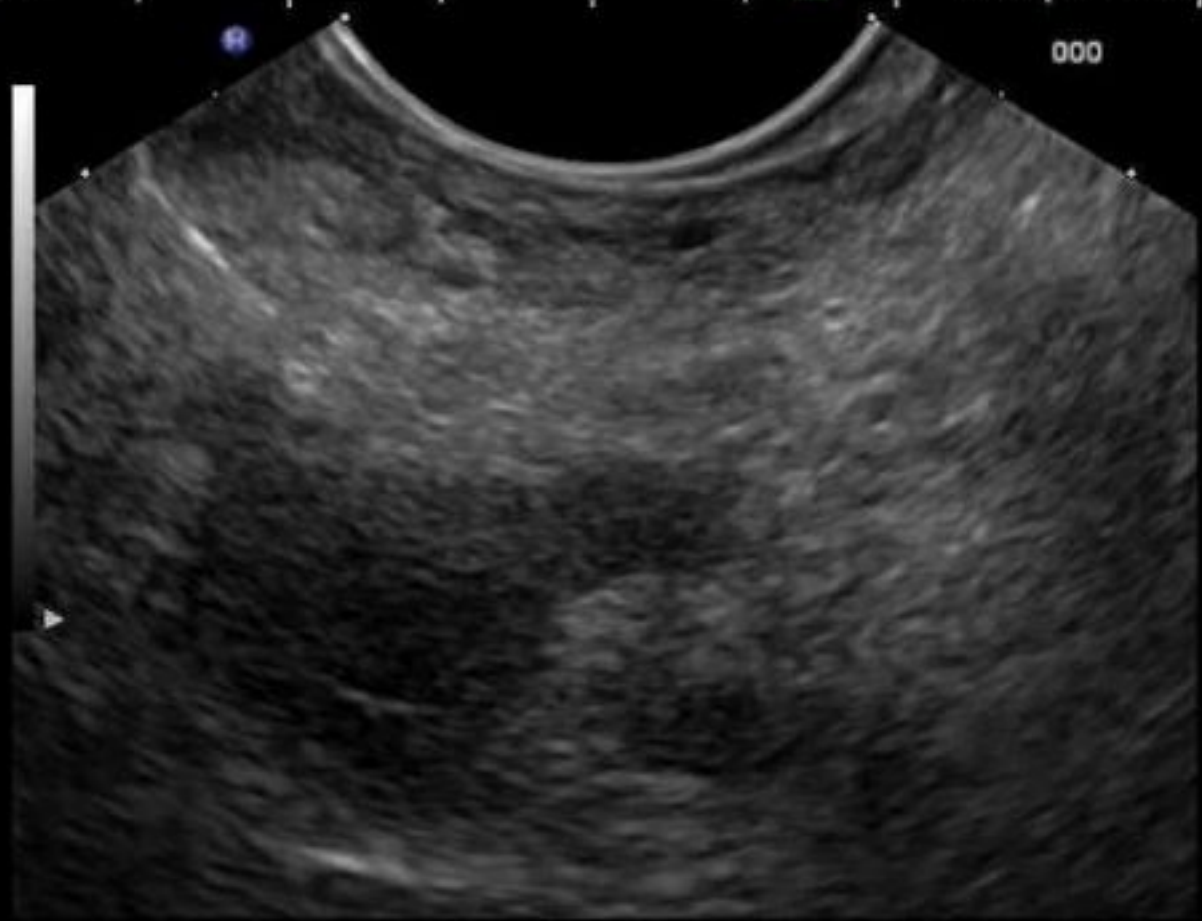
S. ^INES

P:H MI



30-JUN-08 11:06:16

000



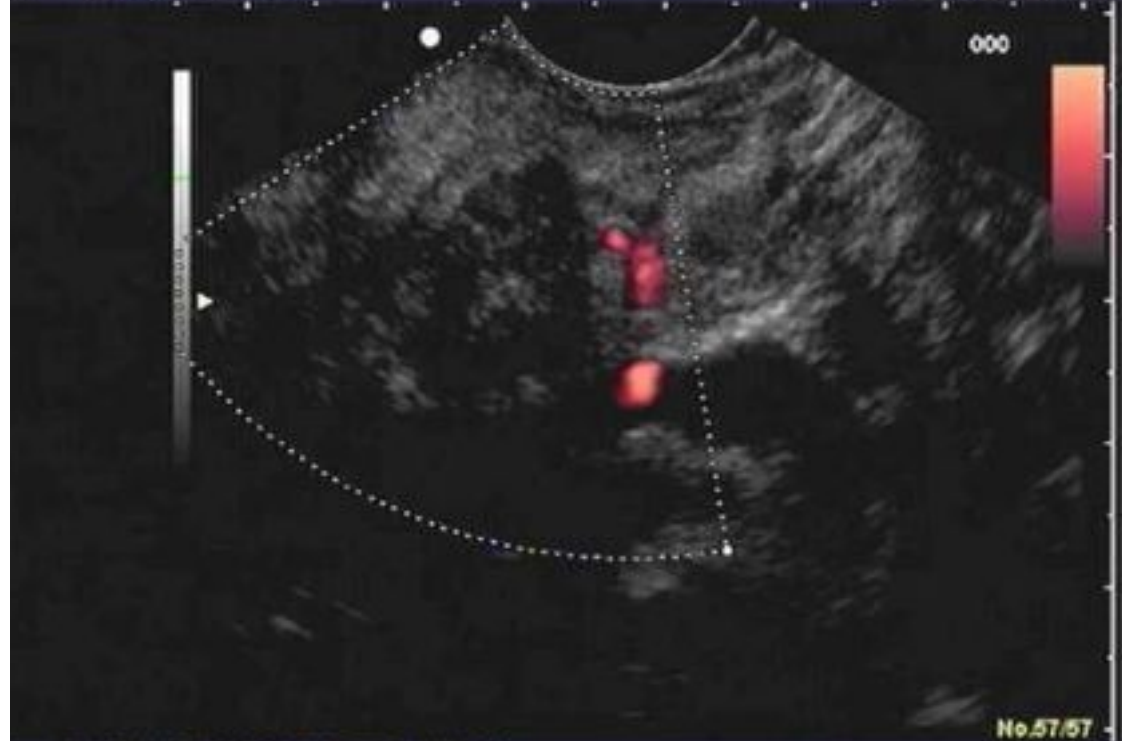
000/045s

BG:15 70/+13/4/0/-/-

EG-3830UT Res.

ENDOSCOPIA

30mm



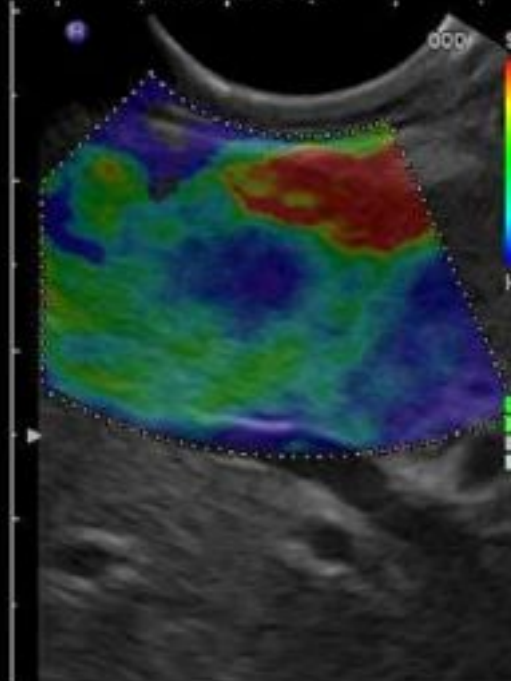
No.57/57

HITACHI ESAOTE LOGOS HV0
FR:21 M. ARCANGELO

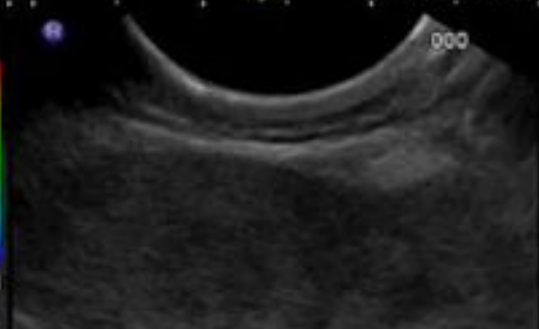
P-H

MI

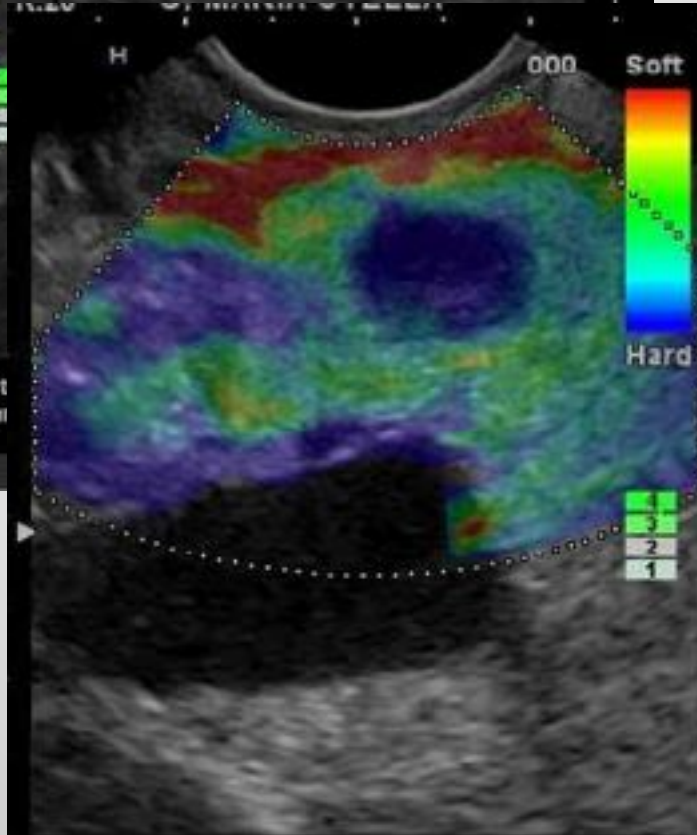
17-MAR-09 11:06:15



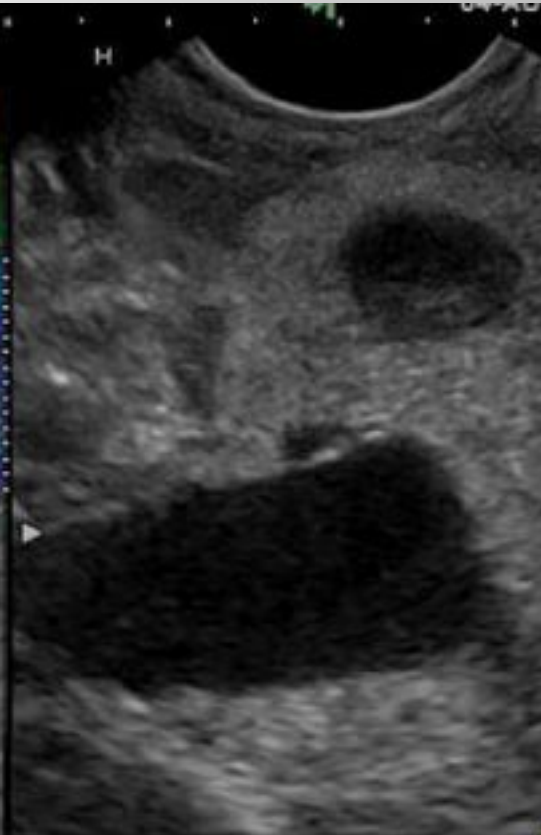
Soft
Hard



BG:15 75/+3/4/0/-/ 26% 3/3/-2/3/4 T-Elast
3870UTK Res. ENDOSCOPIA 40mm



Soft
Hard



BG:14 75/+3/4/0/A/5 22% 3/3/-2/3/4 T-Elasto-L
3870UTK 7.5M ENDOSCOPIA 50mm

BG:14 75/+3/4/0/A/5

HITACHI ESAOTE LOGOS HVG
FR:13 C, MARIA STELLA

P:H

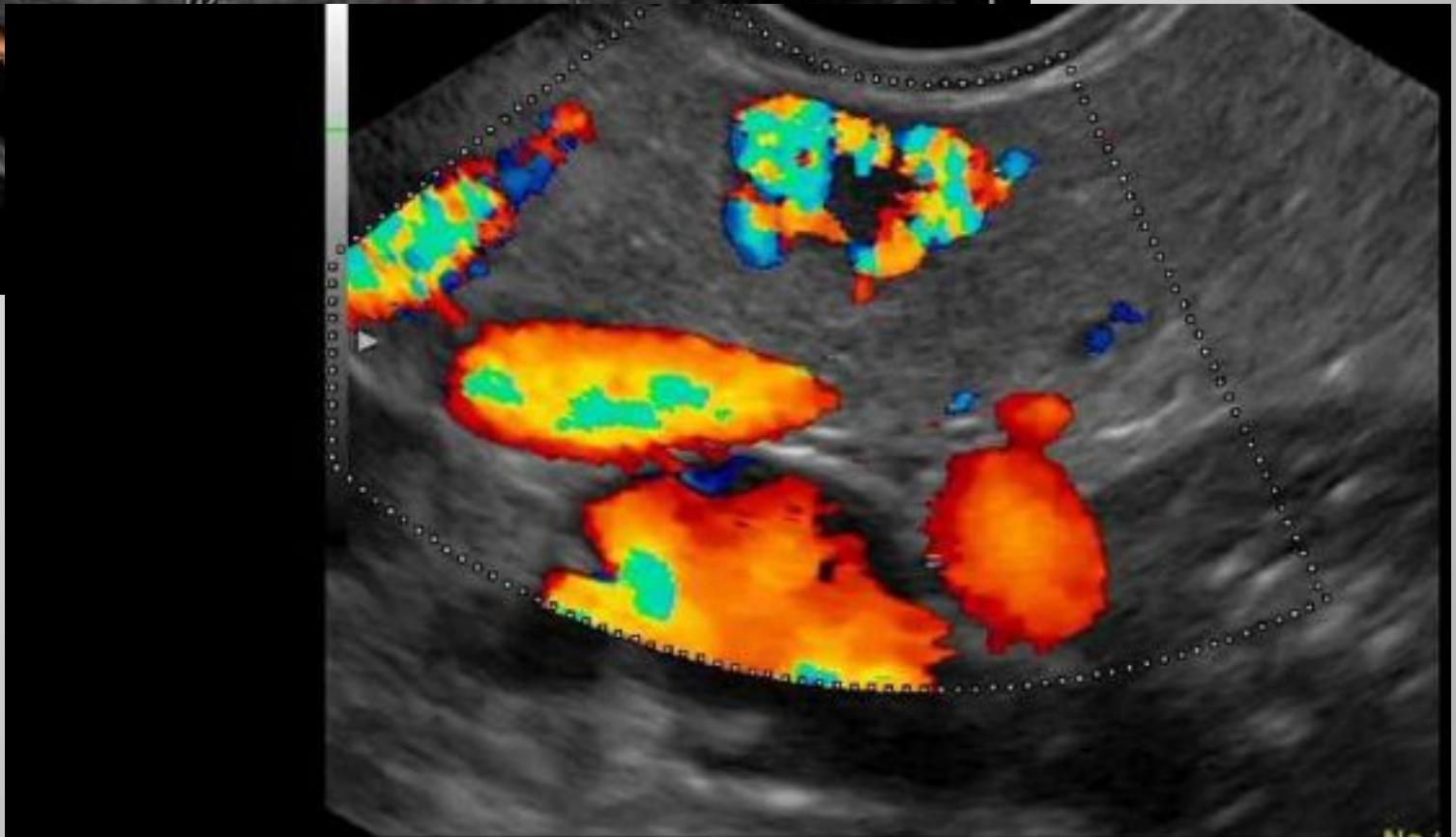
TIS

04-AUG-08 15:44:06

Calip

D1: 10.9 mm

D2: 8.6 mm

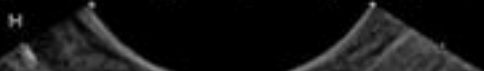


BG:15 75/+3/4/0/-/- CG:45 1/M/2/3/5 650/5.0M/M
3870UTK Res. ENDOSCOPIA 35mm

No. 1

C, MARIA STELLA

04-AUG-08 15:54:04



000

HITACHI

FR:9

R^AIRIDE

P:H

TIS

08-JUL-08 09:12:58

000



75/+3/4/0/A/5

TK 7.5M ENDO

000/045s

BG:13 75/+3/4/0/-

3870UTK Res.

CG:39 3/M/2/4/3 500/5.0M/M

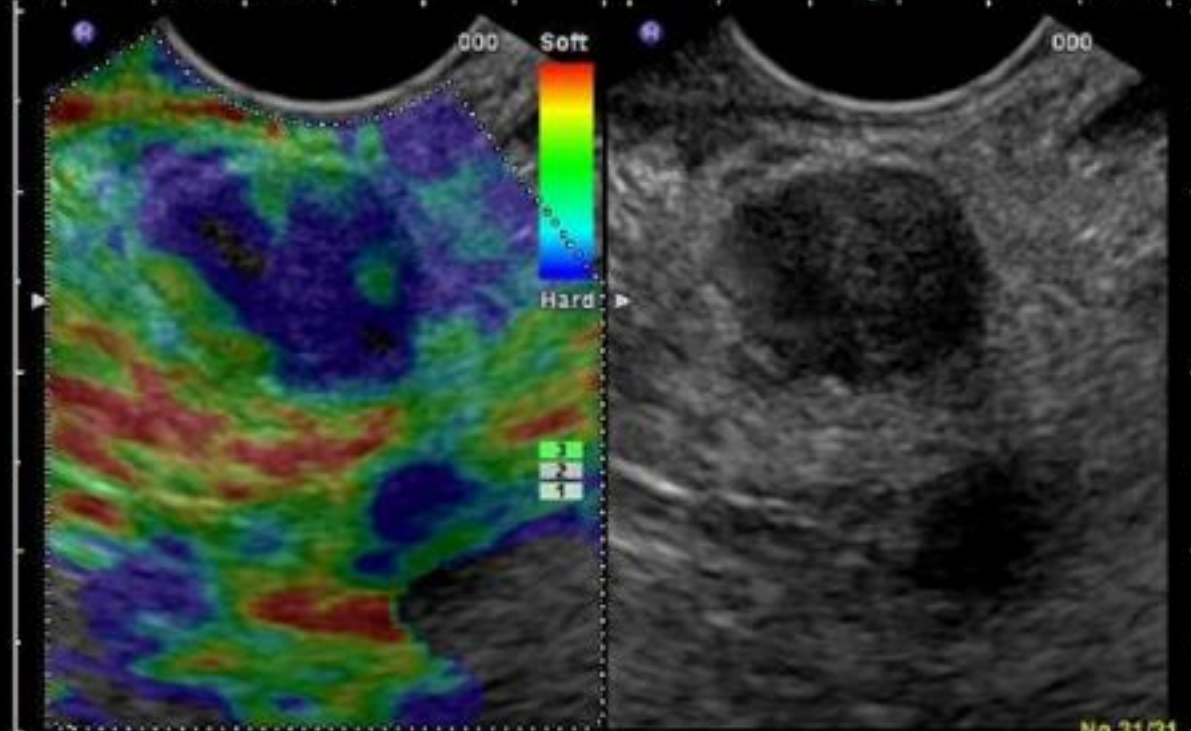
ENDOSCOPIA

50mm

HITACHI ENDOSCOPIA - HSR
FR:19 C. MADDALENA

P:H MI

12-OCT-09 10:20:48

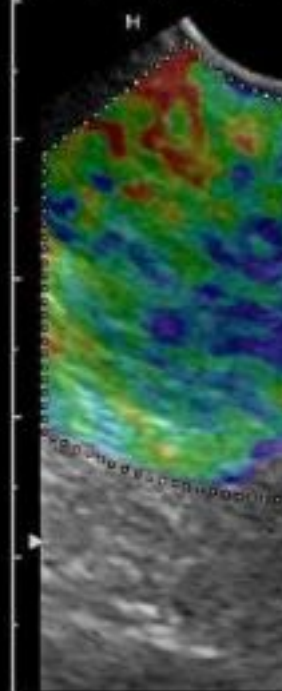


BG:15 65/+2/4/1/- 26% 5/3/-2/3/4 T-Elasto-L BG:15 65/+2/4/1/-
3870UTK Pen. Endoscope 40mm 3870UTK Pen. Endoscope 40mm

No.31/31



HITACHI ENDOSCOPIA - HSR P:H MI
FR:22 B. LUIGI SOSTENNE 23-NOV-09 13:30:19

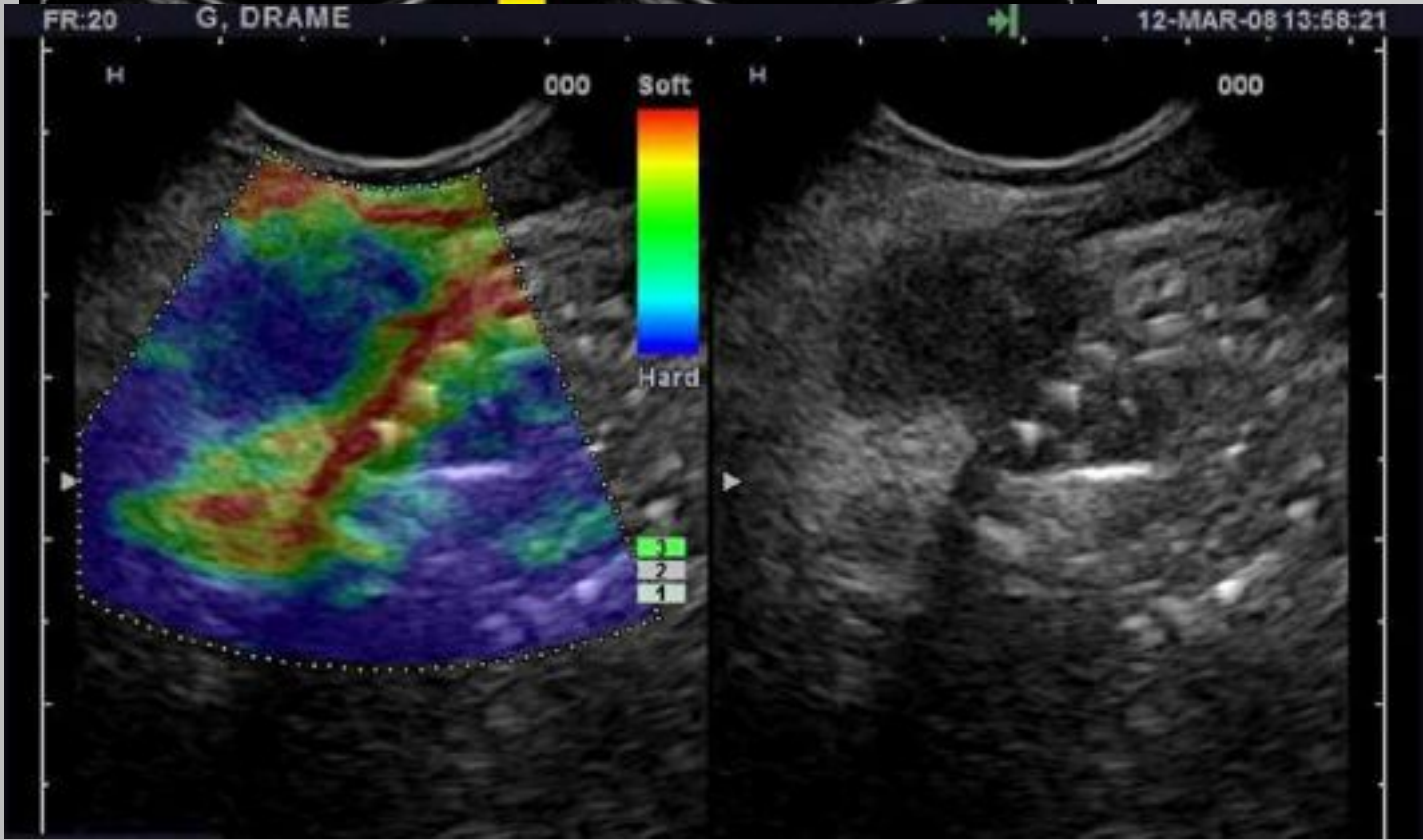


FR:24 B. ROSA 16-DEC-05 11:54:02



BG:23 65/-2/4/0/A/5 2
3870UTK 7.5M Er

BG:4 65/-2/4/1/B.5BL:26% 1/-2/3/4T-Elasto-L
EG-3830UT 9.0M Elastosonografia 50mm
Dual Elasto Map:1 Density:2 FR:H



HITACHI ESAOTE LOGOS HVG
FR:51 R. FRANCO

P:H MI

01-APR-09 09:31:45

000



FR:21 R. FRANCO

01-APR-09 09:27:10

000

Soft

Hard



000

000/120s
BG:15 75/+3/4/0/-/-
3870UTK Res. ENDOSCOP

000/120s
BG:13 75/+3/4/0/-/- 26% 3/3/-2/3/4 T-Elasto-L BG:13 75/+3/4/0/-/-
3870UTK Res. ENDOSCOPIA 40mm 3870UTK Res. ENDOSCOPIA 40mm

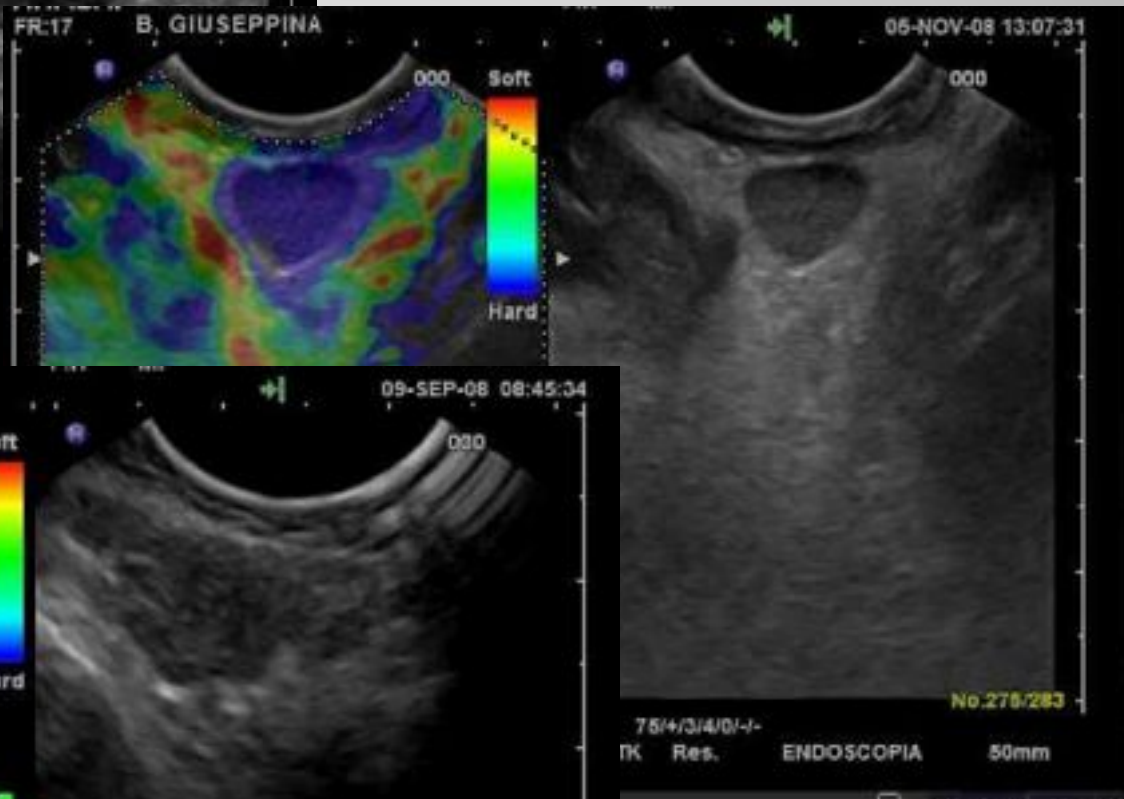
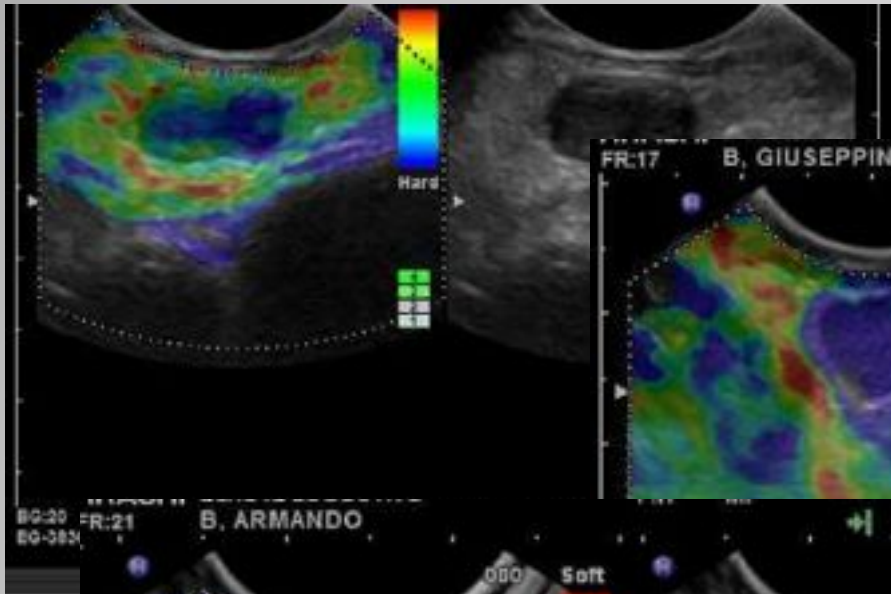
FR:21 B, CAMILLO 28-OCT-09 13:55:43
 Trace
 C1: 1.39 cm
 A1: cm2

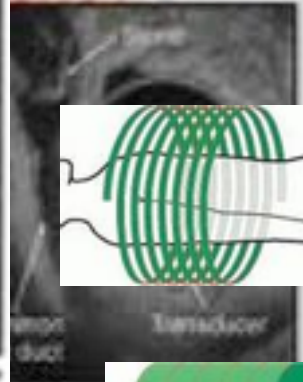
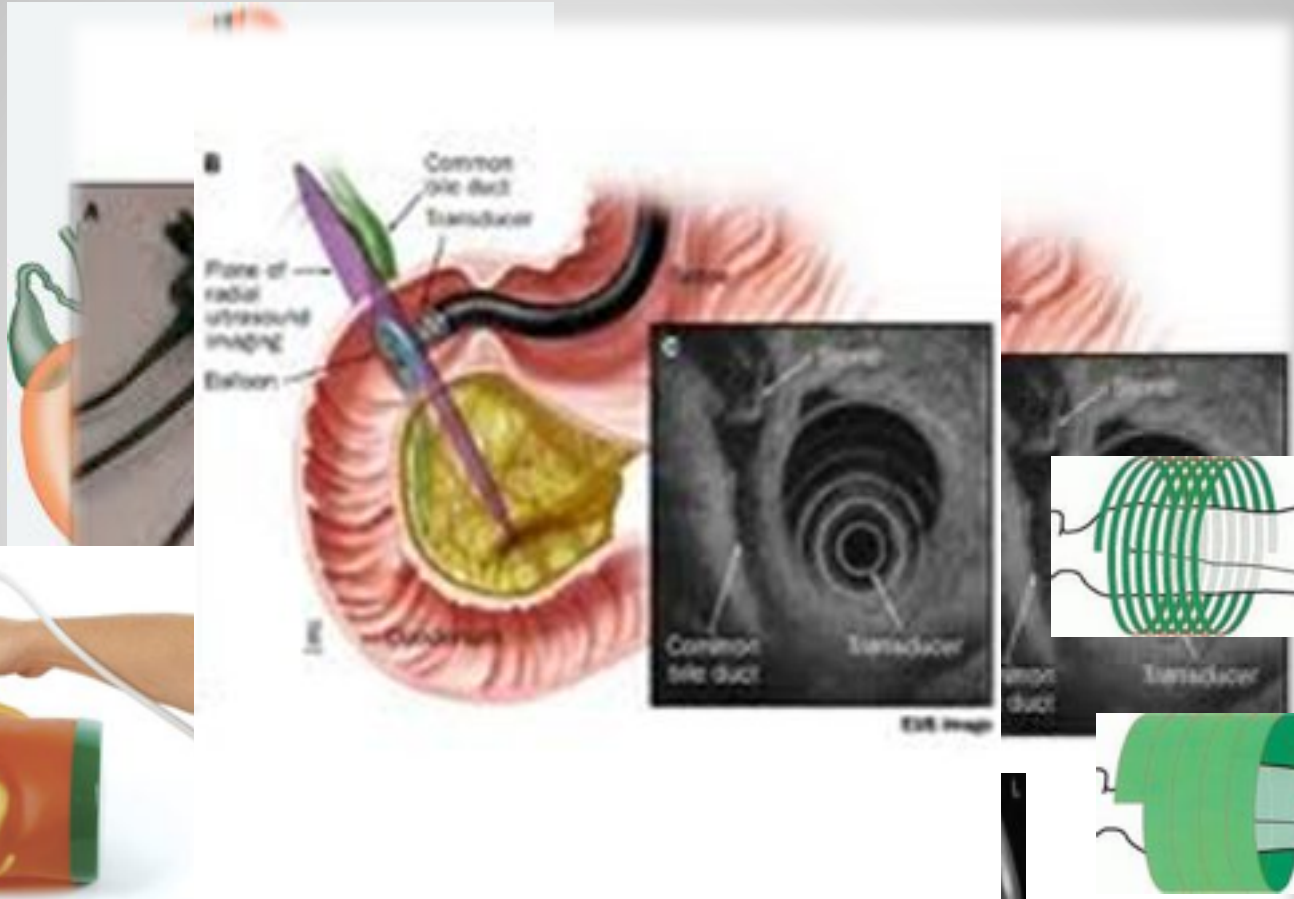
HITACHI ENDOSCOPIA - HSR P:H MI 27-MAY-09 15:03:00
 FR:20 B, CHARLOTTE IRENE

BG:12 65/+2/4/1
 3870UTK Gen.

BG:19 75/+3/4/0/-/- 26% 3/3/-2/3/4 T-Elasto-L BG:19 75/+3/4/0/-/-
 3870UTK Res. ENDOSCOPIA 50mm 3870UTK Res. ENDOSCOPIA 50mm

No.17/17







EUS - FNA

Altri vantaggi di un accertamento istologico

- diagnosi di patologie non frequenti (linfoma) che possono mimare un cancro del pancreas
- biopsie di linfonodi sospetti



EUS

	EUS
Sens	100
Spec	71
PPV	100
NPV	90
Accuratezza	92



Agarwal B, AM J Gastro 2004

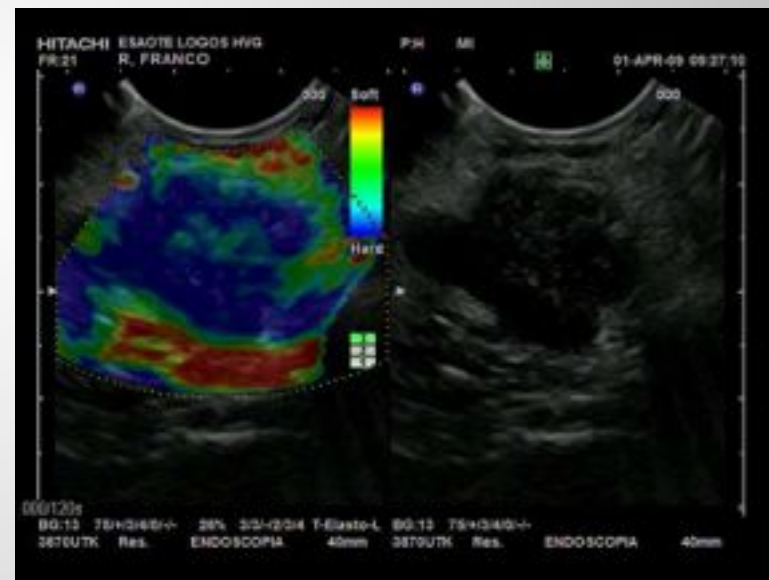
*U.O. Endoscopia
Ircs - CROB*

EUS - FNA

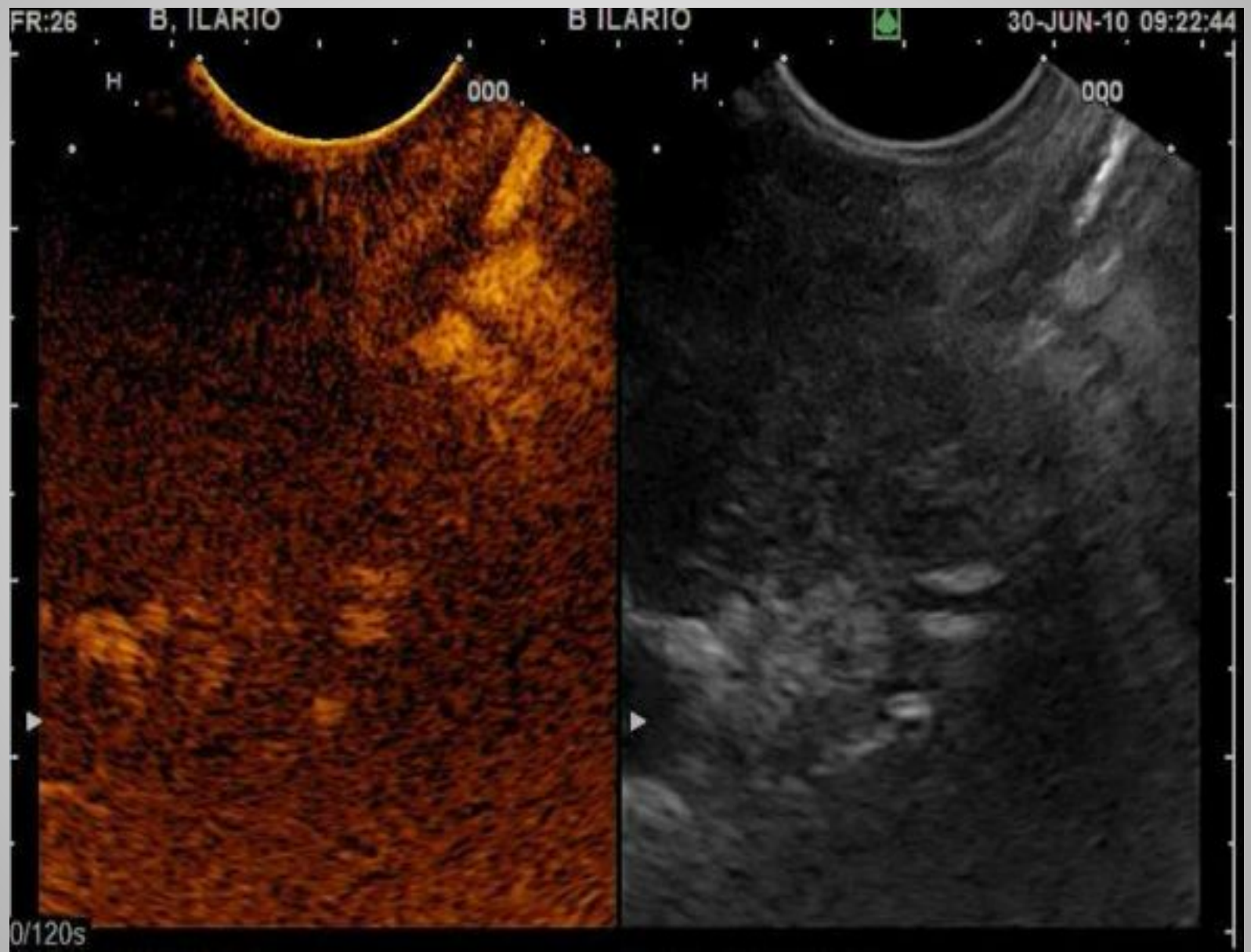
- Lesione primitiva
- Linfonodi
- Lesioni epatiche
- Liquido ascitico

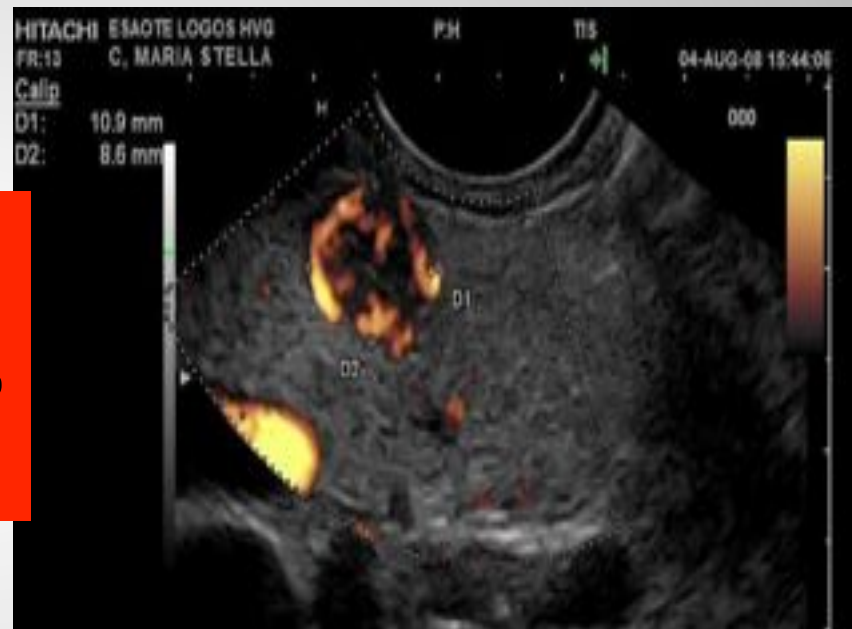


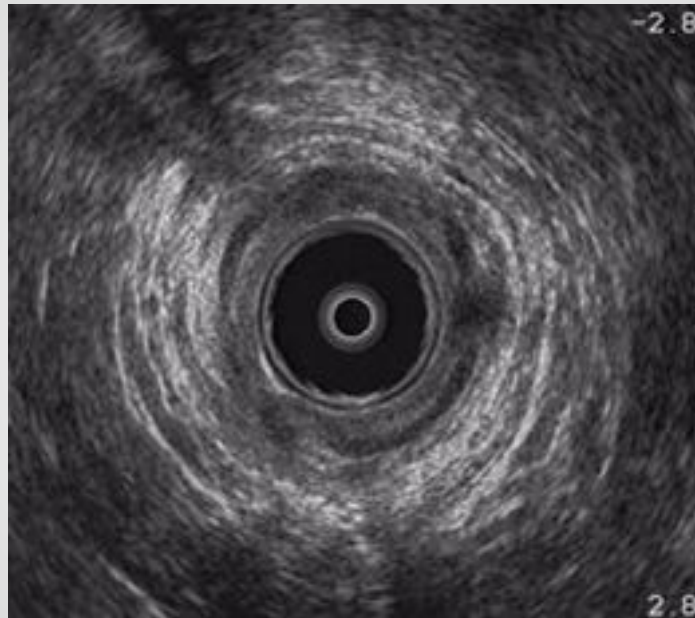
ELASTOSONOGRAFIA



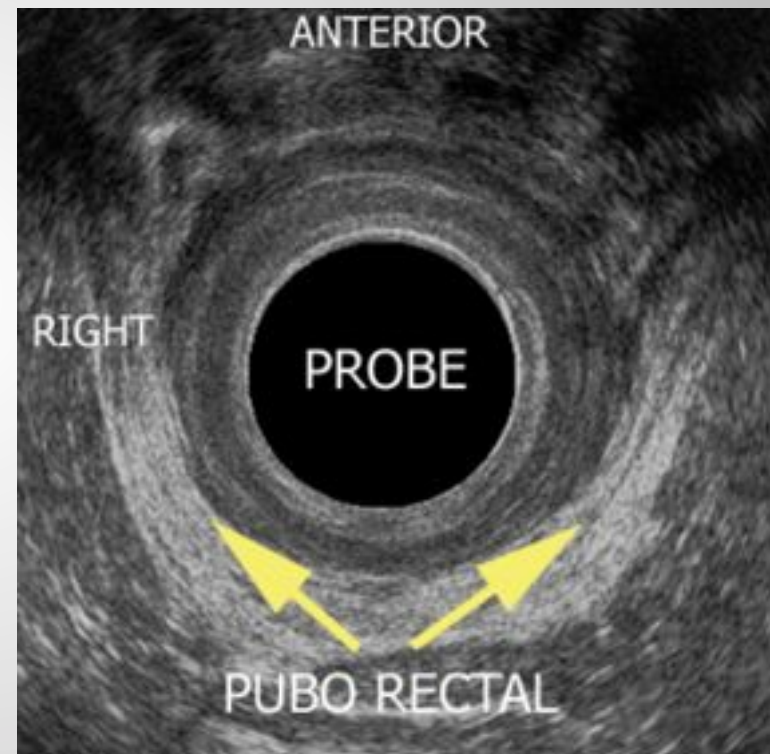
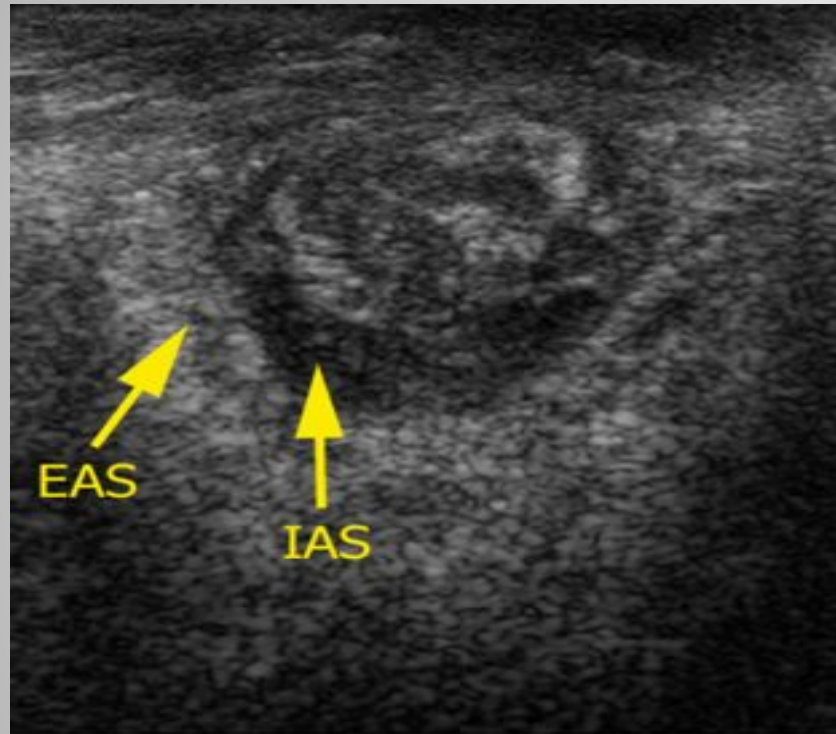
*U.O. Endoscopia
Irccs - CROB*







*U.O. Endoscopia
Irccs - CROB*



TIPI ISTOLOGICI



CARCINOMA SPINOCELLULARE

ADENOCARCINOMA

MELANOMA

GIST

NEOPLASIE NEUROENDOCRINE

LINFOMI



STORIA NATURALE

- **DIFFUSIONE LOCALE:**
 - superiormente al retto,
 - inferiormente alla cute,
 - anteriormente alla vagina-prostata,
 - posteriormente al coccige-sacro;
- **DIFFUSIONE LINFATICA :**
 - per via esopelvica ai linfonodi inguinali (30-40%)
 - per via ascendente ai linfonodi perirettali , iliaci, aortici
 - per via laterale ai linfonodi otturatori ed ipogastrici
- **DIFFUSIONE EMATICA :** fegato e polmone



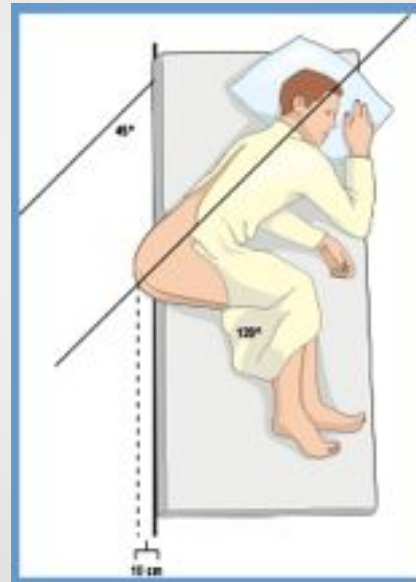
BIOPSIA



*U.O. Endoscopia
Ircs - CROB*



POSIZIONE DI SIMS





CANCRO CANALE ANALE

I fatti:

- Patologia rara
- 1-2% dei tumori del tratto digestivo
- Incidenza annuale 1:100.000
- Istotipo più frequente : carcinoma spinocellulare
- Sopravvivenza complessiva (tutti gli stadi) 60%
- Gruppi a rischio: donne > 60 anni e affette da infezioni sessualmente trasmesse, omosessuali maschi affetti da infezioni sessualmente trasmesse (HPV, AIDS, Herpes, gonorrea, forti fumatori, Crohn perianale)

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EUS

- maggiore invasività rispetto a CT - RMN - PET
- non necessità di sedazione
- morbilità EUS 0,05% = EGDS/COLONSCOPIA (lieve aumento di rischio per FNA)



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CANCRO

1. Trovare la lesione
2. Diagnosi differenziale fra lesioni benigne e maligne
3. Stadiazione
4. Follow-up

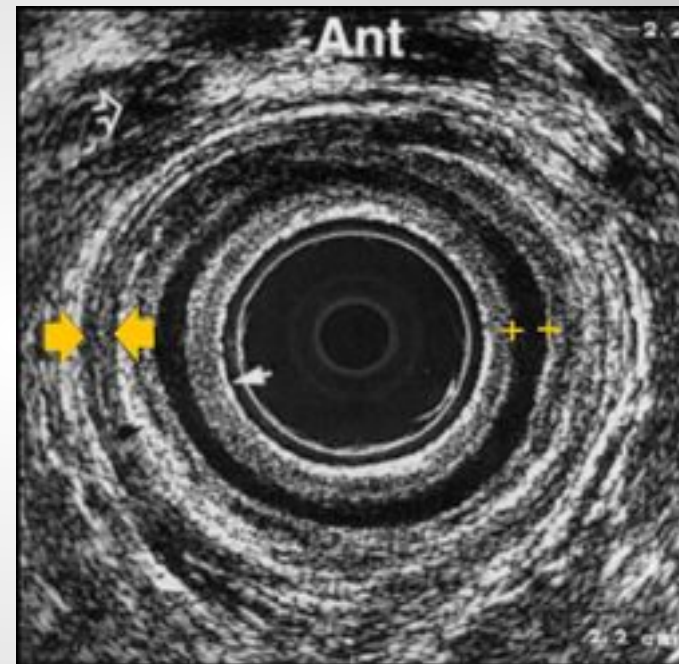


TMN

J Clin Oncol. 1996 Sep;14(9):2527-39

J Clin Oncol. 1997 Sep;15:2040-9

- **83% di remissione completa in pazienti con tumore uguale o > a 5 cm**





EUS-FNA

Morbidity : 0,5-3%

- Sanguinamento
- Infezione
- Febbre
- Dolore



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EUS FOLLOW-UP

ESAME CLINICO / EUS / RETTOSCOPIA/RMN/PET



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