

Echoendoscopie : matériel, petit matériel et procédures

Europharmat Lyon 11 Octobre 2011



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Echoendoscopie actuelle

70 000 échoendoscopies annuelles
2 % actes endoscopiques
43000 biliopancréatiques
7500 ponctions

EUS
Diagnostique

80 %

EUS
Interventionnelle
(FNA)

15%

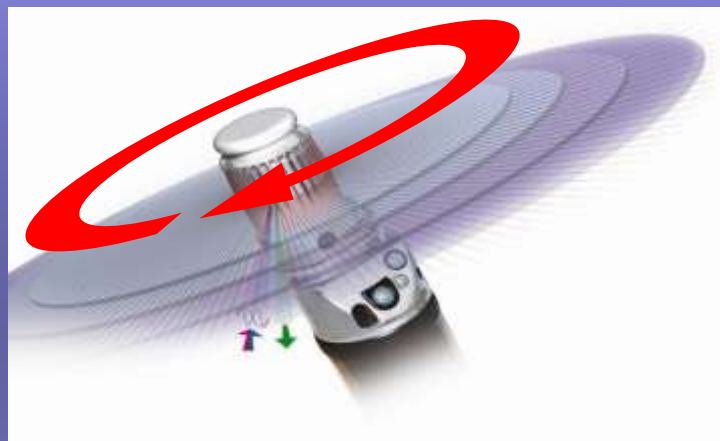
EUS
Thérapeutique

<5 %

Echoendoscopie

- **Différents échoendoscopes**
- Différentes procédures
- Petit matériel

Echoendoscope radial



FUJINON



OLYMPUS

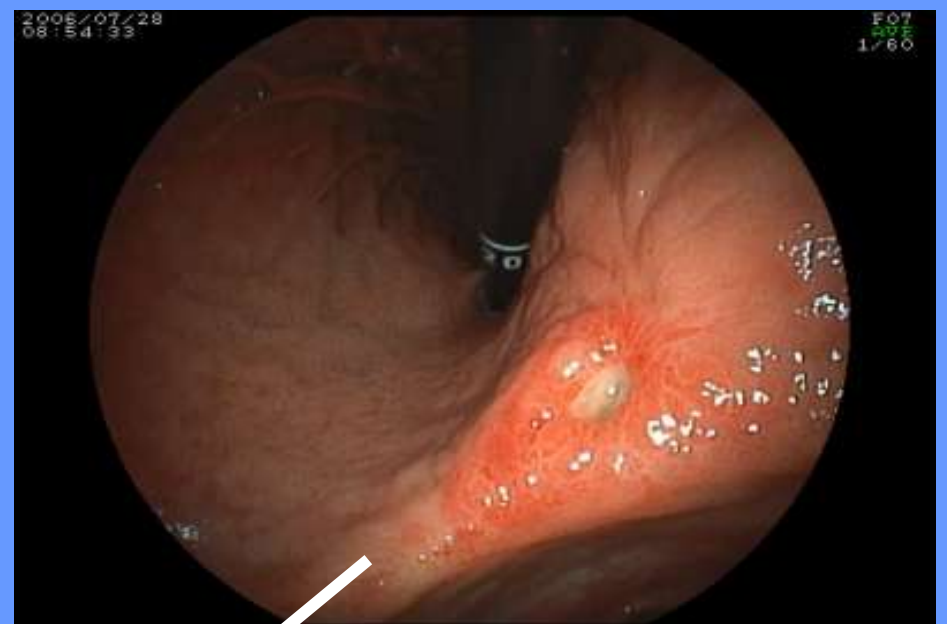


PENTAX



Comparison with companies (Electronic radial)

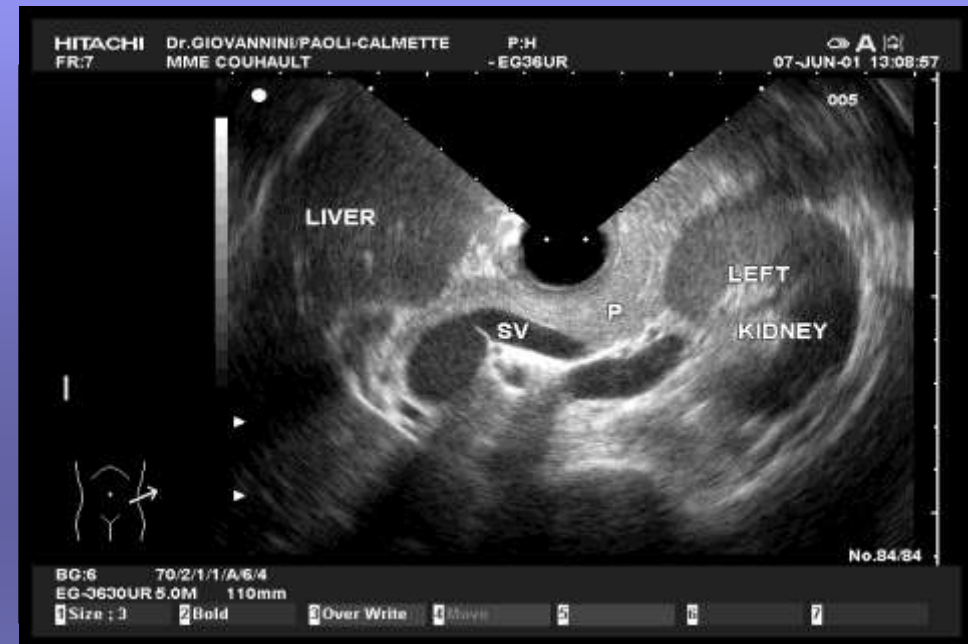
Fuji EG 530 UR



Pentax echoendoscope

EG-3630UR :

- Video endoscope
- Forward view
- 1st electronic radial system
- IMAGE 270°
- Color doppler
- 3.5 – 13 Mhz
- Operating channel 2.2 mm





Olympus Videosystem



Video Echo endoscope

Module video



EUM60 (radial)

Radial echoendoscope with 4 US frequencies

GF-UM160



GF-UM160

C5

9 cm range

C7.5

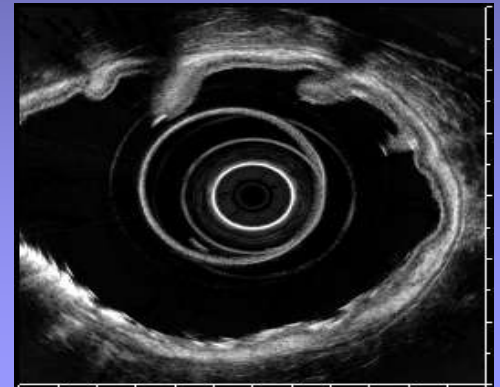
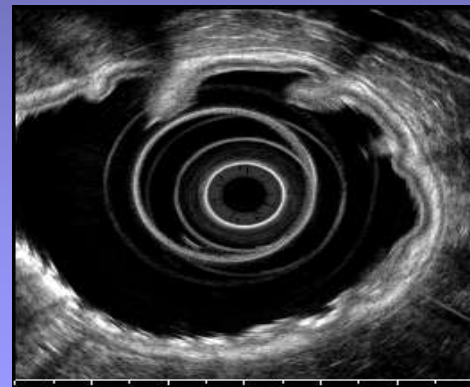
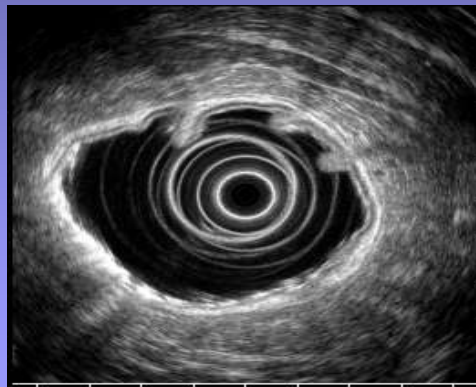
9 cm range

C12

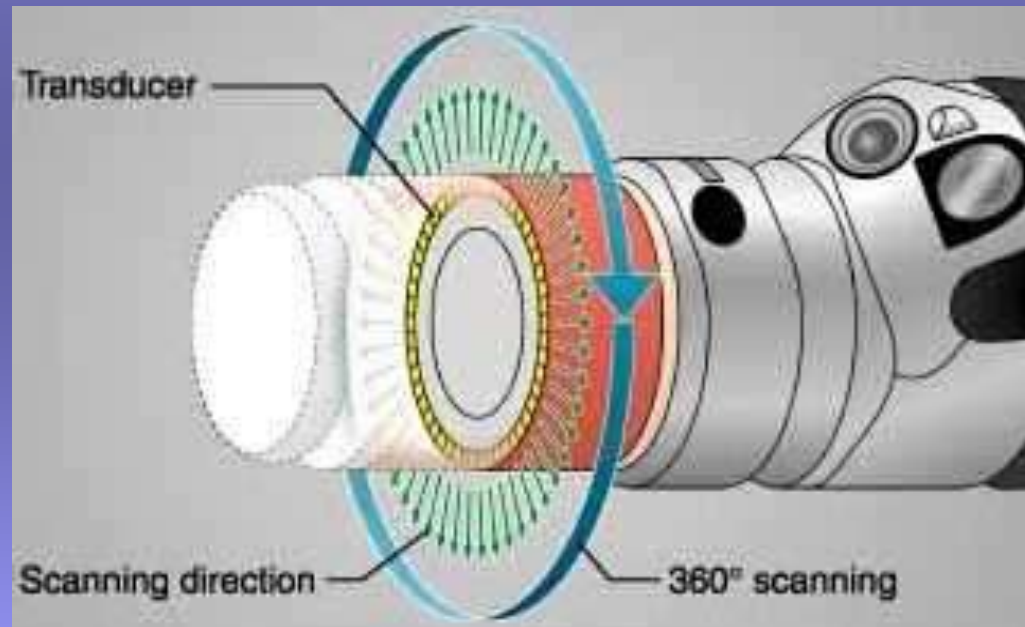
6 cm range

C20

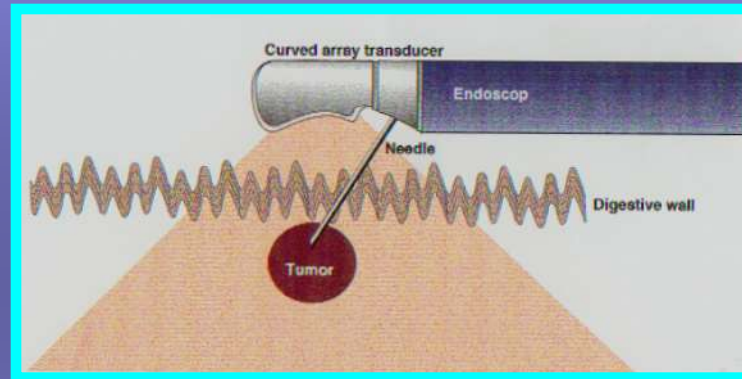
6cm range



GF-UE160-AL5 : radial electronic scope



Linear echoendoscopes



Fujinon

electronic

Olympus

electronic or mechanical

Pentax

electronic

FUJINON



OLYMPUS



PENTAX

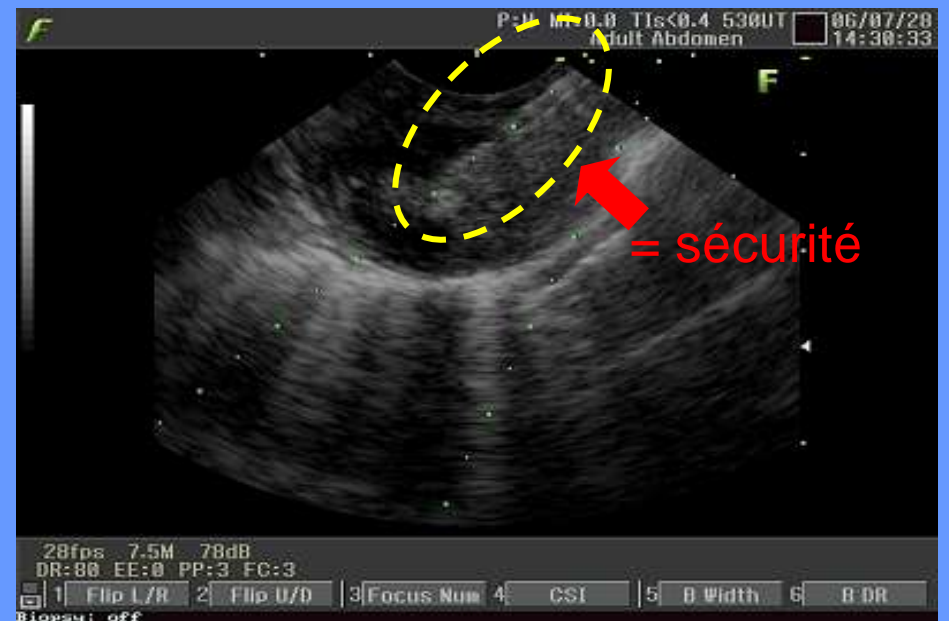


Comparison with other companies (Electronic convex)

	Distal end diameter	Insertion Portion diameter	Forceps Channel diameter	Bending Capability U/ D/ R/L	Ultrasonic Frequency
EG-530UT	ϕ 13.9	ϕ 12.1	ϕ 3.8	160 160 120 120	5-12MHz
GF-UCT160-OL5	ϕ 14.6	ϕ 12.6	ϕ 3.7	130,90,90,90	7.5MHz
EG-3830UT	ϕ 15.5	ϕ 12.8	ϕ 3.8	130,90,90,90	5-10MHz

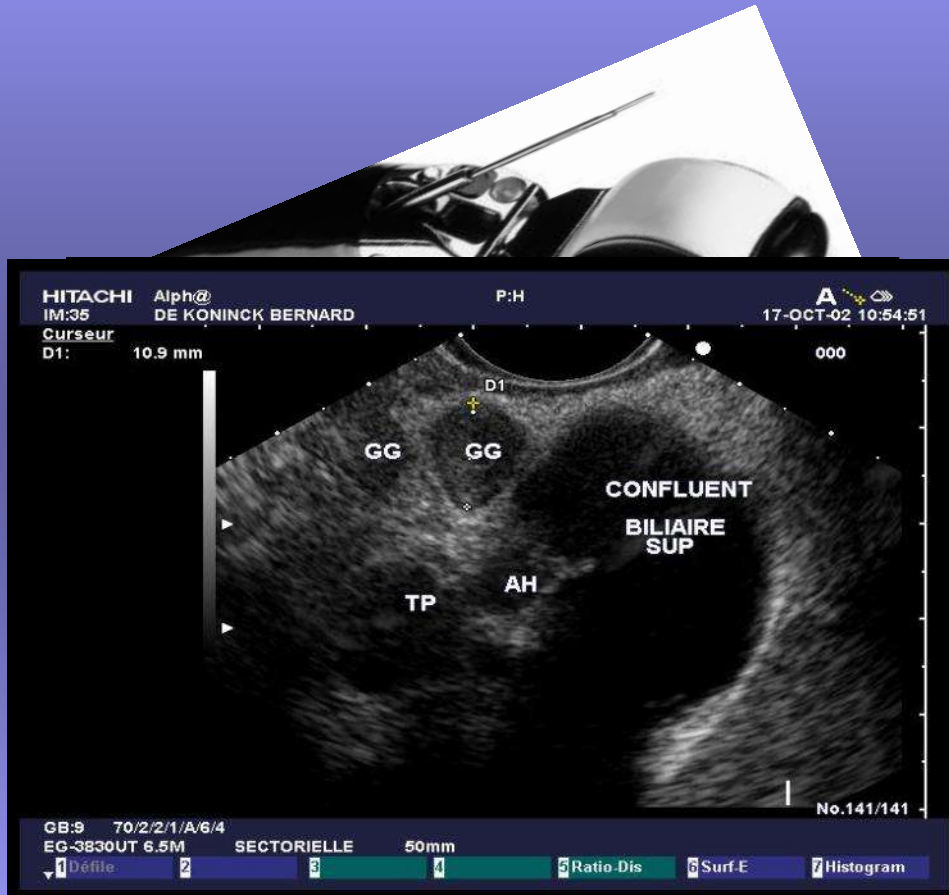
Fujinon EG-530UT

- ◆ needle assistance : prediction of needle trajectory with or without elevator

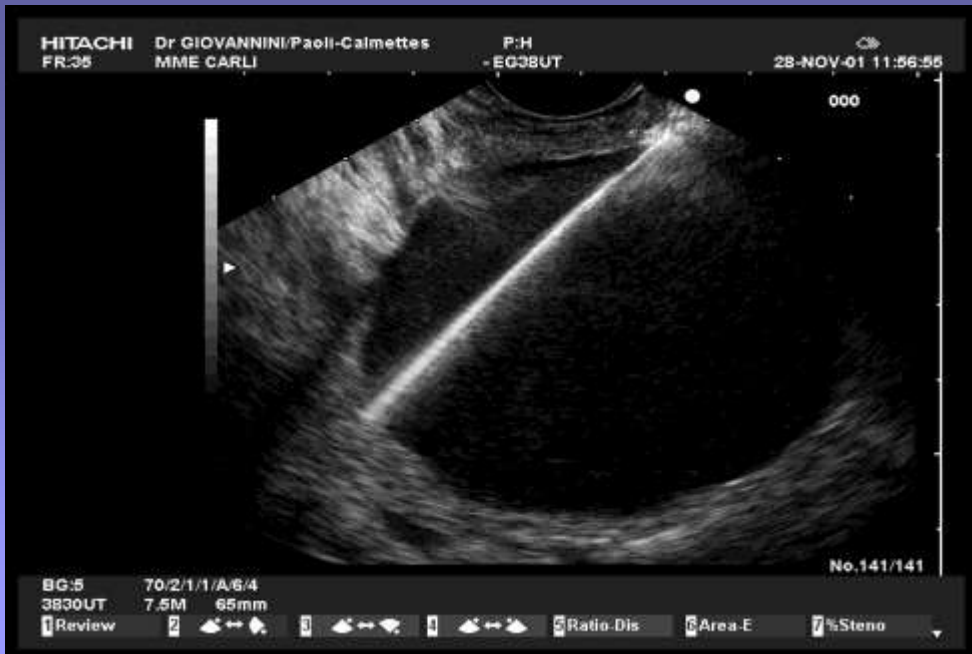


Pentax linear scope

EG-3830UT :



- Video endoscope
- Forward view
- Electronic 120°
 - elevator
 - channel 3,8mm
 - 3.5 – 13 Mhz



Two types of linear echoendoscopes

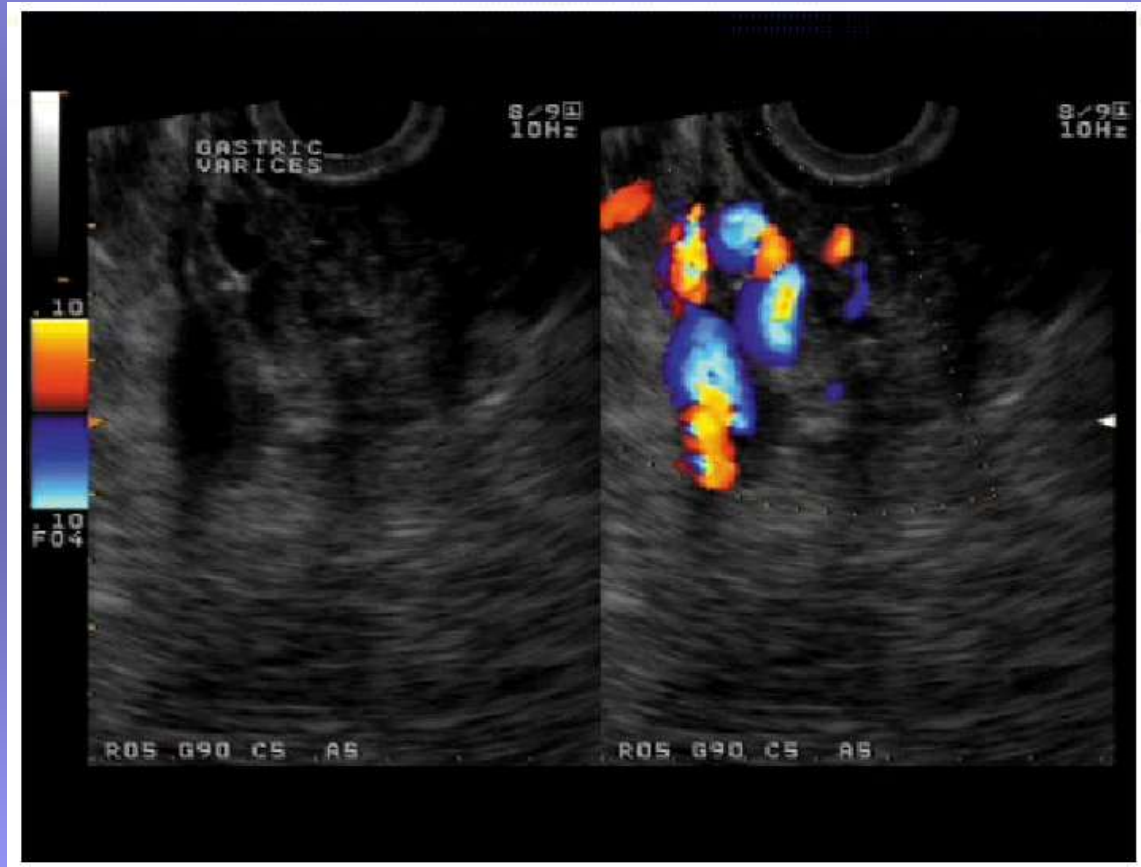
- GF-UCT140-AL5: 3.7 mm operating channel
 - stent 10 Fr
- GF-UC140P-AL5: 2.8mm operating channel
 - Stents 7 Fr



180° Scanning range
elevator



ALOKA Alpha 5 Dual Dynamic Display



DDD independant visualization of FNA and vascular doppler without interference

Fujinon probe



These probes work with a Hitachi platform

Miniprobe 20 Mhz



T1 ie

mm

mp

LUGOL

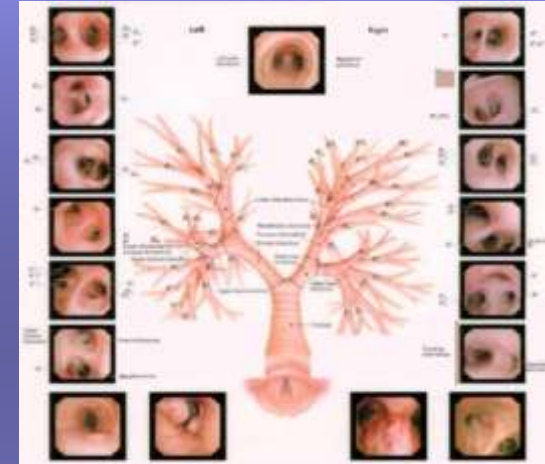
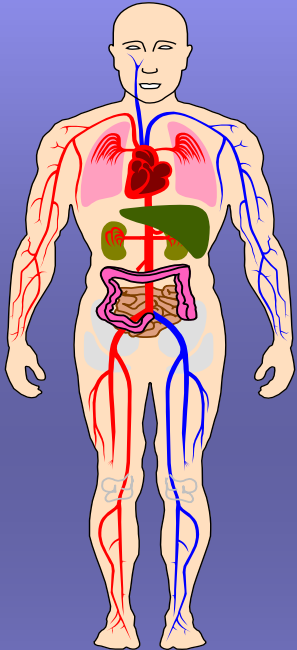
Esophageal cancer : usT1sm



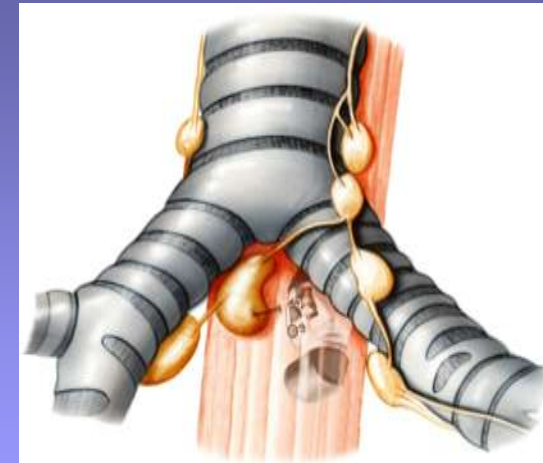
20 MHz : 9 layers

New : Endobronchial probes (Olympus)

Bronchoscope BF-UC260



Outer diameter : 6.9 mm
Length 60 cm
2 mm accessory channel (special FNA needle)
C60 processor

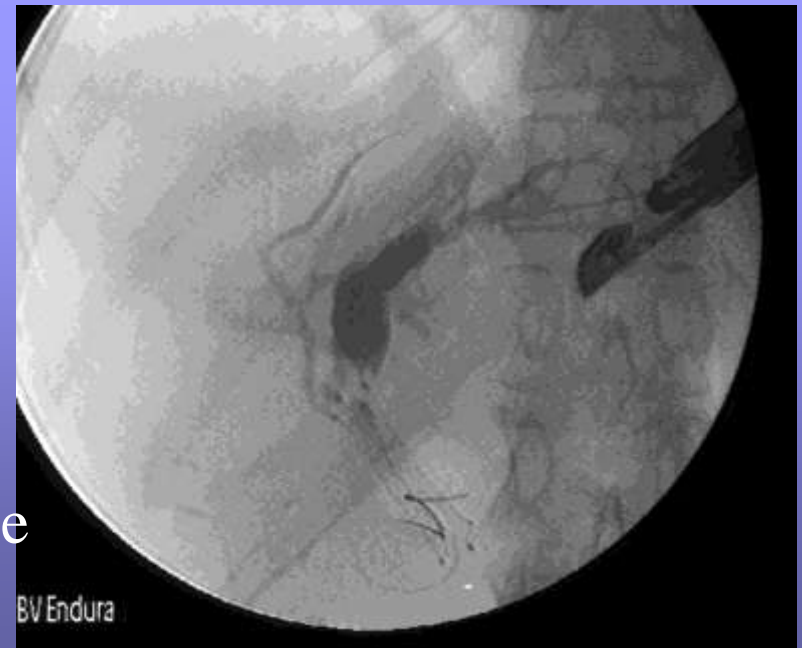
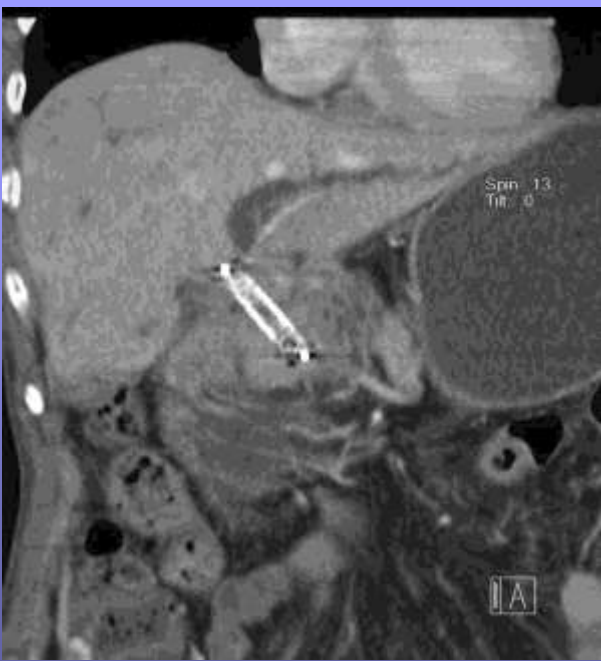


Echoendoscopie

- Différents échoendoscopes
- **Différentes procédures**
- Petit matériel

Différentes procédures

- Diagnostiques pures
- Diagnostiques avec ponction
- thérapeutiques



Anastomose biliogastrique
Et
transgastrique hépatico-jéjunale poussée
Sous échoendoscopie





Résultat

Anastomose biliogastrique
Et
transgastrique hépatico-jéjunale poussée
Sous échoendoscopie

Drainage transgastrique de voies biliaires



Drainage transgastrique de pseudokyste pancréatique



Resultats 3 mois
Après drainage



Le futur de l'échoendoscopie?

L'exemple de la CPRE...

IRM
Multidetector
CT scan



EUS
Diagnostique

10 %

EUS
Interventionnelle
(FNA)

30%

EUS
Therapeutique

50-60%

Echoendoscopie

- Différents échoendoscopes
- Différentes procédures
- **Petit matériel**

Petit Matériel

- Aiguilles
- Cystostomes
- Prothèses

Aiguilles : FNA (fine needle aspiration)

- 19G, 22G, 25 G
- Echotip ou non
- 22 G : la plus répandue
- 19 G : usage thérapeutique
- Différentes variantes : aiguille à guillotine, à brosse, « access needle »...
- Produites par Cook, Olympus, Mediglobe, Boston Scientific

COOK : FNA needle



EUSN1 echotip 19-25G



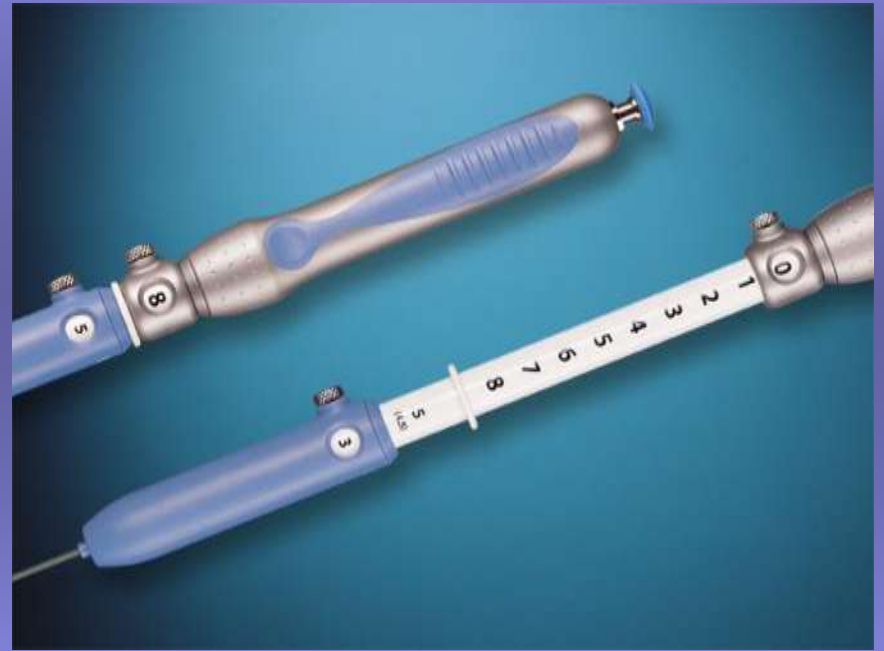
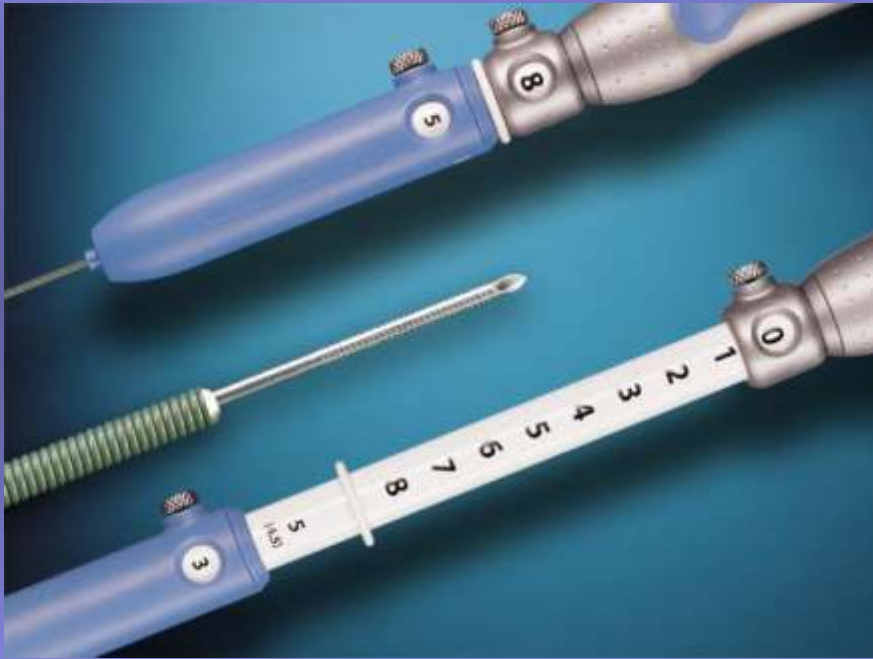
EUSN-3 (green-sheathed, slippery coated)



Echotip

Non echotip

COOK : FNA needle 19-T or 22-T



Independant set up of the sheath and the needle

COOK : FNA needle



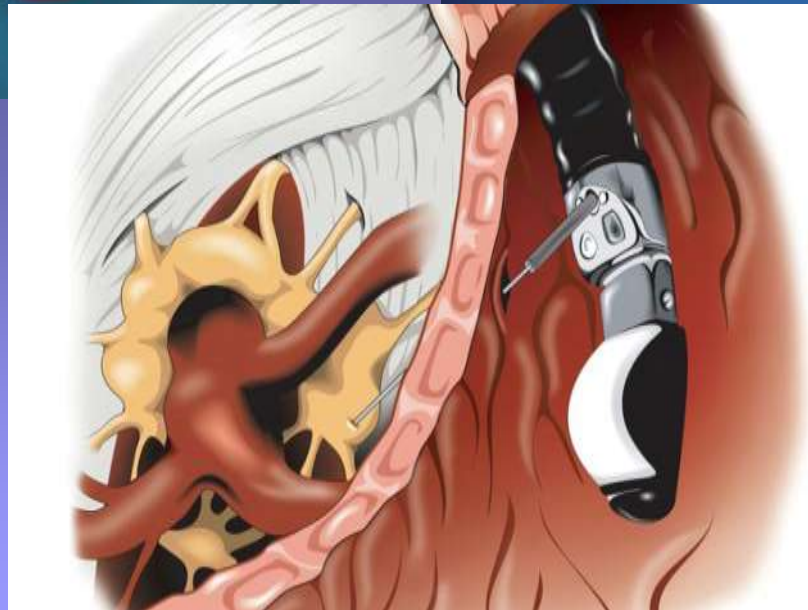
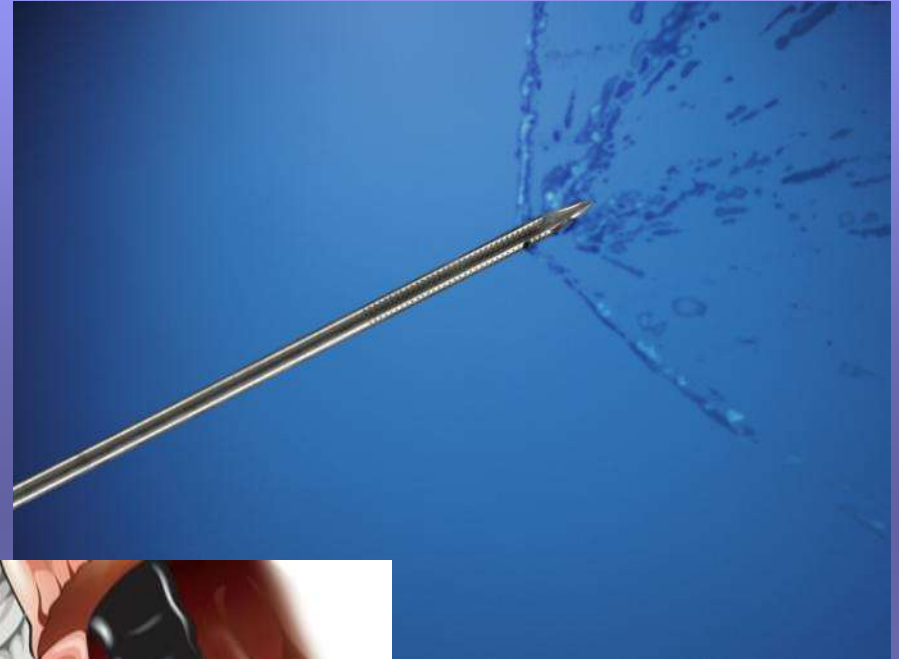
Quick-core needle
19 G



Stiffness
Difficult to deploy in the
duodenum



COOK : FNA needle



Celiac neurolysis

COOK: Brush needle

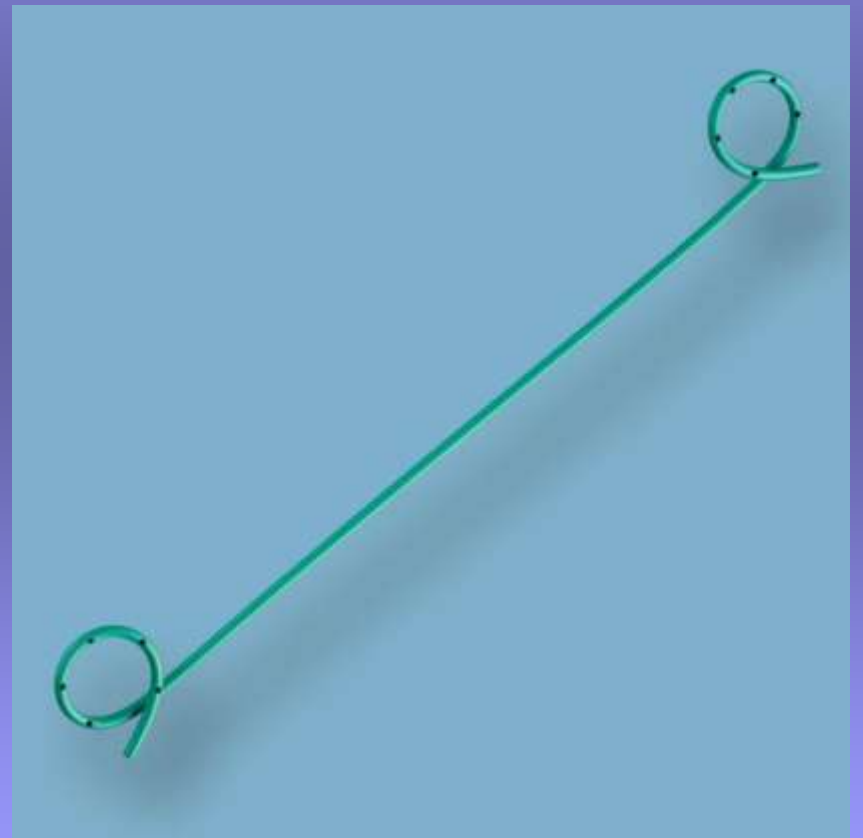
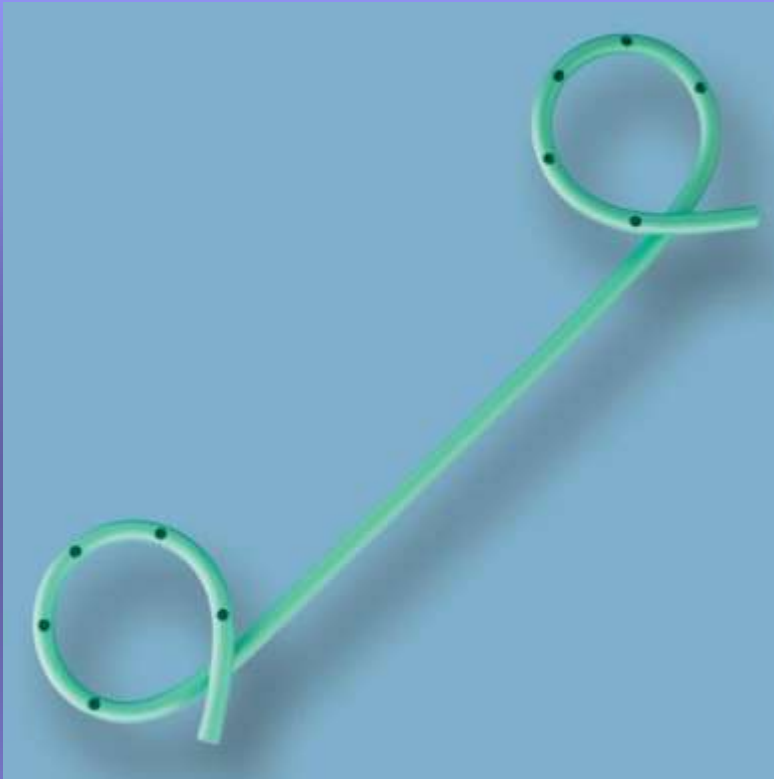


Cystic tumors ?

Access needle : indication thérapeutique



Prothèses double queue de cochon



Cystostome



Conclusion

- Technologie onéreuse pour les endoscopes
- petit matériel le plus fréquent : aiguilles à ponction
- Petit matériel thérapeutique en évolution
- Equipes spécialisées : formation, coût
- Impact diagnostique majeur : oncologie
- Impact thérapeutique de plus en plus développé

Thank you for your attention



Radial sample



Fujinon EG-530UT

◆ video and US quality image , doppler



LUGOL



Esophageal cancer : usT1 is



20 MHz : 9 layers

Hitachi 7.5 probe
Back-loaded



Rectal villous adenoma



Bile duct

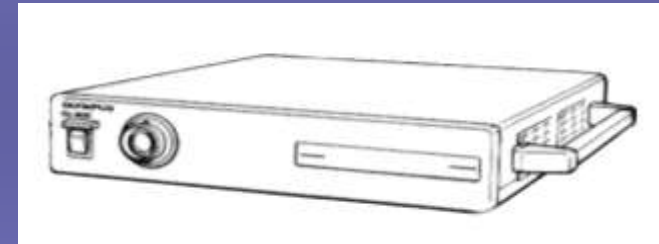


Olympus miniprobes



Miniprobes and motor

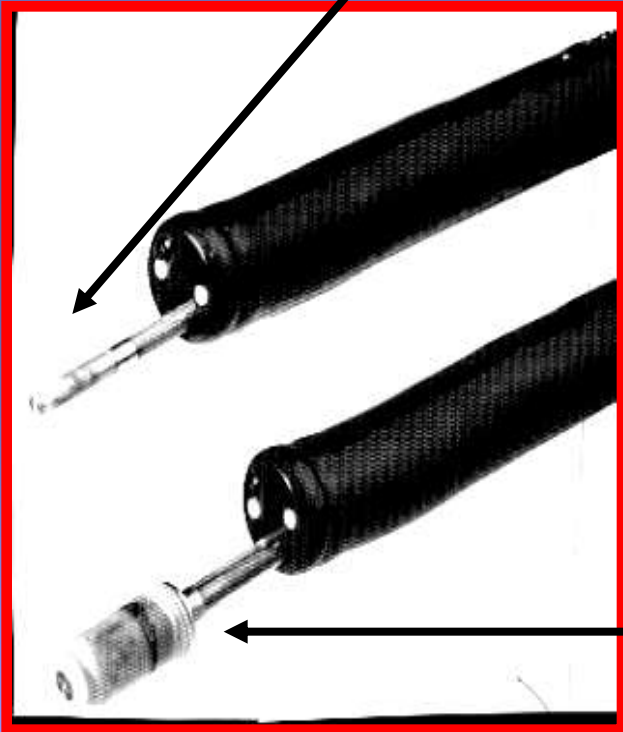
US processor



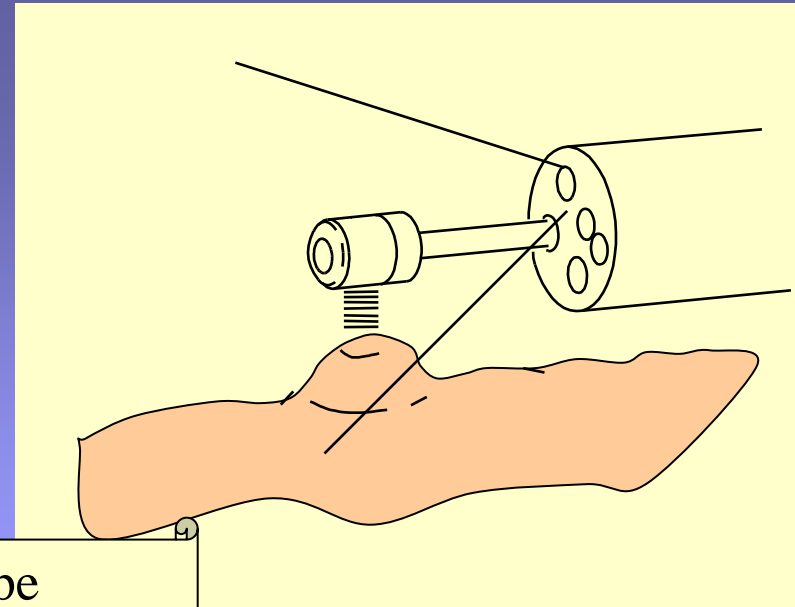
EUM60 (radial)

Motor MAJ 935

PL-2220-12/15/20 Fujinon miniprobes , all 2.6 mm diameter



7.5 MHz Fujinon probe



Front-Loading type
7.5MHz mini-probe