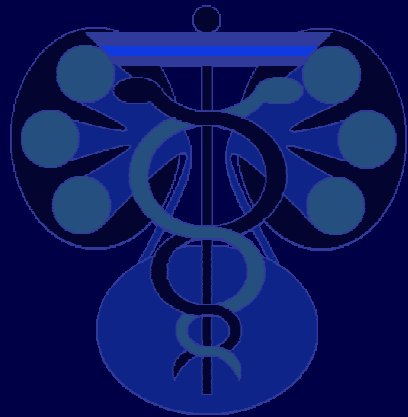


EVOLUZIONE DEGLI STANDARD TERAPEUTICI IN UROLOGIA. UP TO DATE.



Paolo Salsi

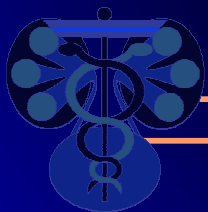
U.O. Urologia

Azienda Ospedaliero Universitaria di Parma

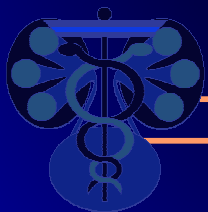
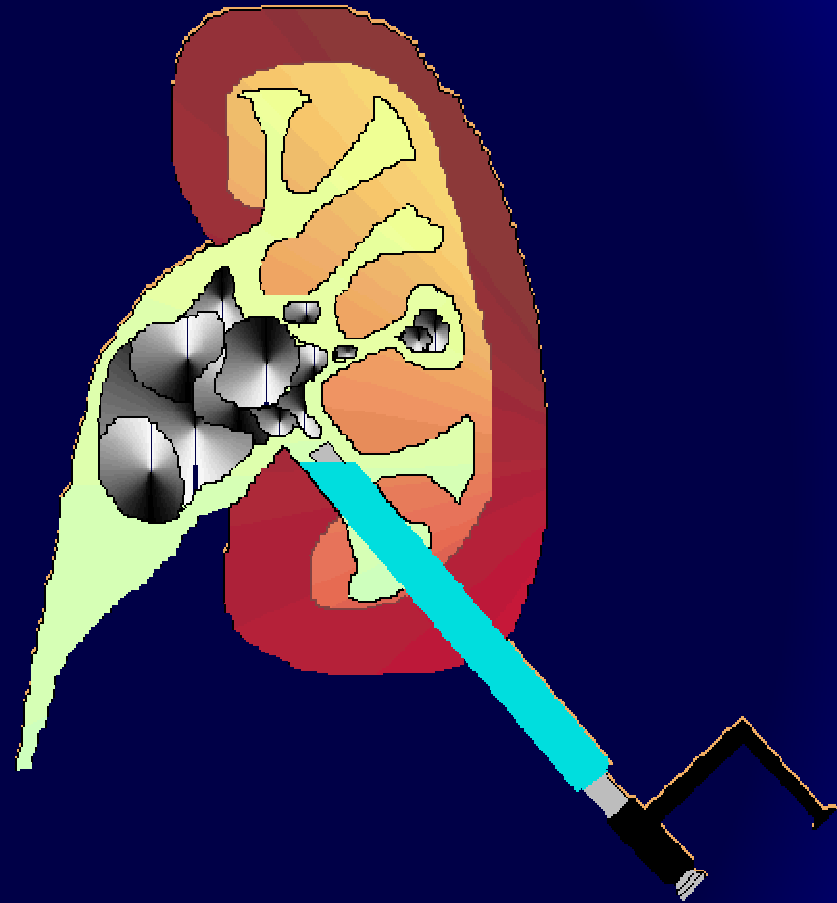
Direttore: Umberto Maestroni

Fino agli inizi degli anni '80 il trattamento della calcolosi reno-ureterale era esclusivamente di pertinenza chirurgica

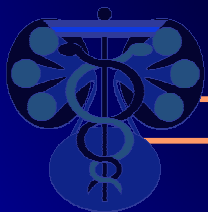
Anche nelle calcolosi di piccole dimensioni (< 1 cm), se la terapia medica non sortiva effetto si doveva provvedere in modo invasivo (ureterolitomie)



Le prime esperienze di
metodiche "meno
invasive" endoscopiche
iniziarono in quegli anni
- avvento della
ecografia
bidimensionale
(nefrostomie/trissie
percutanee – Fernstrom
1976 first series)



Le prime esperienze cliniche con litotritori ad onde d'urto extracorporee si affacciano in Europa nei primissimi anni '80 (Chaussy – Lancet 1981)



Tutti gli anni 90 sono stati caratterizzati dall'utilizzo dei litotritori extracorporei ad onde d'urto con indicazioni a trattamenti terapeutici di **calcoli anche > 2 cm**

(necessità di ritrattamenti; manovre ancillari es. stent; steinstrasse etc. etc.)



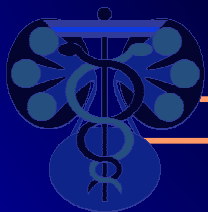
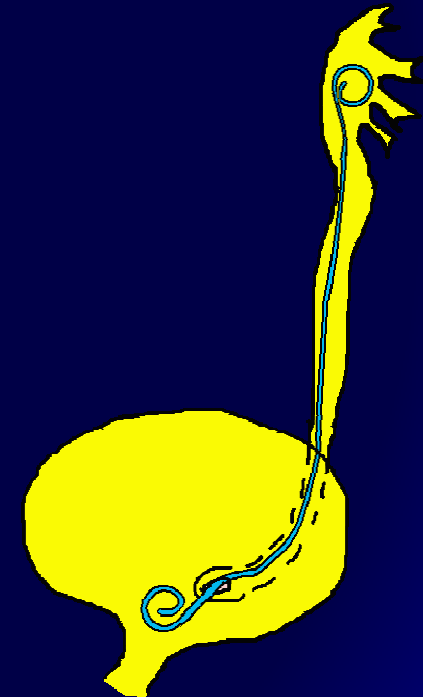
TIPO 1



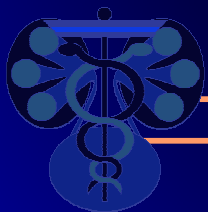
TIPO 2

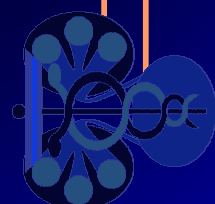
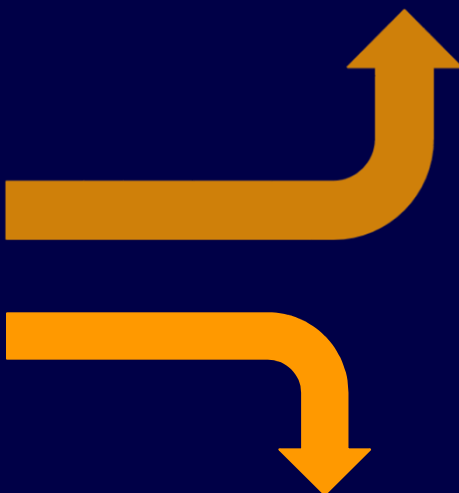
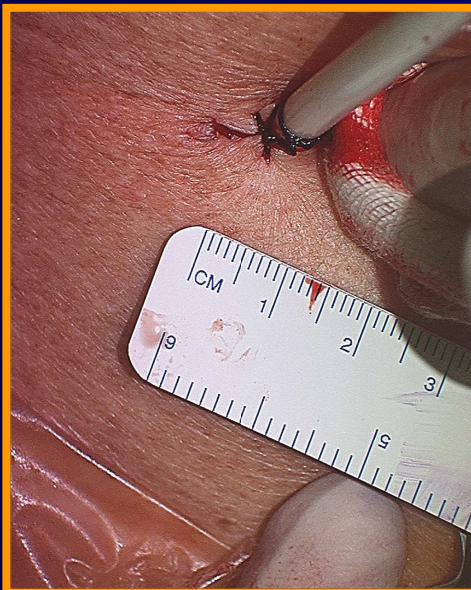


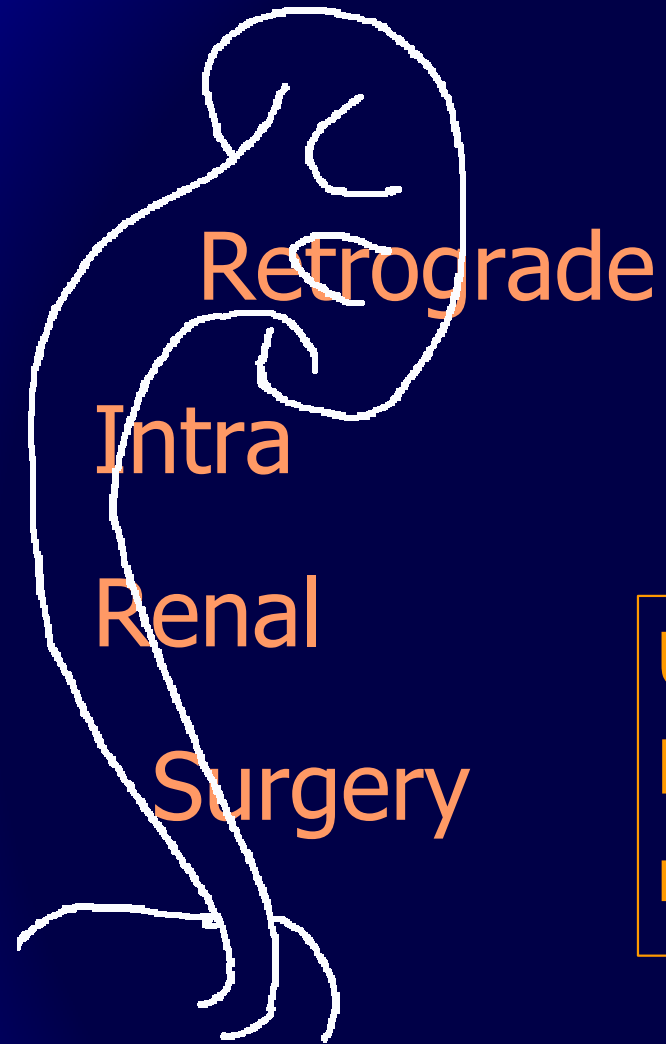
TIPO 3



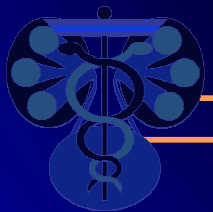
Agli inizi del 2000, rivalutazione delle metodiche percutanee ed endourologiche, grazie anche alla miniaturizzazione degli ureteroscopi semirigidi (10 Fr poi 8 Fr, poi 6,5 Fr); all'avvento degli ureteroscopi flessibili e alla riduzione dei calibri di tutto l'armamentario per gli accessi percutanei al rene







URETEROLITOTRISSIA
FLESSIBILE – chirurgia
retrograda intrarenale - **RIRS**



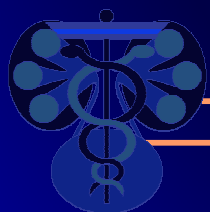
INDICAZIONI RIRS

Calcoli renali $> 1,5$ e ≤ 2 (casi selezionati - pediatrici);
range ottimale 1,2-2 cm endorenali/calicali inferiori

Calcoli renali, anche più piccoli, ma refrattari alla
litotrissia extracorporea o all'espulsione

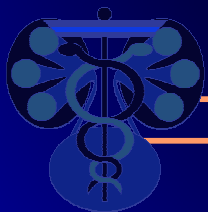
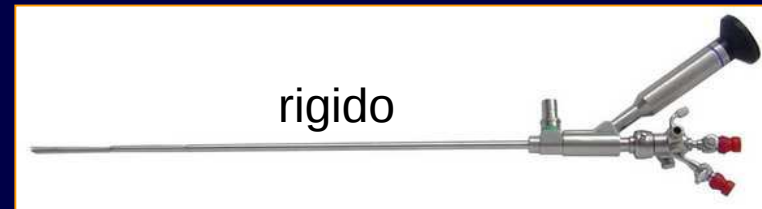
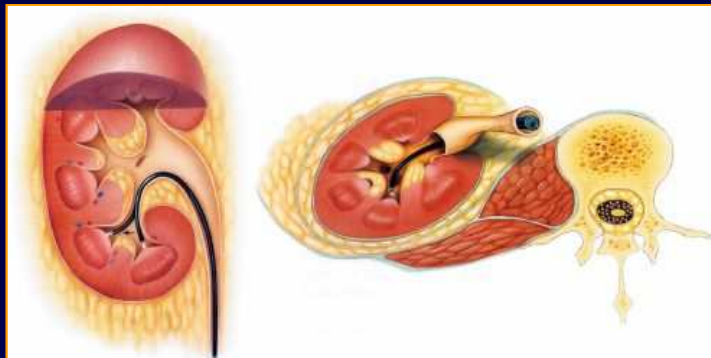
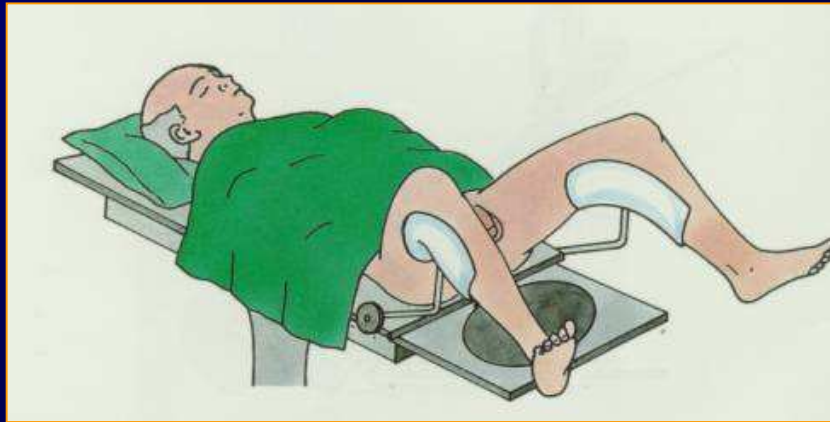
Calcoli risaliti in pelvi dopo ureterolitotrissia semirigida
in uretere (manovre contestuali – stessa seduta
chirurgica)

Procedure diagnostiche flessibili endorenali (ematurie di
lato, neoplasie uroteliali, follow up etc.)

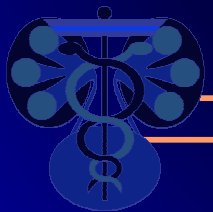
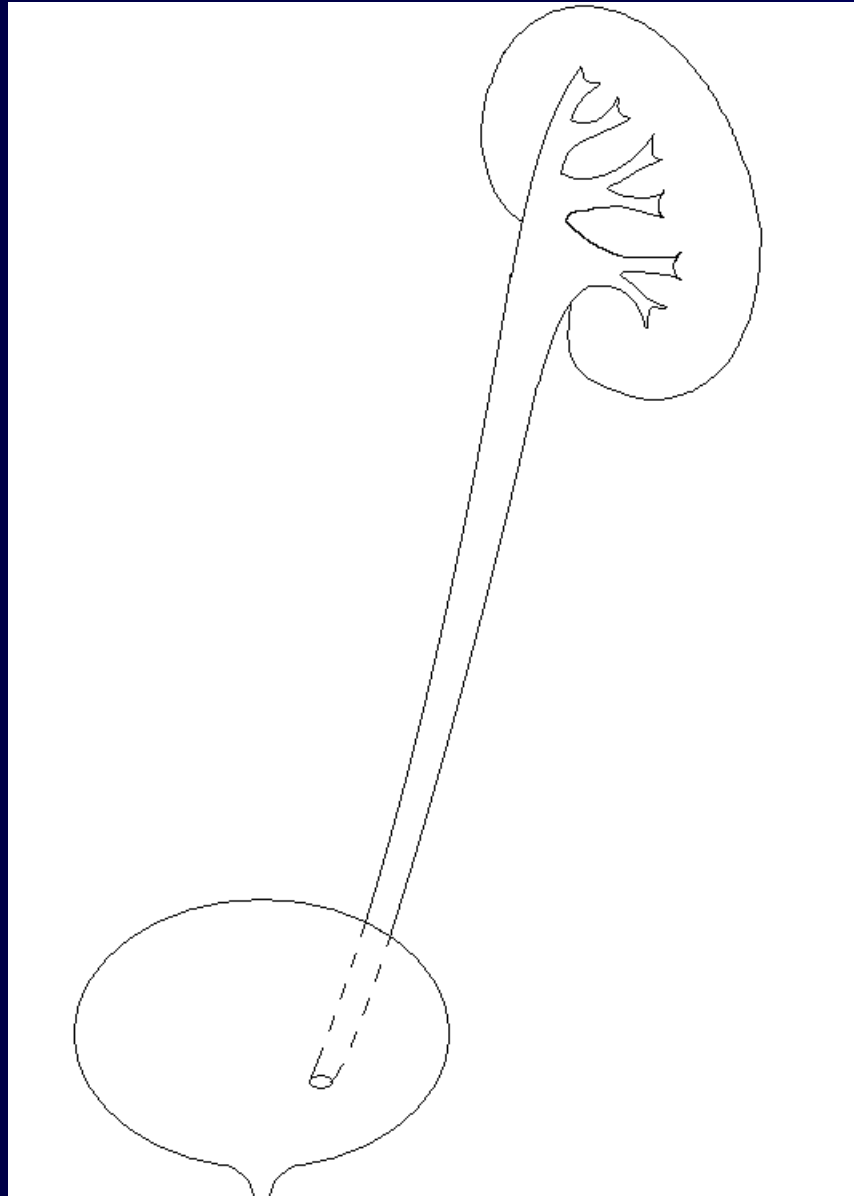


UPA (ureteropielografia anterograda)

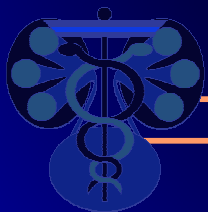
URS (ureterorenoscopia)



UPA / URS FLESSIBILE



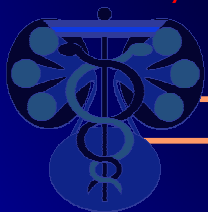
URS operativa → RIRS



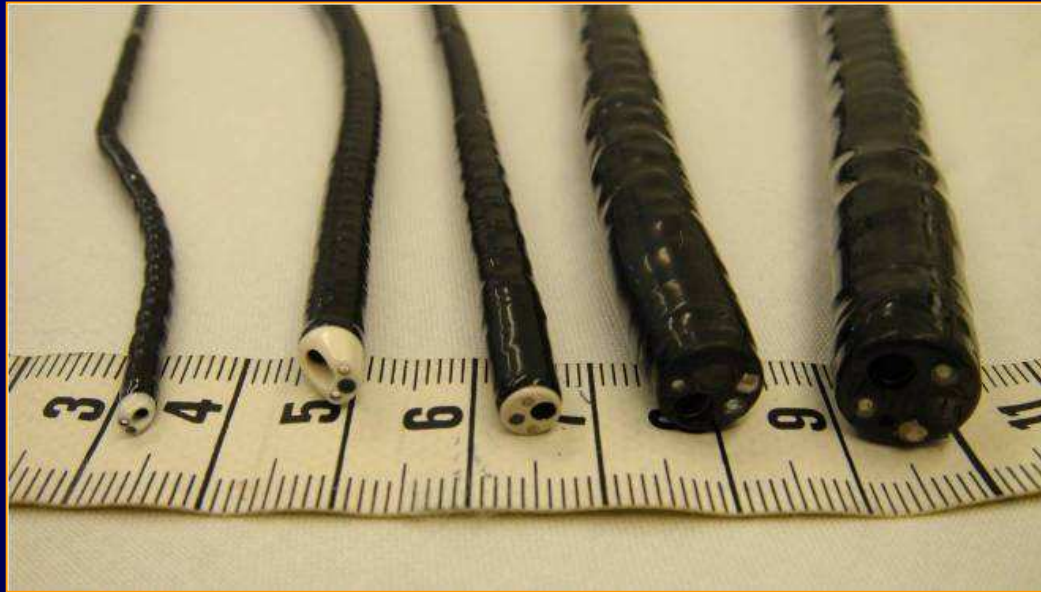
USO DI CESTELLI / BASKET PER LITOLAPASSI



2,4 Fr 1,9 Fr 1,5 Fr 1,3 Fr



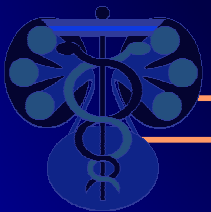
EVOLUZIONE STRUMENTARIO



Riduzione calibri mantenendo operatività

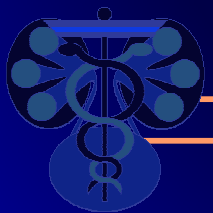


Sistemi video
DIGITALI





***NEFROLITOTRISSIA
PERCUTANEA***



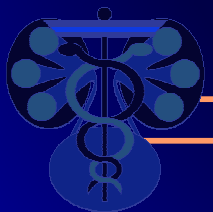
PNL

Procedura già praticata a livello sperimentale negli anni Cinquanta e Sessanta, poi temporaneamente abbandonata in favore della ESWL

Attualmente gold standard nella gestione della calcolosi complessa della via escretrice superiore

In posizione prona (più antica) e supina (sempre più utilizzata)

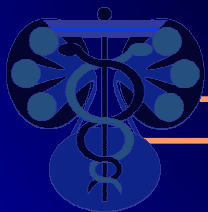
Necessita **SEMPRE** di anestesia generale



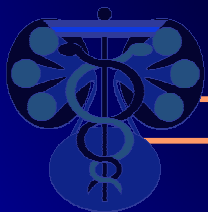
INDICAZIONI PNL

Calcoli **renali** >2cm, anche a stampo completo racemosi (staghorn)

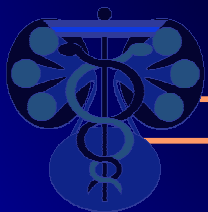
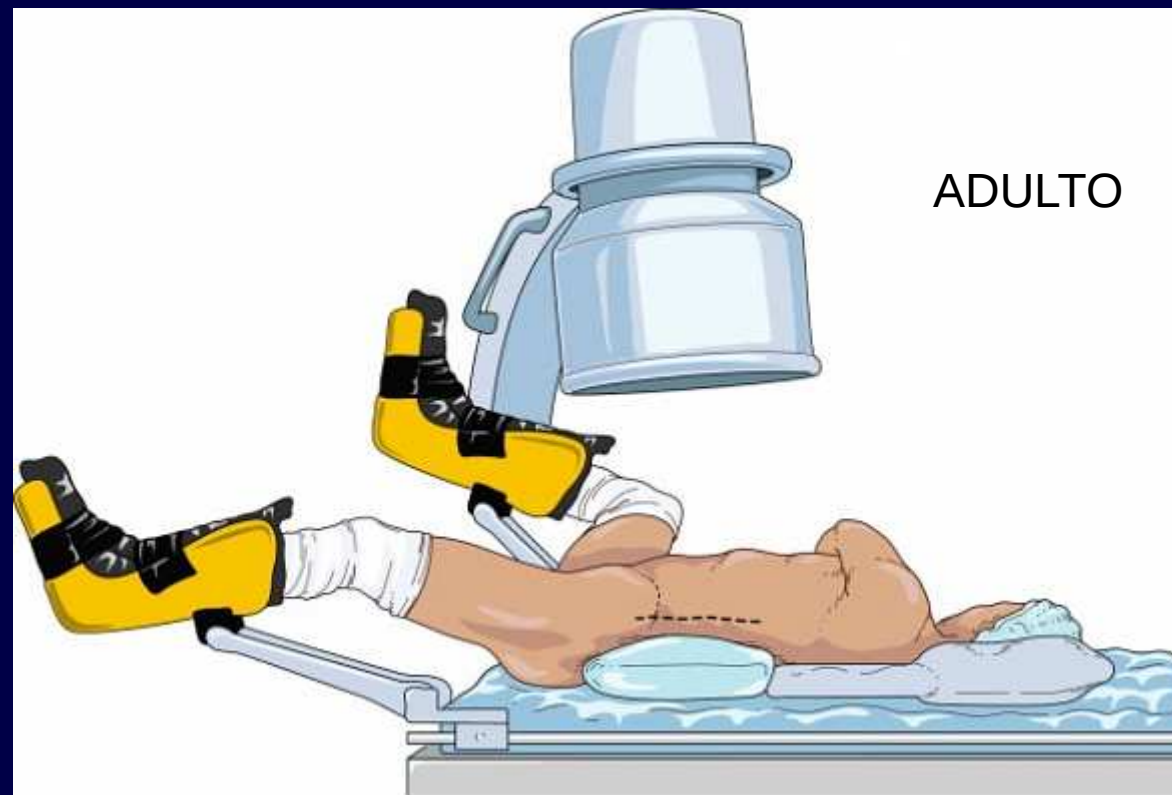
Calcoli delle **derivazioni urinarie** non aggredibili per via retrograda ES. i condotti urinari con l'ileo (di solito solo come via d'accesso)



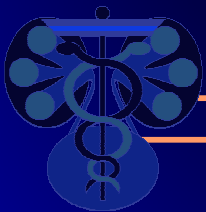
POSIZIONE PNL PRONA (1998 - 2007)



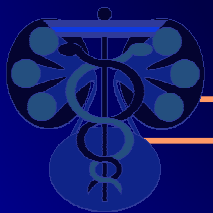
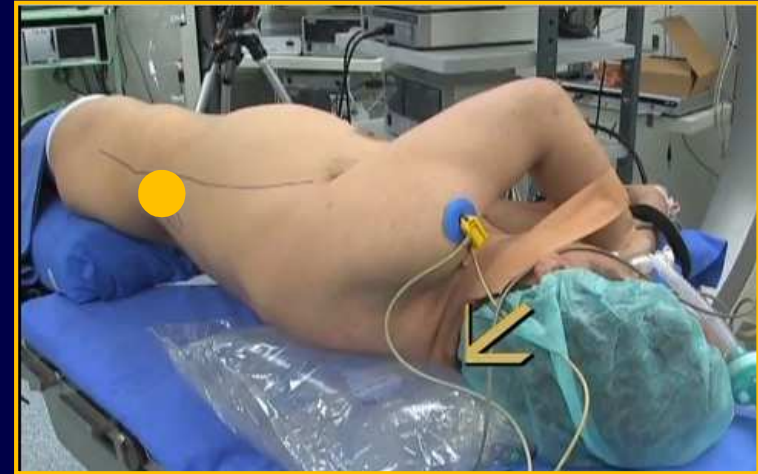
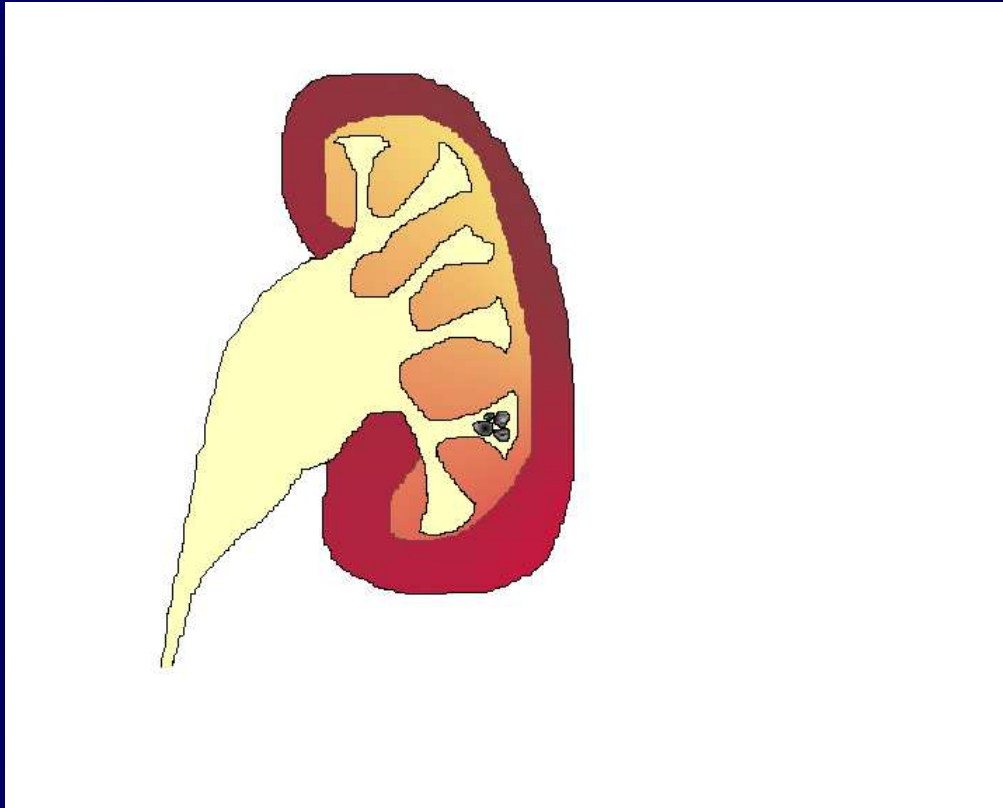
POSIZIONE PNL SUPINA (DAL 2007)



POSIZIONE SUPINA PEDIATRICA



PNL



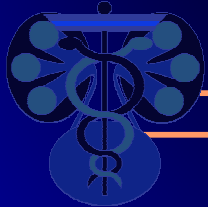
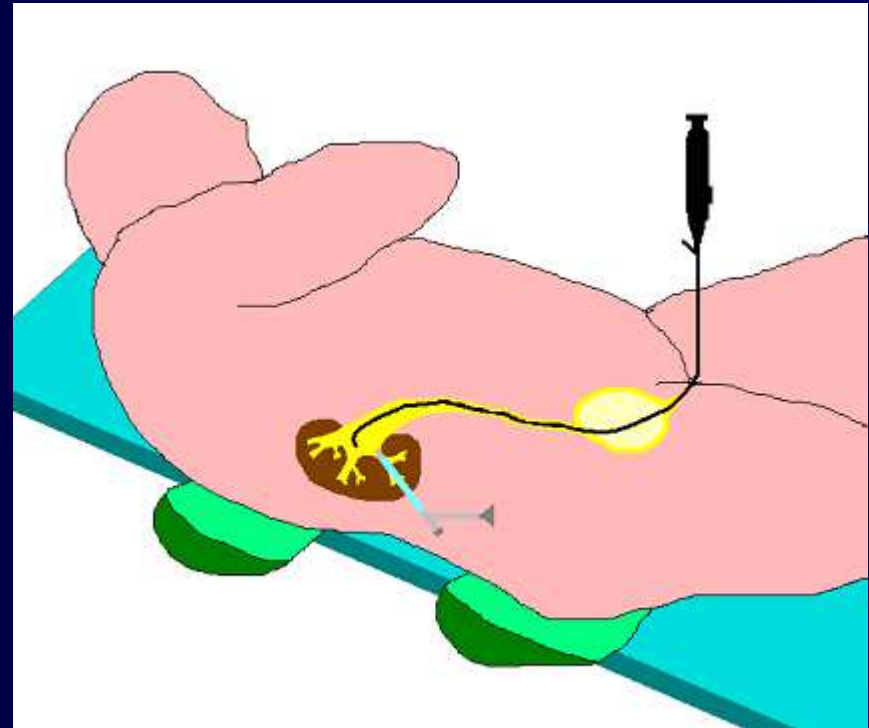
NEFROLITOTRISSIA PERCUTANEA + URS : EVOLUZIONE

ECIRS: Endoscopic Combined IntraRenal Surgery

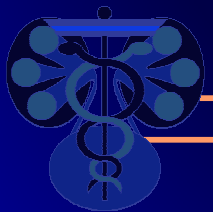
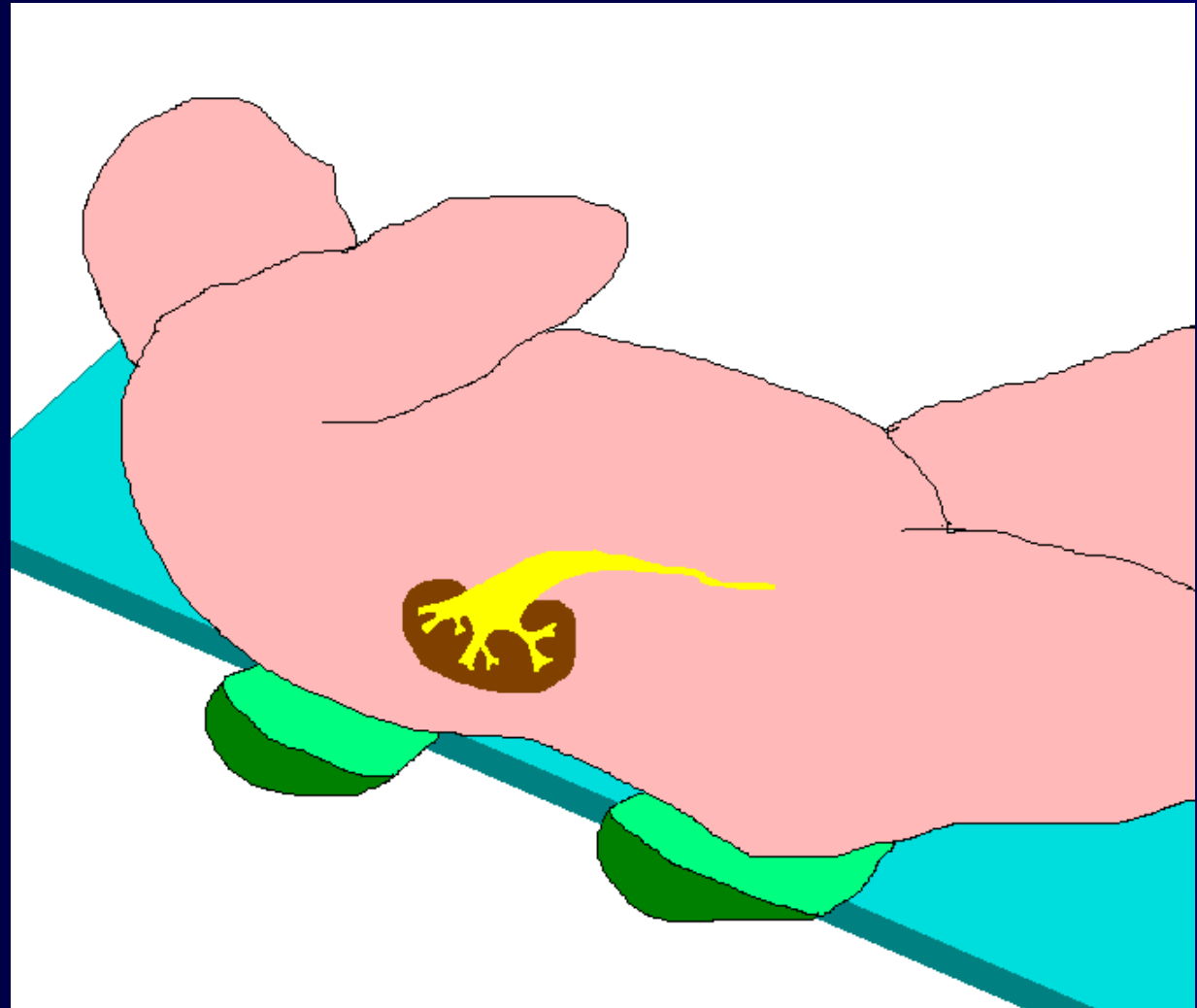
PCNL in posizione supina

La puntura del rene viene effettuata sotto controllo eco o rx e viene verificata mediante l'impiego di un ureteroscopio flessibile

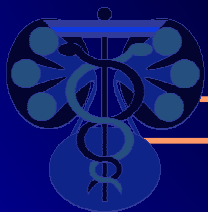
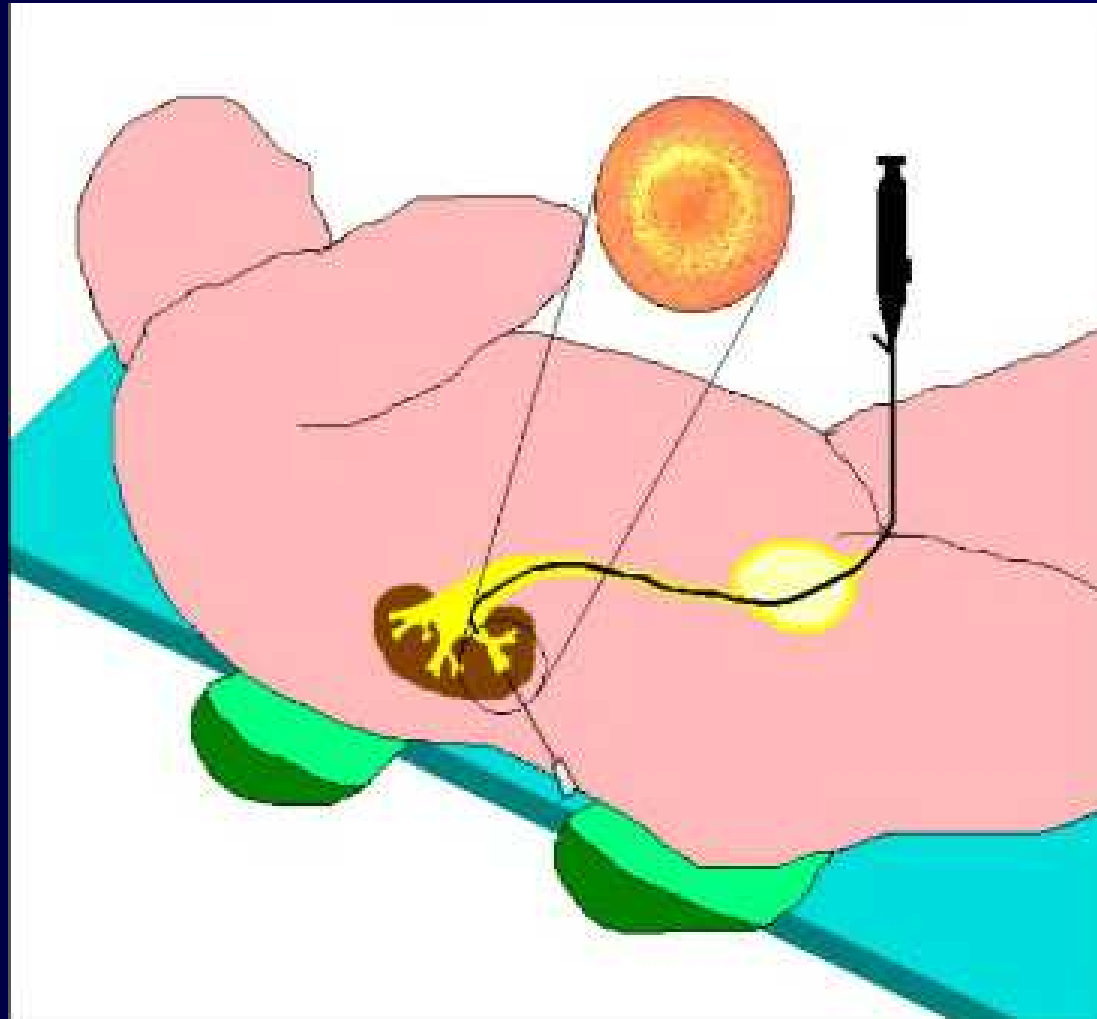
In seguito l'ureteroscopio potrà anche intervenire attivamente nella esplorazione di calici e rimuovere calcoli non raggiungibili direttamente con il nefroscopio



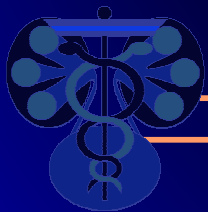
LA PUNTURA



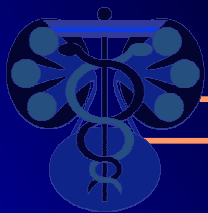
LA PUNTURA



LA PUNTURA

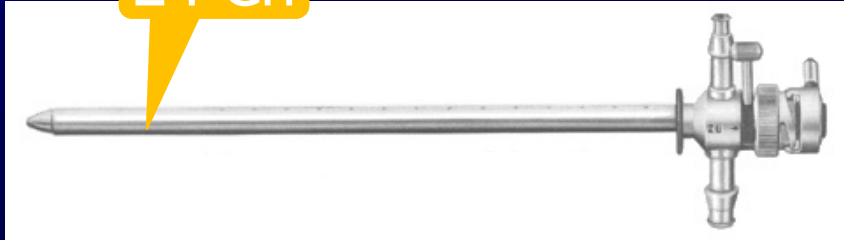


LA DILATAZIONE DEL TRATTO NEFROCUTANEO

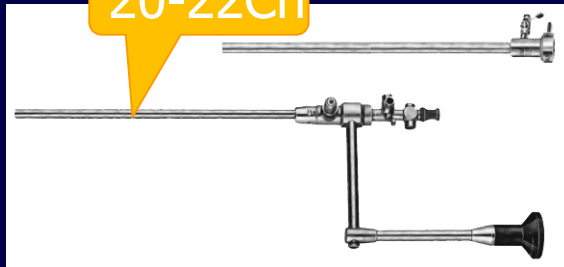


IL NEFROSCOPIO

24 Ch



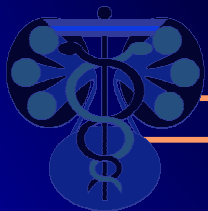
20-22Ch



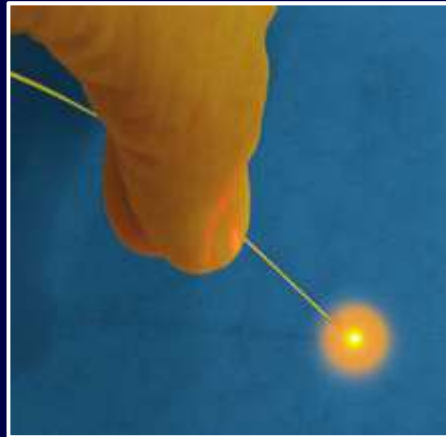
14-17Ch



- Vari **calibri**, **lunghezze** e **forme**
- La **miniaturizzazione** della strumentazione negli ultimi 10 anni ha permesso di scendere di calibro con gli strumenti mantenendo buone *performance* lavorative.

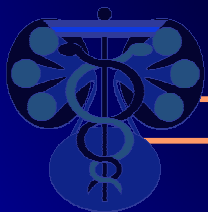


FONTI ENERGETICHE PER LITOTRISSIA



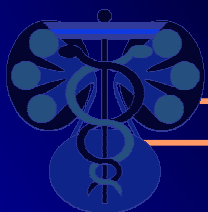
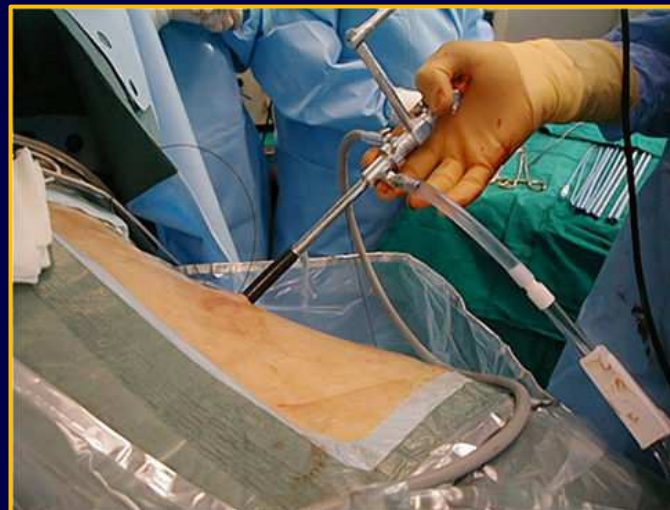
Energia
combinata
balistica ed
ultrasonica

Holmium LASER





**RISULTATO
LITOTRISSIA
BALISTICA/US**



CONCLUSIONE

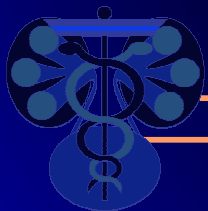
**Evoluzione Tecnologica
(visione/miniaturizzazione)**



Personalizzazione del trattamento



**Ottimizzazione dei risultati
(centri specializzati)**



CASISTICA DI PARMA

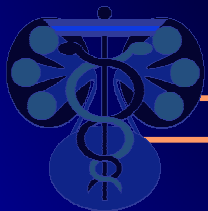
oltre **700** PNL

732 Ureterolitotrie Flessibili (dal 2004)

37 Interventi Endourologici Pediatrici

oltre **4500** ureteroscopie rigide

(1992 Inaugurazione del Litotritore Extracorporeo – flessione)



Grazie per l'attenzione

