

What after cystectomy?

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After cystectomy



Ureters



Urethral stump

Urinary diversion

Incontinent versus Continent

Urinary diversion

Incontinent versus Continent

“Bricker versus Vervangblaas”

Urinary diversion

Incontinent → skin

Continent

→ skin

→ urethra

→ anus

Cutaneous incontinent urinary diversion

Ureterostomy

Ureteroileostomy or “Bricker”

Ureterocolostomy

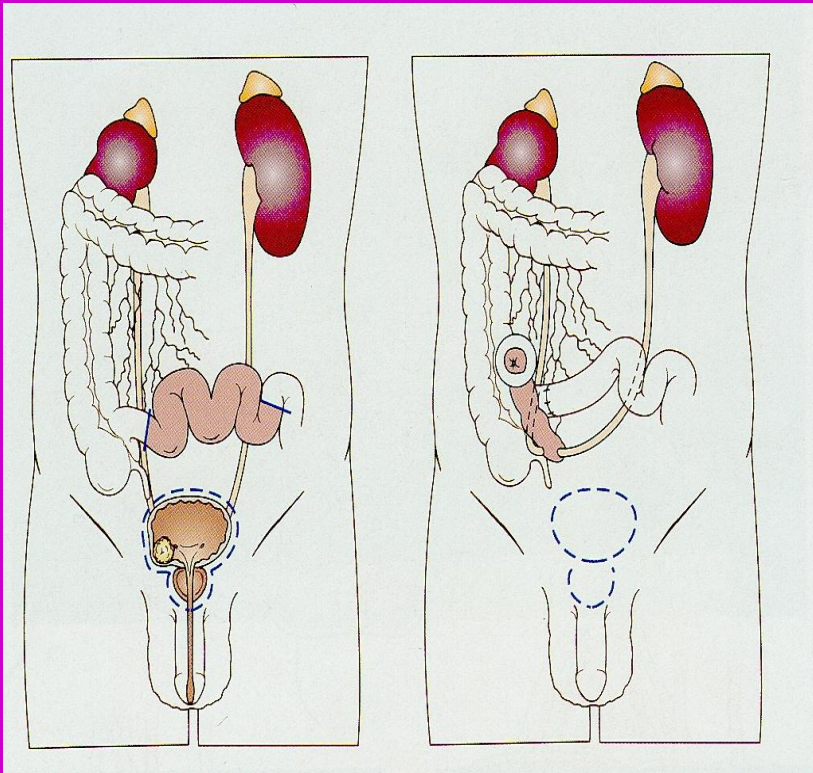


FIGURE 183.—Lt. Col. Eugene M. Bricker, MC.

- Lt. Col. Eugene M. Bricker, MD
- USA, Washington
- °1908
- Surg Clin N Am (1950):

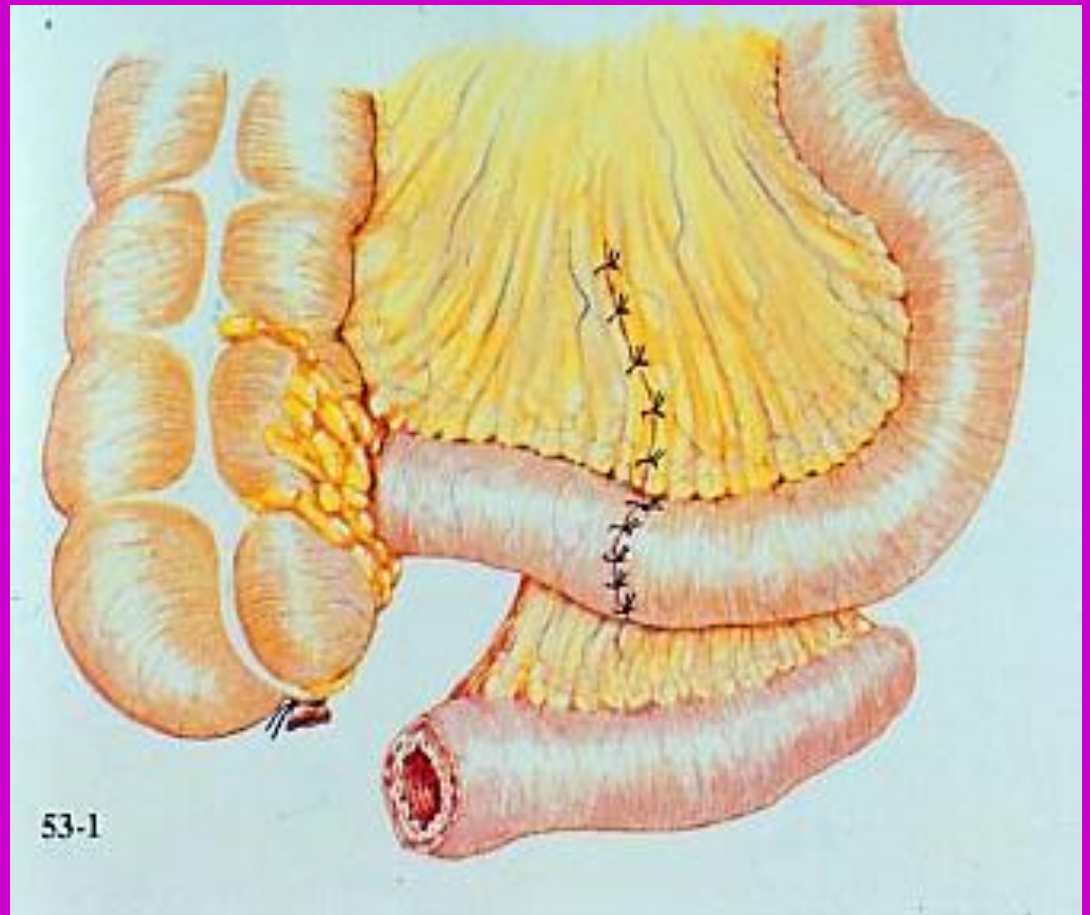
Bladder substitution after pelvic evisceration

“Bricker”

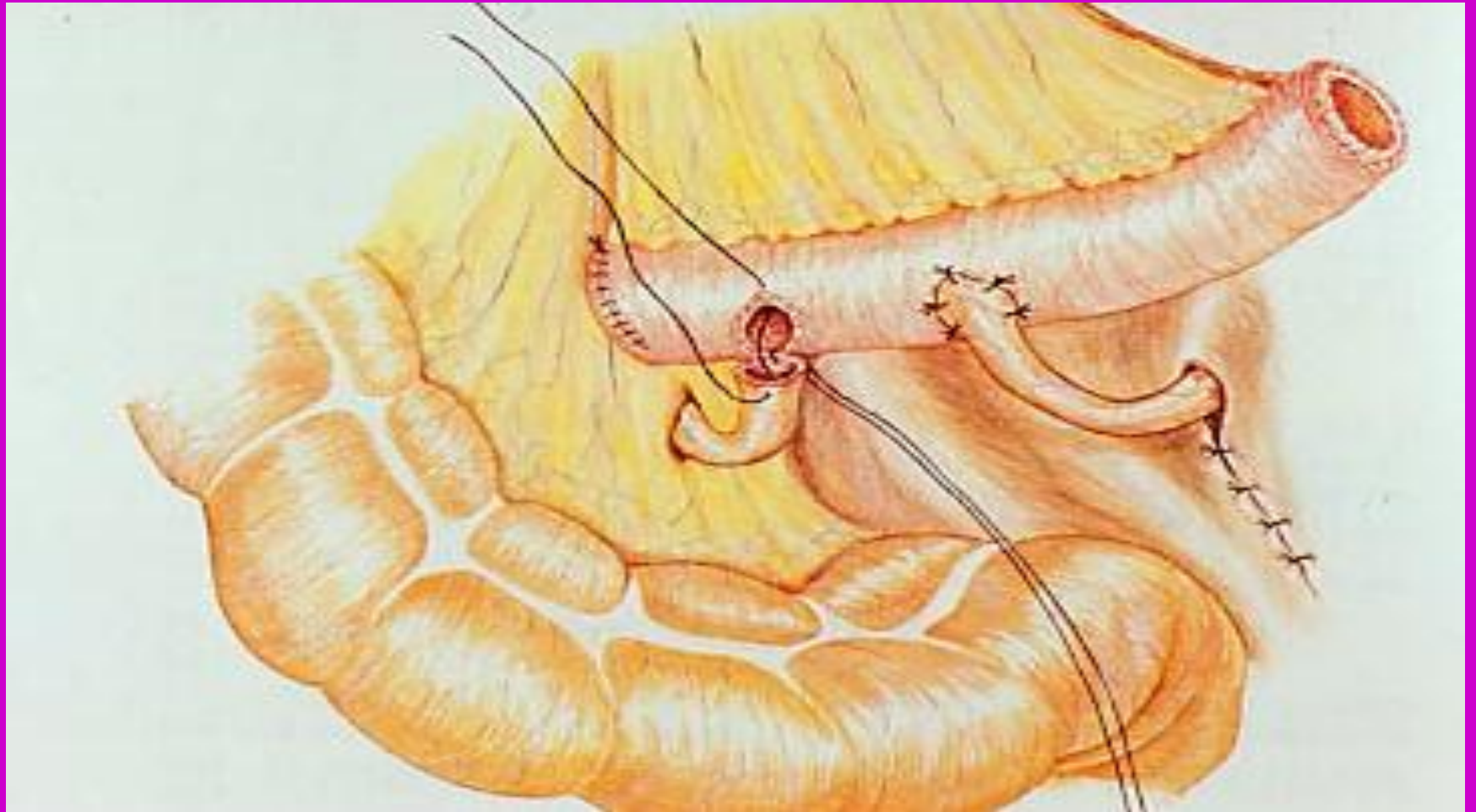


Cutaneous incontinent urinary diversion

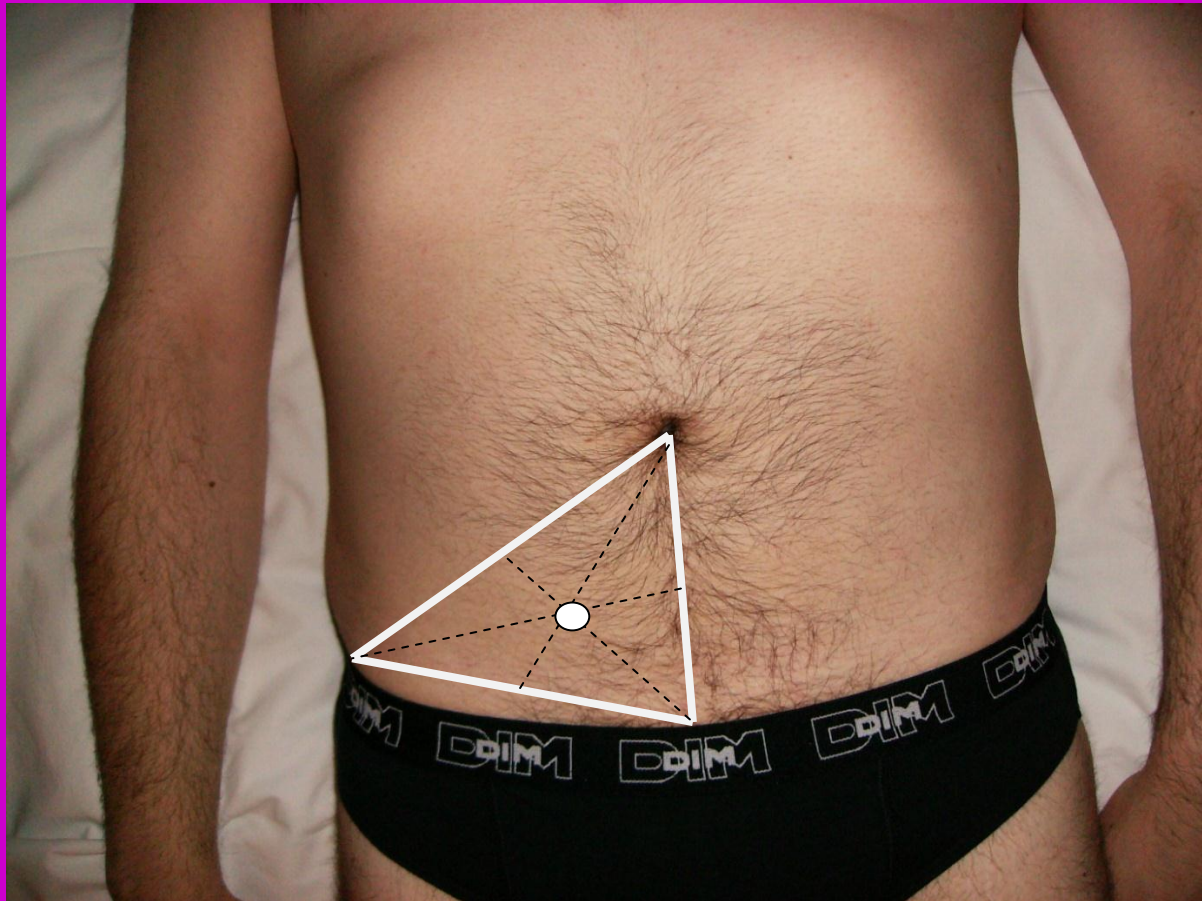
Ileal conduit
("Bricker")



Ileal conduit ("Bricker")

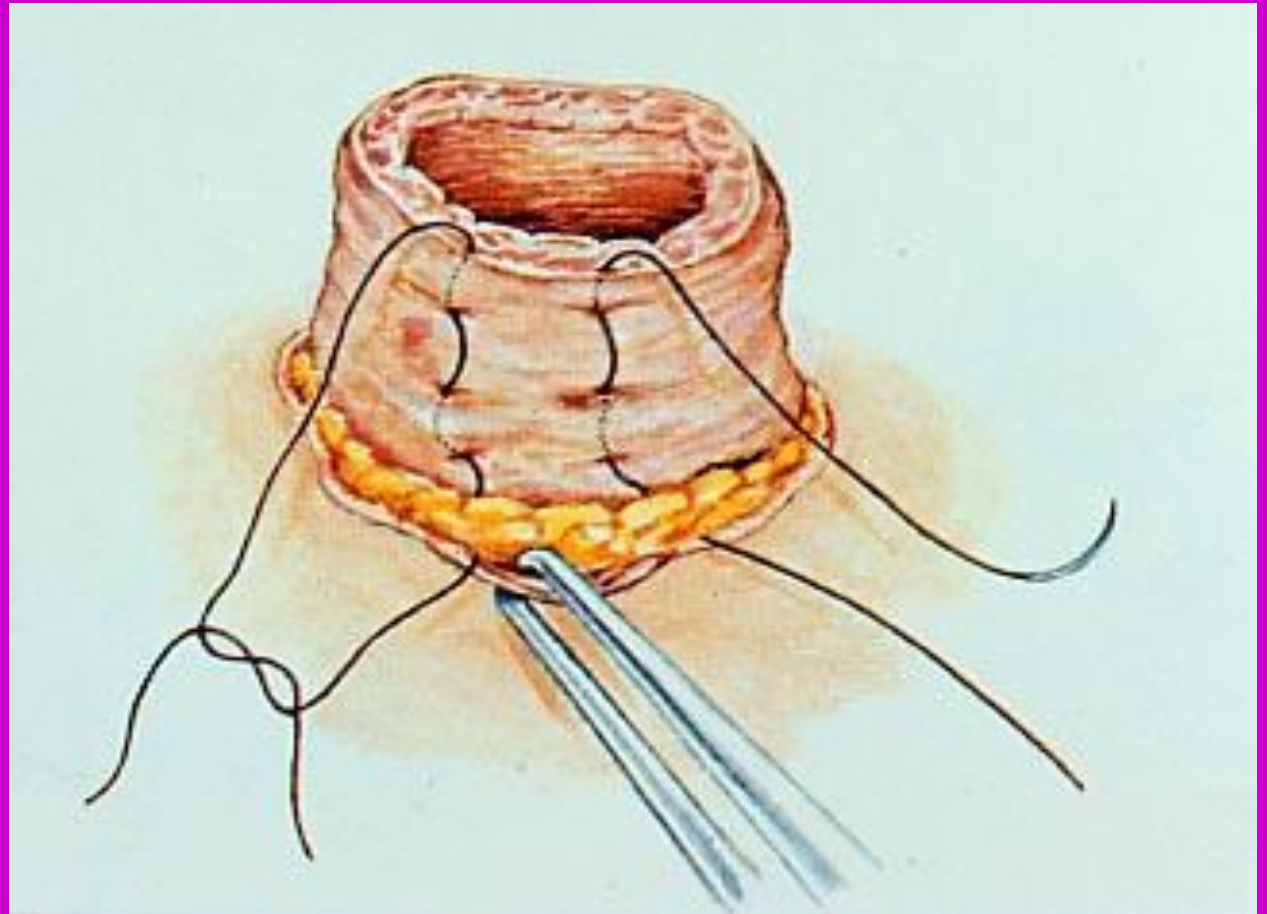


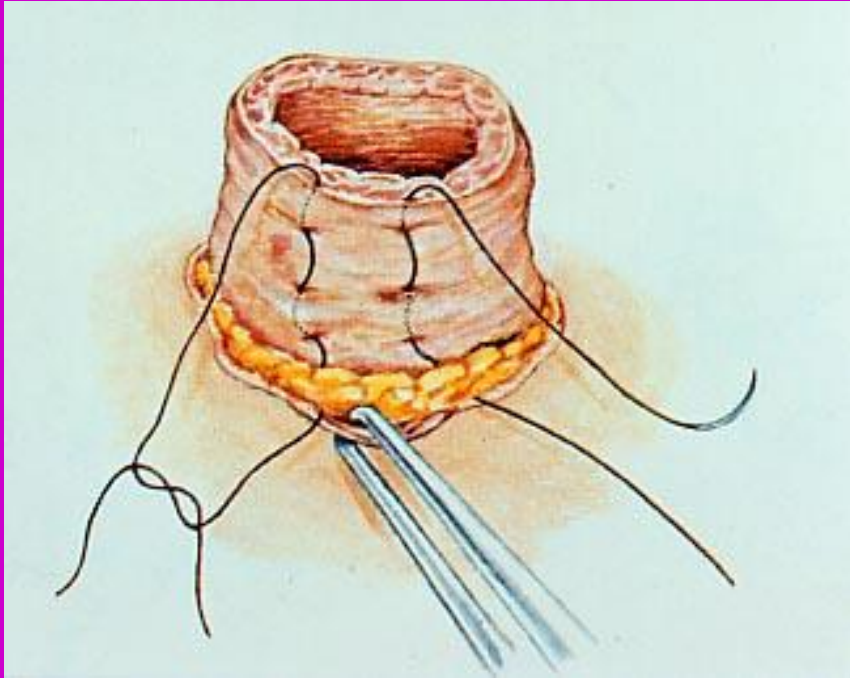
Stoma localisation



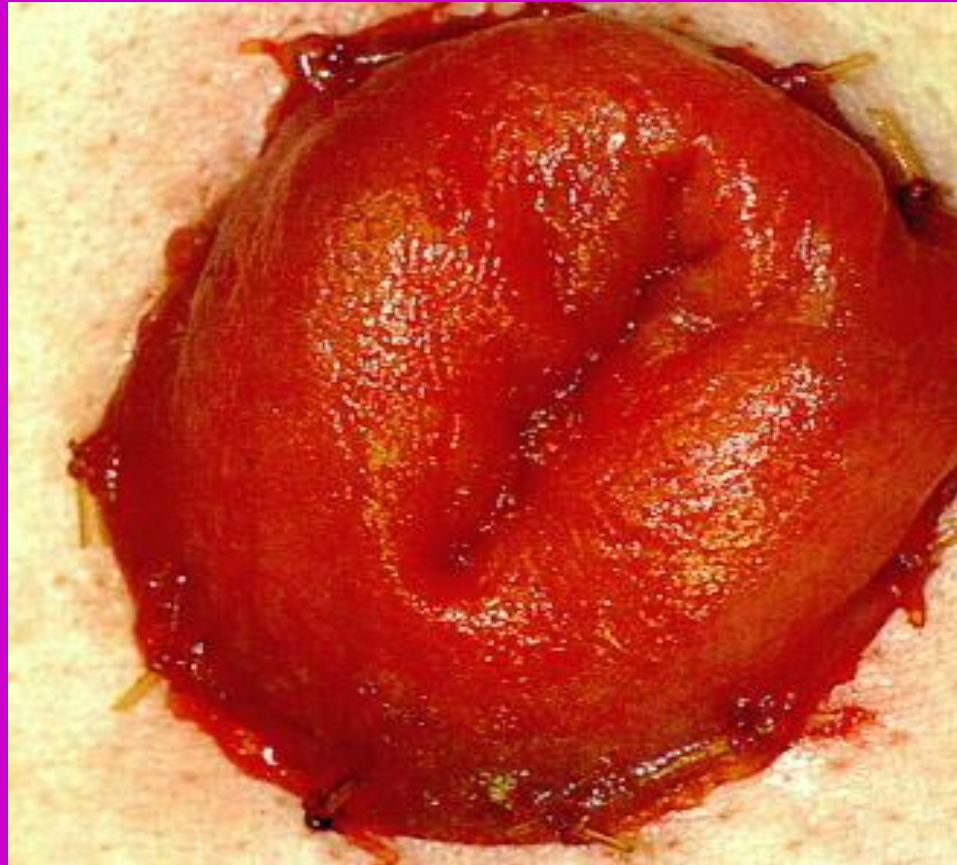
Ileal conduit

Stoma





Stoma



Ileal conduit

(advantages)

“Well known”

Complications acceptable

Uretero-ileostomy (« Bricker »)

Pro

Well documented

Stoma easy to tend

Contra

Use of bowel

Total incontinence

Ileal conduit

(contra indication)

Short bowel

Inflammatory disease

Prior radiation therapy

Urinary diversion

Continent

- skin: pouch
- urethra: orthotopic bladder
- anus: ureterosigmoidostomy
rectal neobladder

Rectal bladder

Ureterosigmoidostomy

Augmented valved rectum

Ureterosigmoidostomy

(patients with perfect rectal control)

Pro

No stoma

Continence

After urethrectomy

Contra

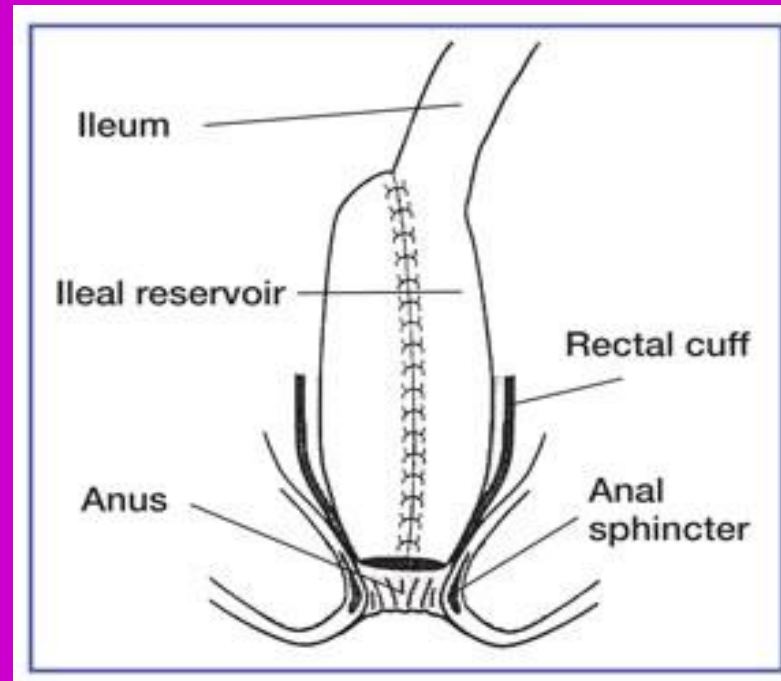
Cloaca (cave flatus)

Ascending pyelonephritis

Metabolic acidosis

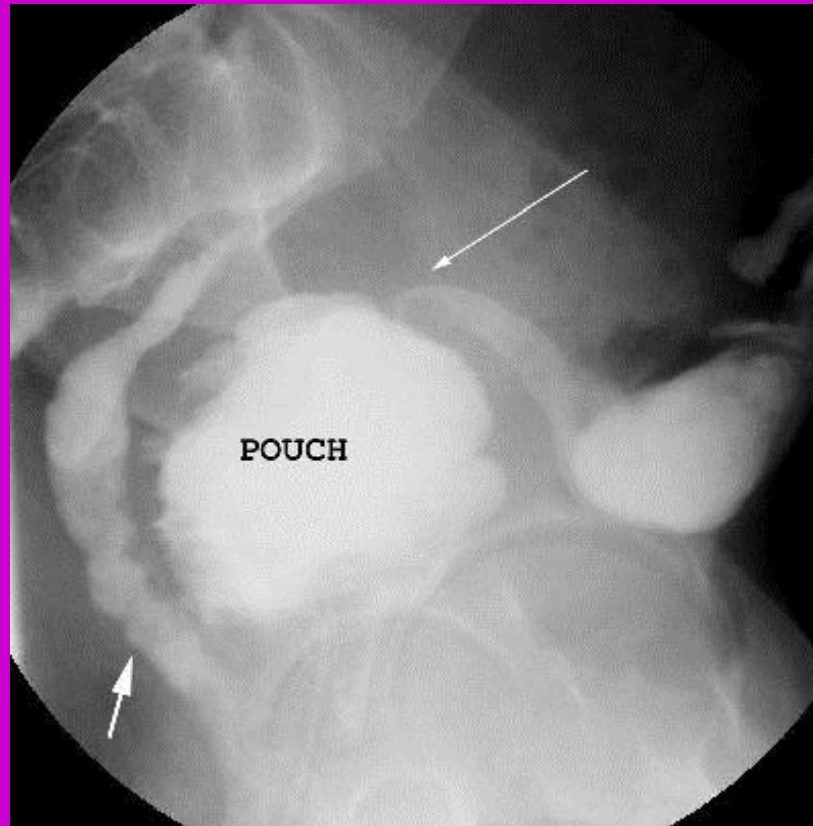
Urinary diversion

Continent → anus: rectal neobladder



Urinary diversion

Continent → anus: rectal neobladder



Cutaneous continent urinary diversion

Based upon the confection of
a reservoir and a continent stoma

Continent stoma confection principles

Use of appendix

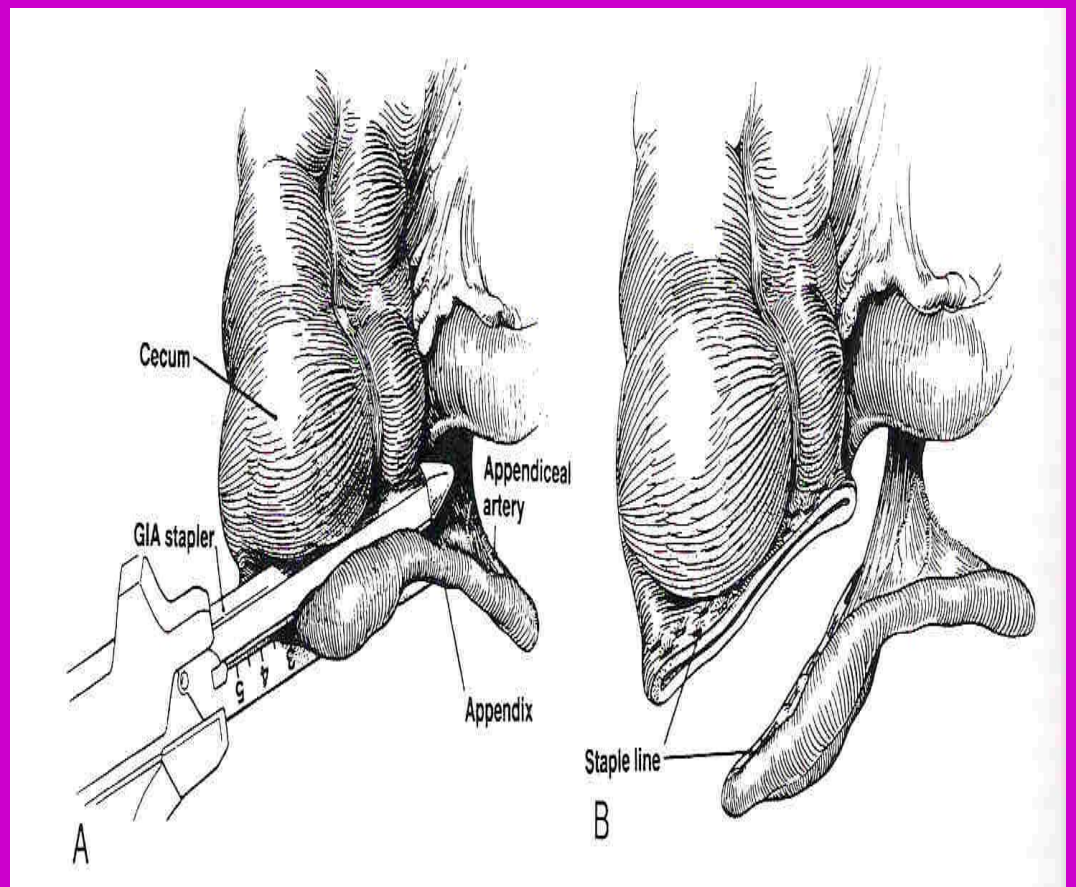
Tapering small bowel

Intussusception

Hydraulic valve

Cutaneous continent urinary diversion

Appendico-
vesico-
stomy



New reservoir and continent stoma

Kock pouch

T pouch

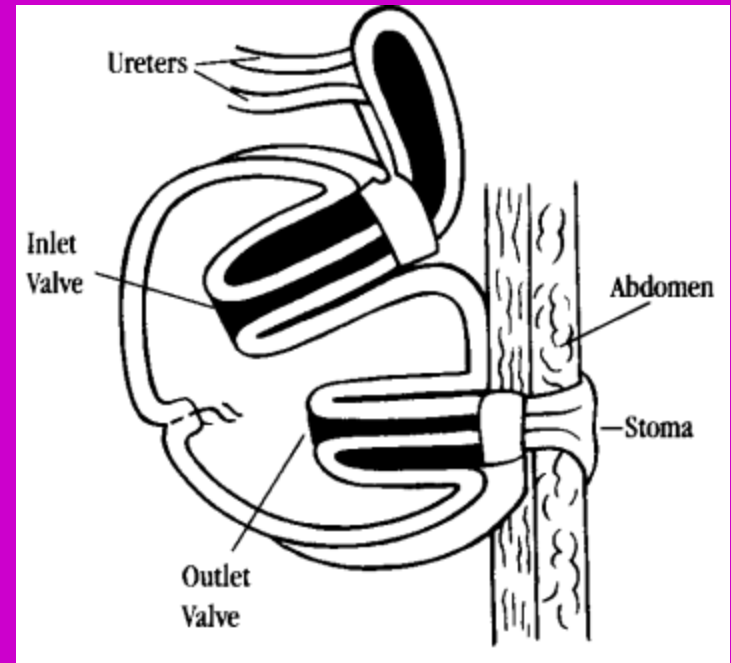
Mainz pouch

Indiana pouch

Penn pouch

Cutaneous continent urinary diversion

Kock pouch



Continent pouch

(when patients demand continence)

Pro

Continence

After urethrectomy

Contra

Major surgery

Self catheterisation

Incomplete emptying

Urinary infection

No long term follow-up

Continent stoma

(disadvantages)

Major intervention

Intermittent catheterisation

Not for disabled

“Umbilical” catheterisation



Orthotopic urinary diversion

Camey procedure

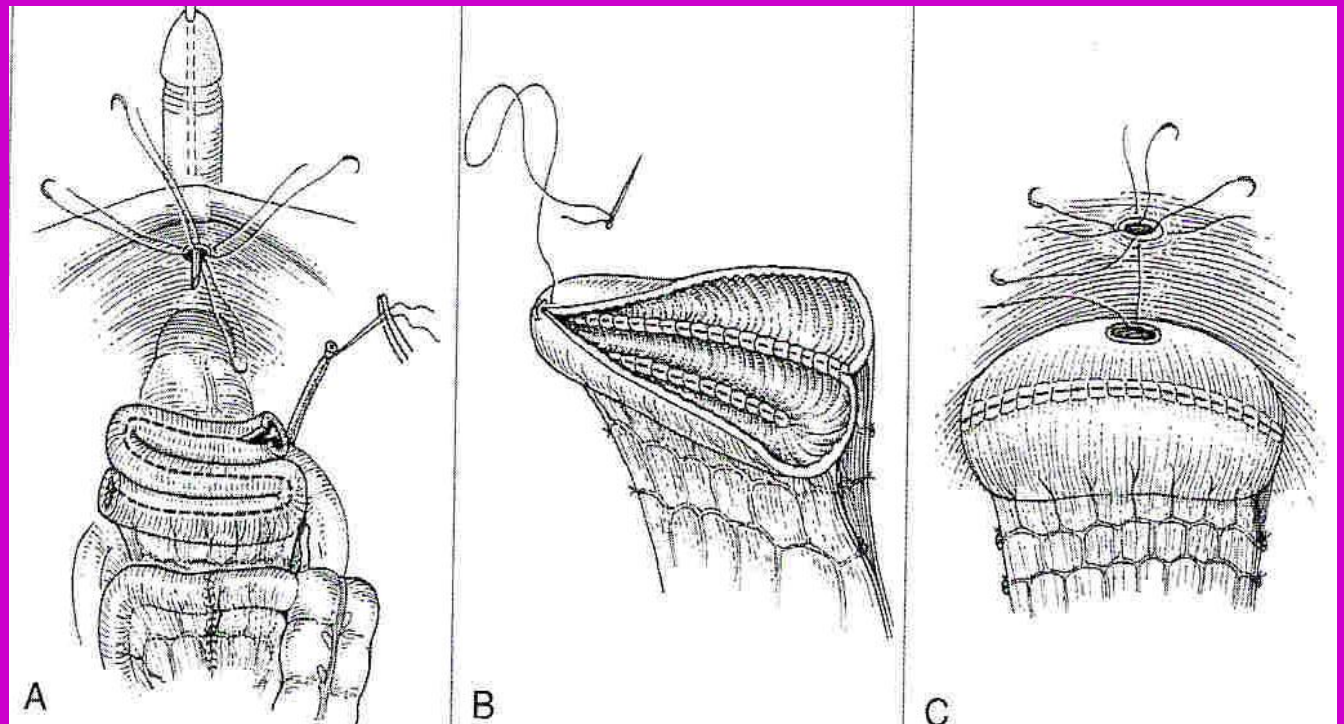
Hautmann procedure

Studer procedure

Mainz procedure

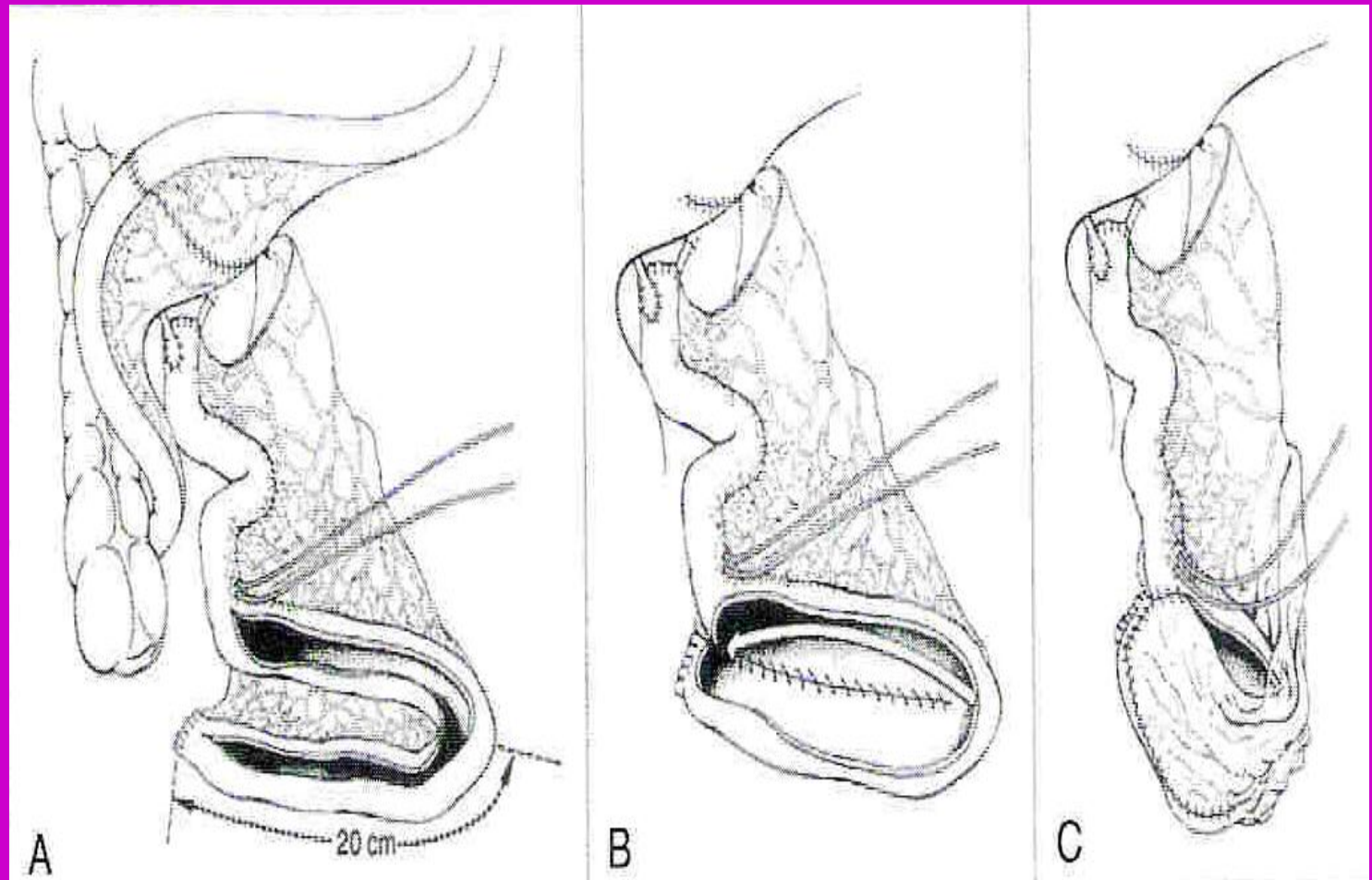
Orthotopic urinary diversion

Camey

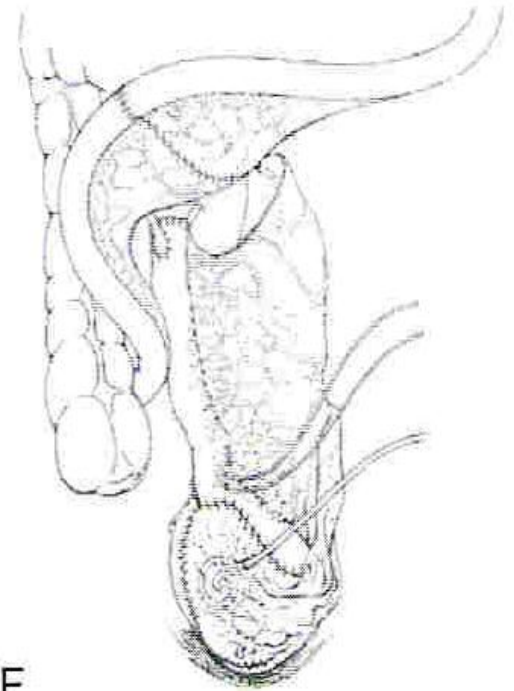
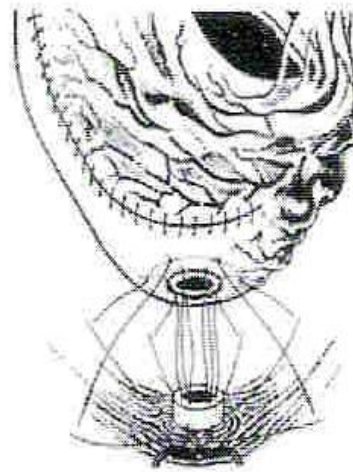
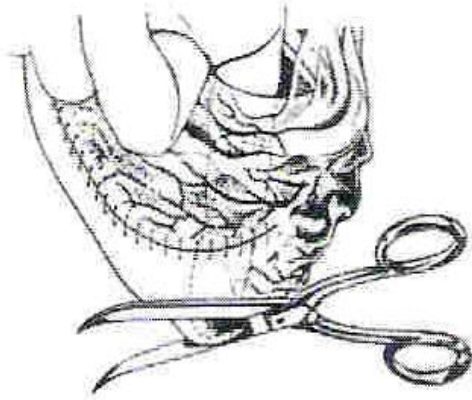


Orthotopic urinary diversion

Studer



Studer





Orthotopic bladder

(patients demanding continence)

Pro

No stoma

Diurnal continence

Contra

Major surgery

Nocturnal incontinence

Incomplete emptying

Urinary infection

No long term follow-up

Post-operative handicap

- Neo-bladder +
- Sigmoidostomy + +
- Pouch + + +
- Ureterostomy + + + +
- Uretero-ileostomy + + + +

Operating time

- Cystectomy 150 minutes
- Ureterostomies + 30 = 180 minutes
- Uretero-ileostomy + 90 = 240 minutes
- Pouch +150 = 300 minutes
- Neo-bladder +150 = 300 minutes

The future ?

Subtotal prostatectomy

Partial cystectomy

with adjuvant brachytherapy

with adjuvant chemotherapy

Chemotherapy

Tx for listening

Questions?

BRICKER: postoperatief

- TPN 5 dagen
- MS tot peristaltiek
- pijnstilling
- urimeters
- IN katheters spoelen met 5 cc fysiologisch
- SC laagmoleculaire heparine
- verwijderen katheters D10-D12 post op

Table 106-5. COMPLICATIONS: ILEAL CONDUIT*

	Early	Late
Urine leak	2% (9/356)	—
Bowel leak	2%	—
Sepsis	3% (7/230)	3% (4/142)
Acute pyelonephritis	3% (21/700)	18% (133/726)
Wound infection	7% (17/230)	2% (4/178)
Wound dehiscence	3% (11/326)	—
Gastrointestinal bleed	2% (2/90)	—
Abscess	2% (3/168)	—
Prolonged ileus	6% (14/230)	—
Conduit bleed	2% (3/178)	10% (18/178)
Intestinal obstruction	3% (18/610)	5% (42/878)
Ureteral obstruction	2% (14/610)	6% (56/878)
Parastomal hernia	—	2% (9/454)
Stomal stenosis	—	30% (143/486)
Stone formation	—	7% (59/822)
Excessive conduit length	—	9% (26/276)
Metabolic acidosis	—	13% (27/206)
Conduit infarction	—	2% (2/90)
Volvulus	—	7% (2/268)
Conduit stenosis	—	3% (11/320)
Conduit-enteric fistula	—	<1%

*Incidence as a percentage of the total number of reported cases from the literature. Numbers in parentheses are the number of cases from which the percentage is derived.

Early COMPLICATIONS

- leakage
 - Intestinale anastomosis 2%
 - uretero ileal anastomosis 2 %
- wound infection 7%
- ileus 3%
- pyelonefritis after catheter removal

Late COMPLICATIONS

chronical pyelonefritis

- 10 - 60 % renal function loss
- 6 % exitus from renal insufficiency
- 75% E Coli infection of terminal ileum
- chronical bacteriuria ≠ significant infection

Surgery

- TUR
- Cystectomy
- Partial cystectomy

Urinary diversion

Continent

Vs

Incontinent

Incontinent urinary diversions

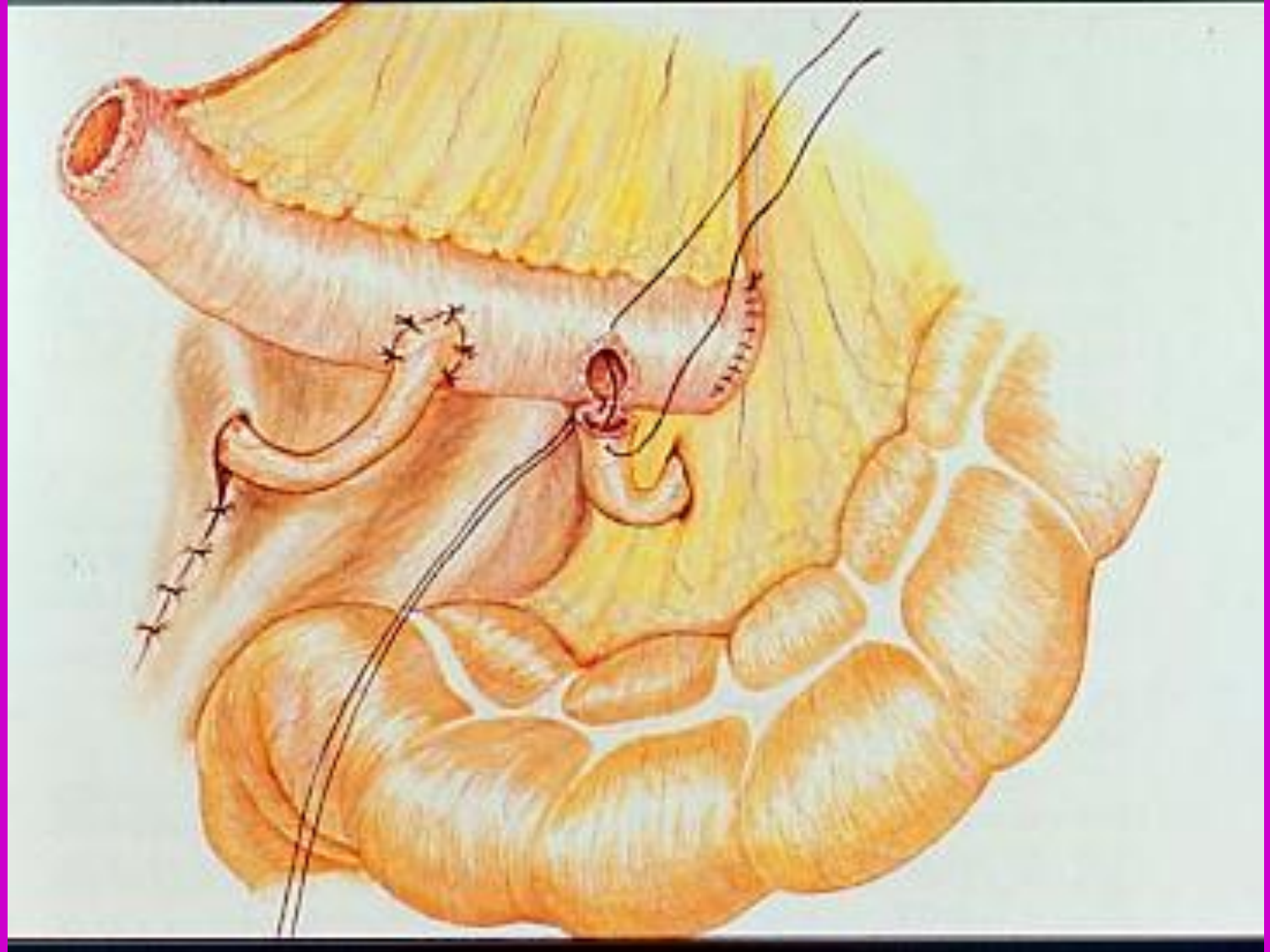
- Uretero-ileostomy (« Bricker »)
 - Ureterostomy

Continent urinary diversions

- Orthotopic bladder
- Continent pouch
- Sigmoidostomy



53-1



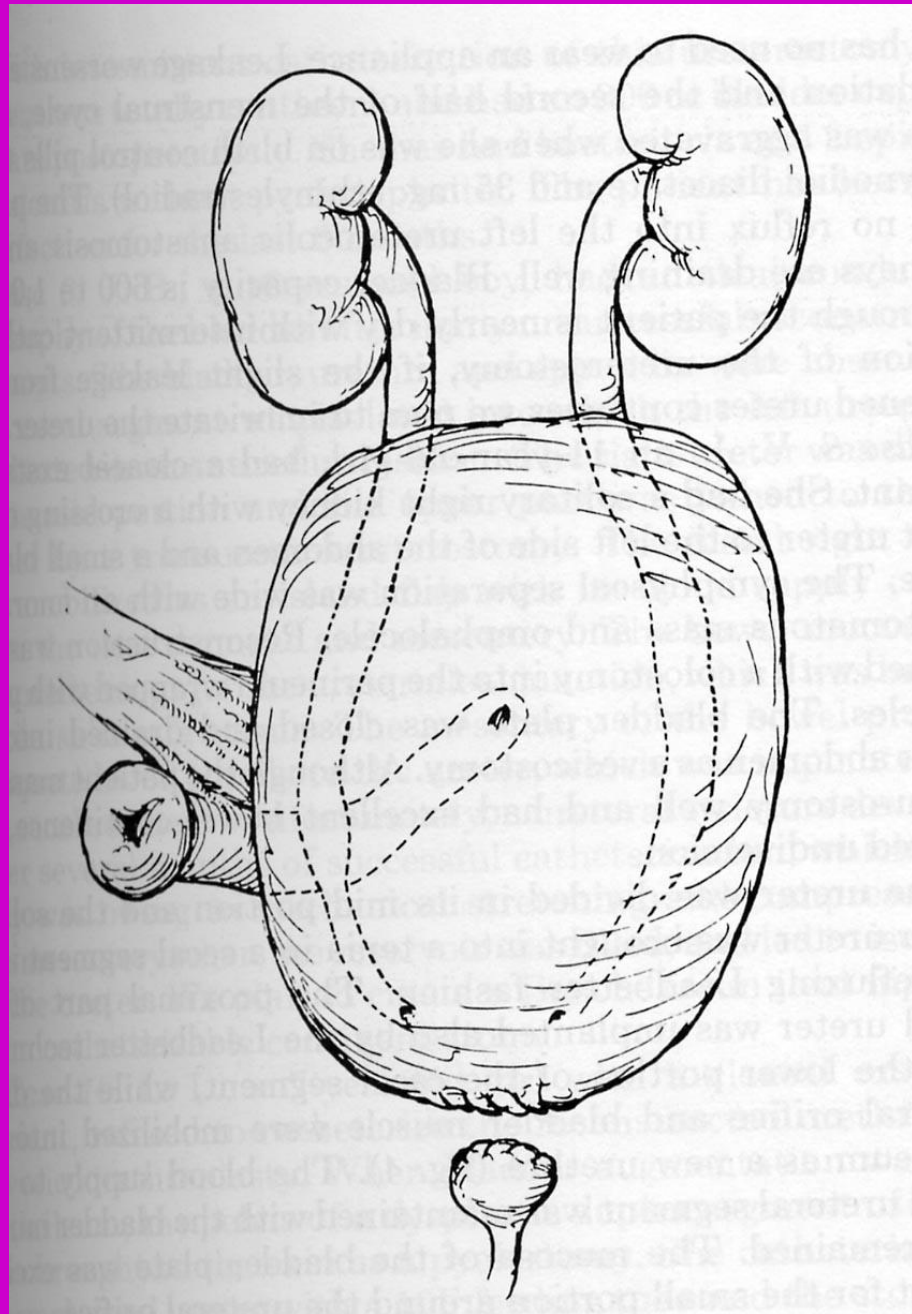






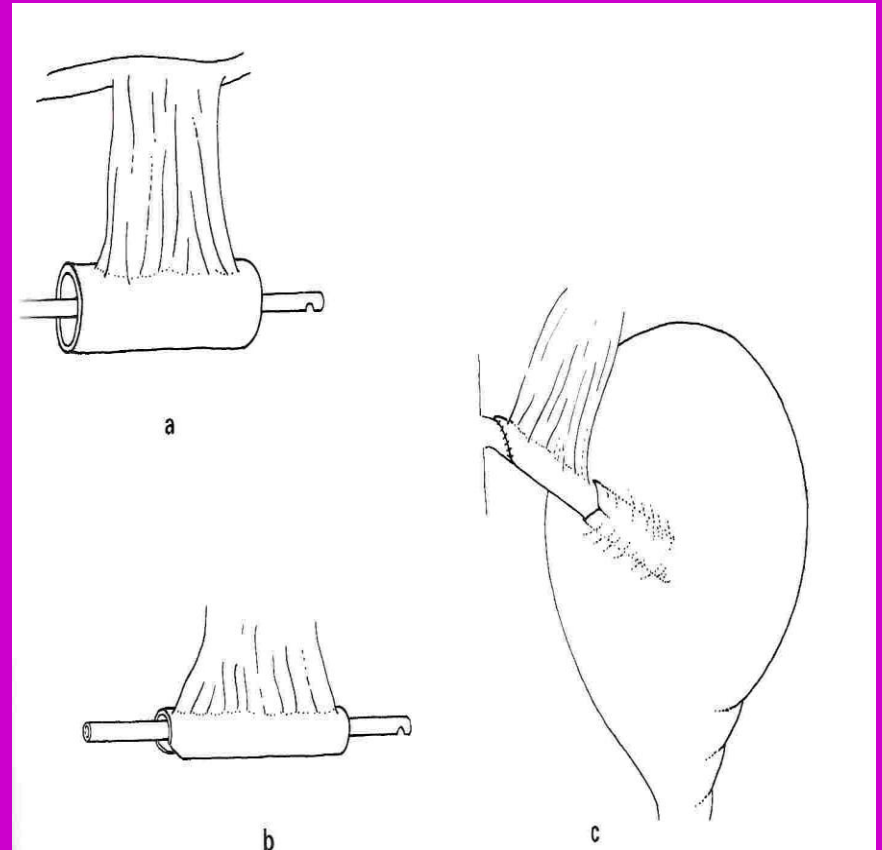
New reservoir and continent stoma





Cutaneous continent urinary diversion

Tapering small bowel



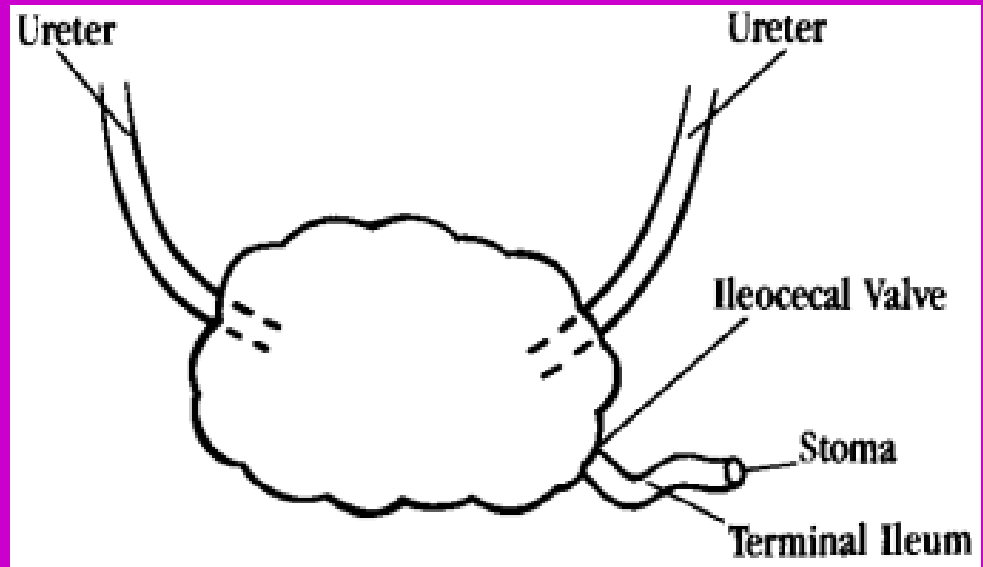
Cutaneous continent urinary diversion

Mainz pouch



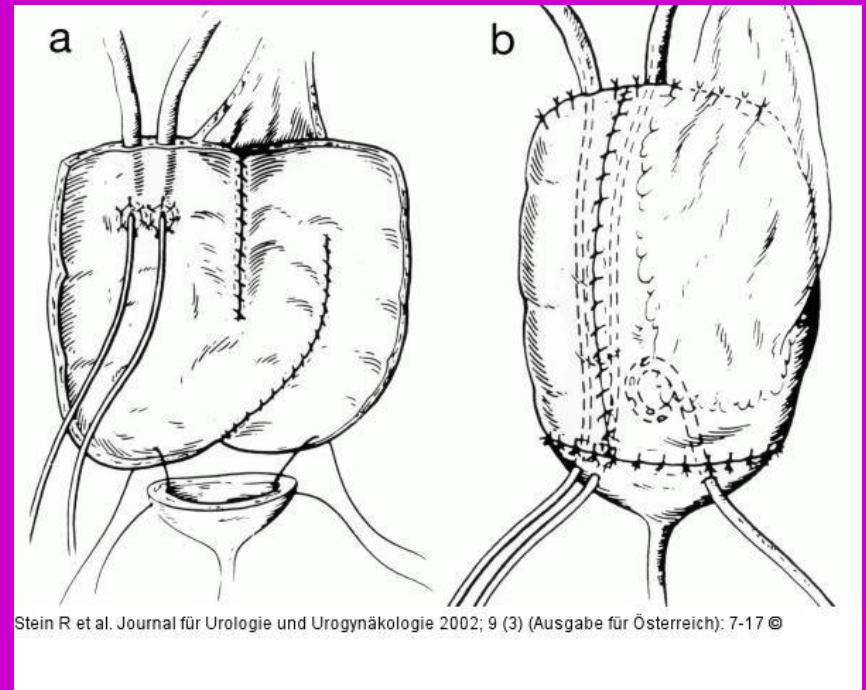
Cutaneous continent urinary diversion

Indiana pouch



Orthotopic urinary diversion

MAINZ pouch



Continent stoma

Benchekroun principle

Ureterostomy

Pro

Lowest morbidity

No bowel

Contra

Total incontinence

Stoma(ta)

Ureteral stricture

Stoma appliances

Peristomatitis



Cutaneous incontinent urinary diversion

Ureterocolostomy

