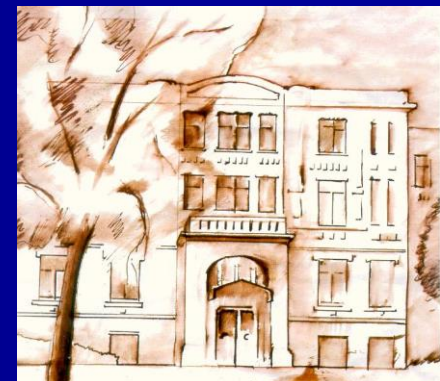
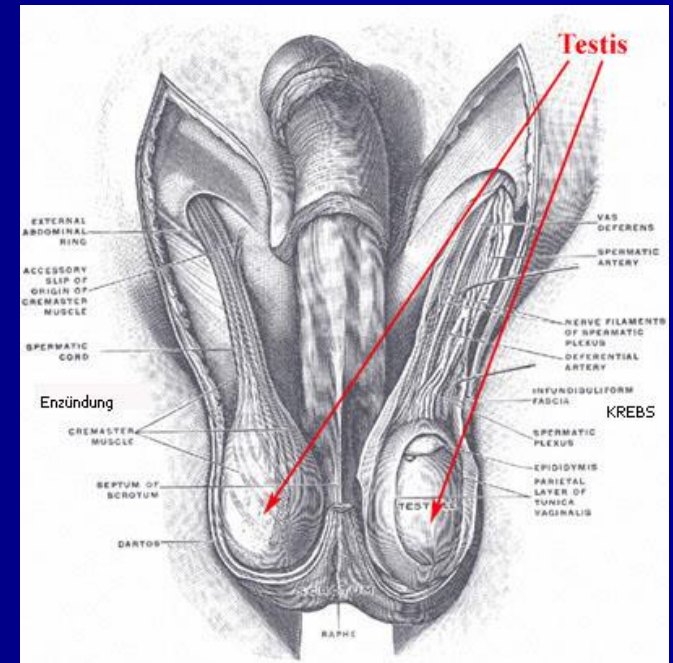


Testicular and Penile Tumors

Miklós Szűcs

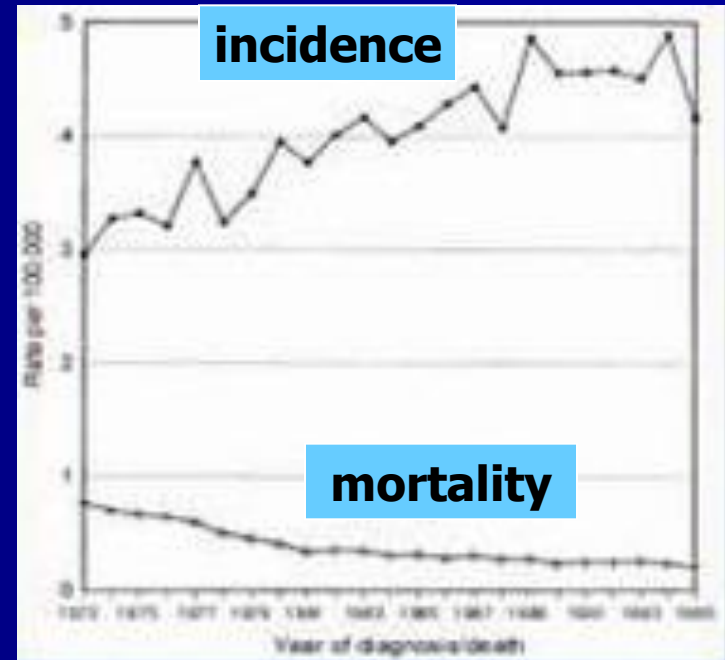


Testicular cancers



Background

- 1% of all male neoplasms
- 3-6/100.000 males/year
- young men (mean age 32 years)
- incidence increases
- mortality is low



Risk factors (Epidemiology)

- cryptorchidism
- familia history
- infertility
- Klinefelter syndrome
- contralateral tumor

Screening

- stage and prognosis are related to early diagnosis
- advocate self-physical examination

Symptoms are aspecific

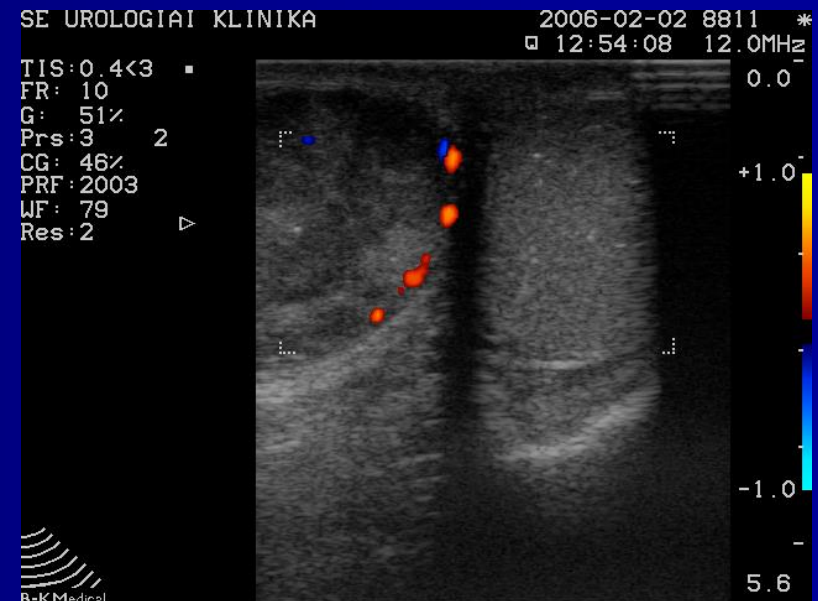
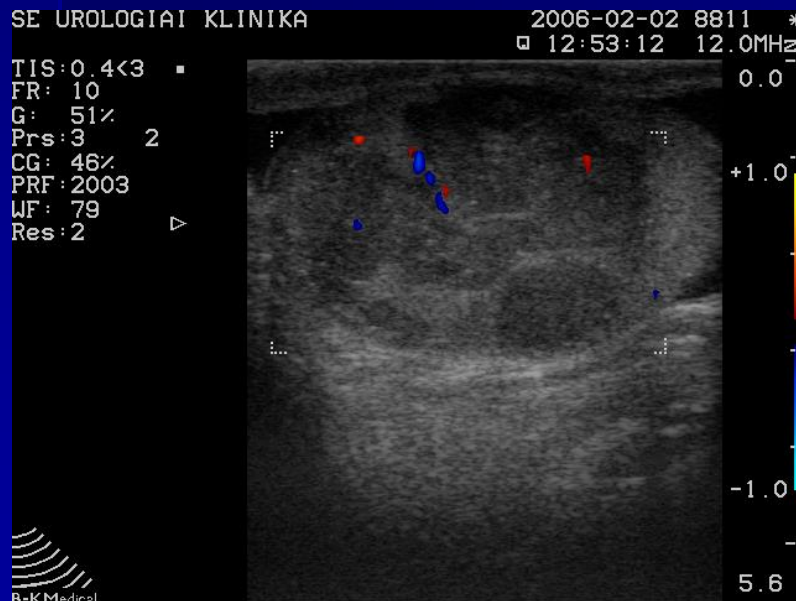
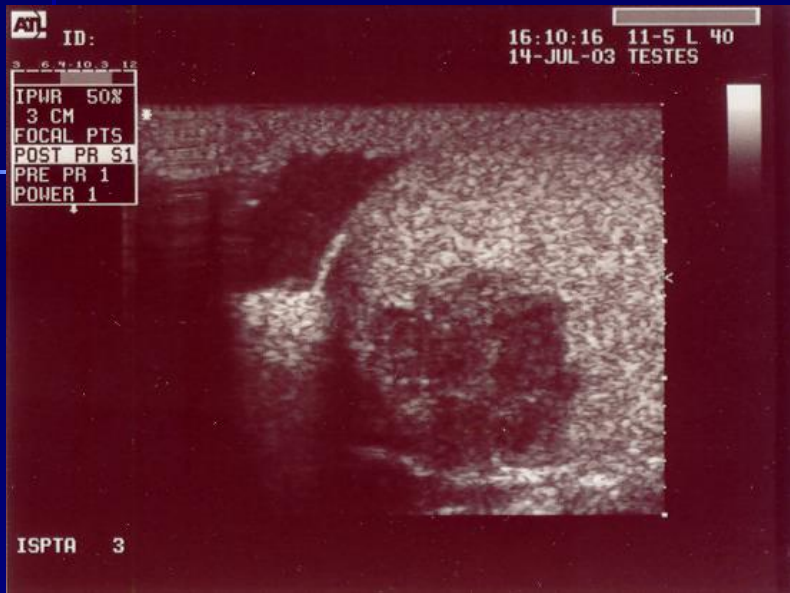
- Painless growing of the testis
- Dense knot in the testis
- Pain (rarely)
- Tractive feeling in the testis



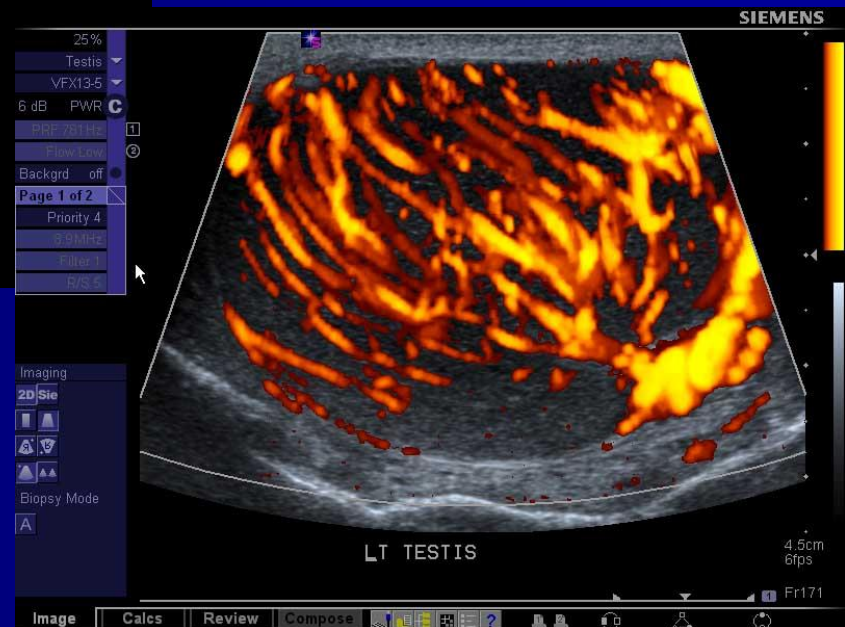
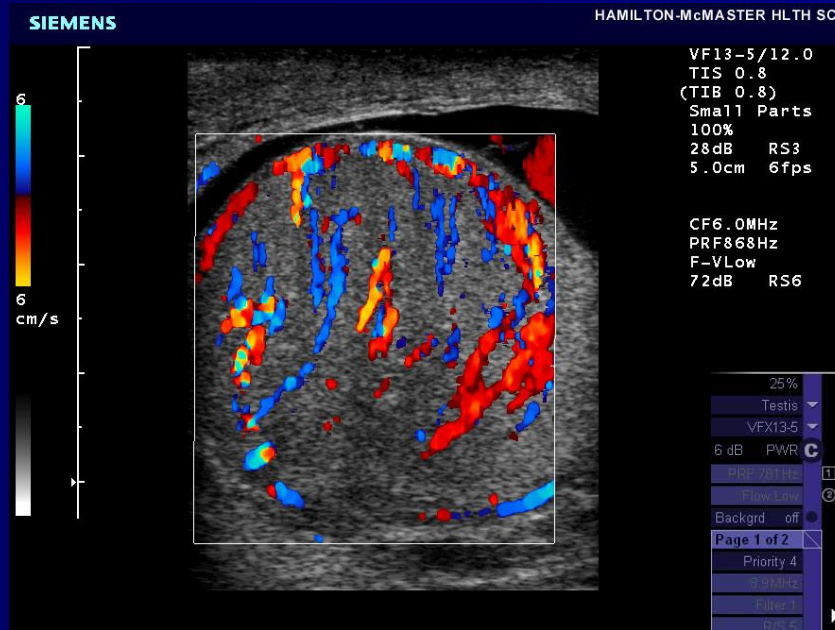
Diagnosis

- physical examination
- ultrasound of the testicles
- serum tumor markers
- confirmation diagnosis (inguinal orchiectomy)
- CT scan (abdomen and thorax)

Ultrasound



Ultrasound (Doppler)



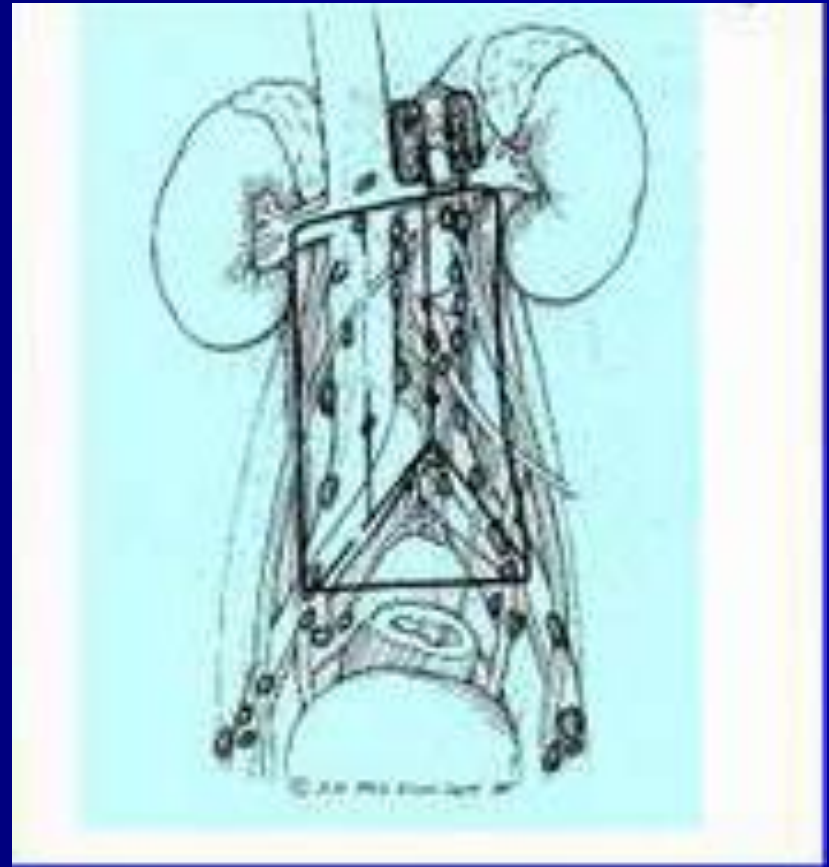


Tumor markers

- AFP (alfa-fetoprotein)
- β -HCG (beta human choriogonin)
- NSE (neuron specific enolase)

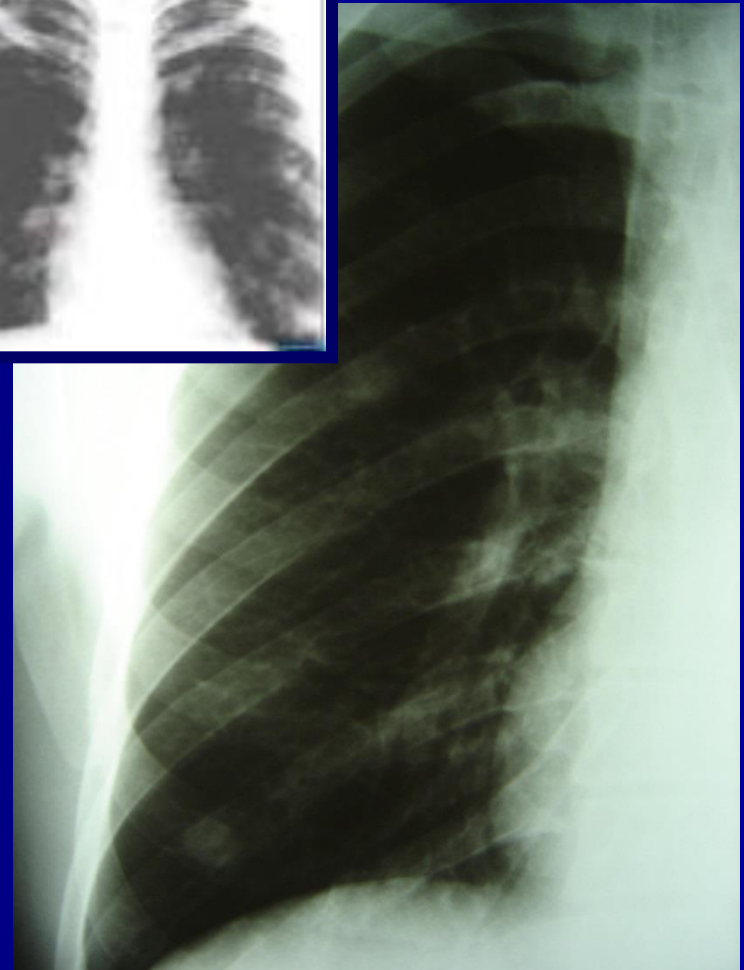
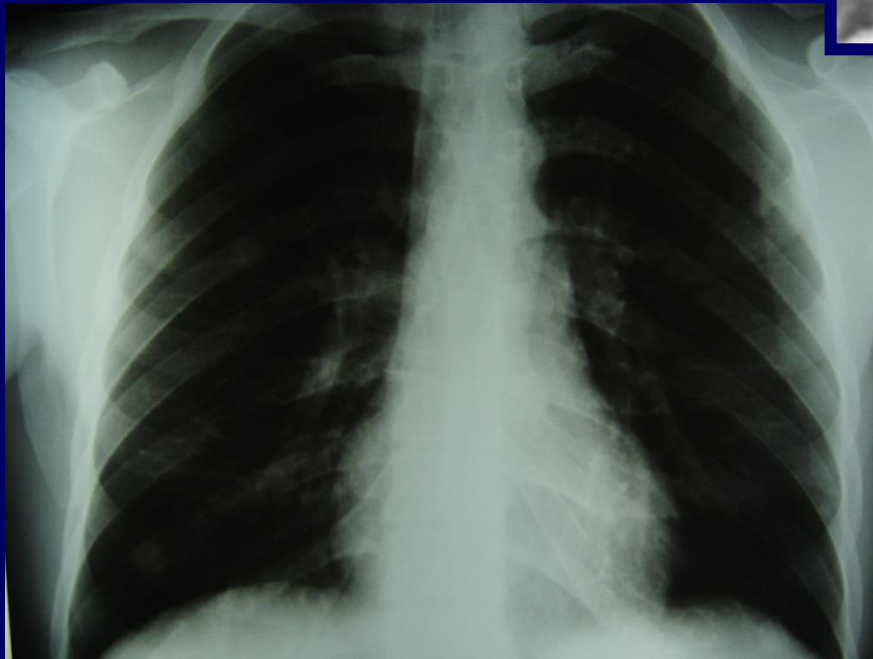
Abdominal ultrasound and CT

- To examine retroperitoneal (para-aortical) lymph node metastasis



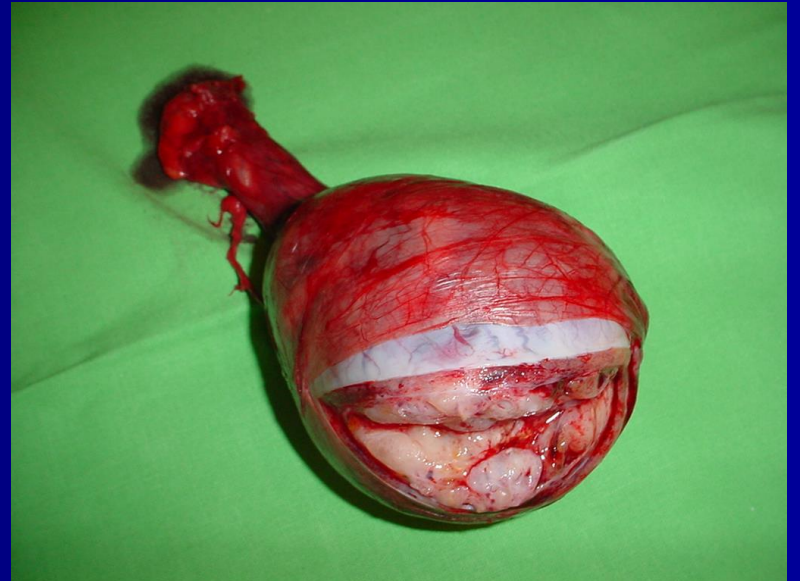
Chest X-ray and CT

- To examine pulmonary metastasis



Treatment

- First step:
unilateral high
castratio



Histology of primary germ cell tumors and frequency of serum tumor markers

Tumor type	AFP (%)	HCG (%)
All germ cell tumors	50 to 75	40 to 60
Seminoma	0	9
Nonseminoma	65	56
Choriocarcinoma	0	100

Pathological staging

- pT Primary tumor
- pN Regional lymph nodes
- pM Distant metastasis

Staging is the cornerstone
in decision making for the
right treatment.

- Stage I No metastasis
- Stage II/A Metastasis below the diaphragm
- Stage II/B Metastasis over the diaphragm

Treatment

Seminoma:

- Stage I
 1. wait and see
 2. radiation
- Stage II/A
 1. radiation
- Stage II/B
 1. radiation + adj. chemotherapy
 2. ind. chemotherapy+ salvage retroperitoneal lymphadenectomy (RLA)

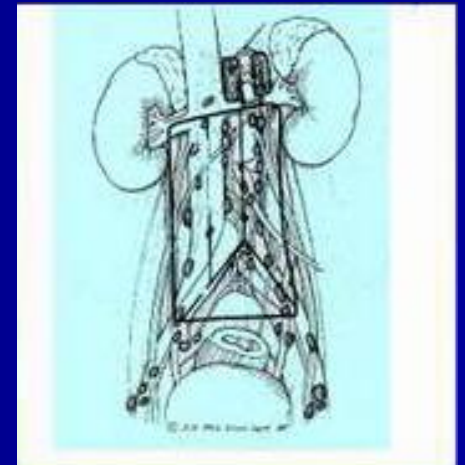
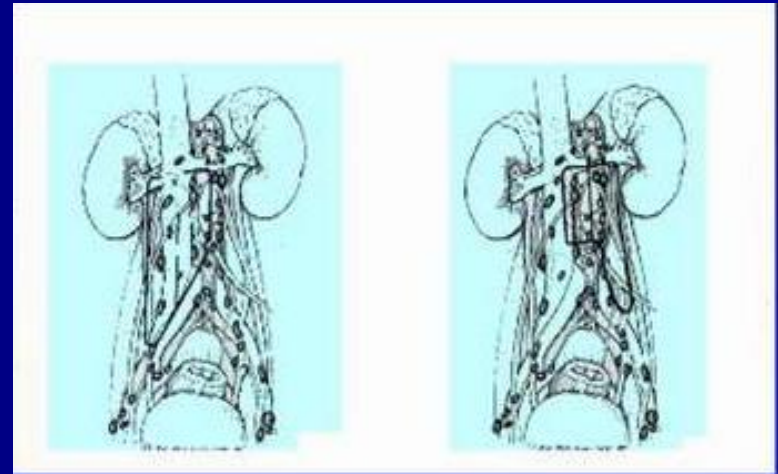
Treatment

Nonseminoma:

- Stage I
 1. RLA
 2. chemotherapy
 3. wait and see
- Stage II/A
 1. RLA + adj. chemotherapy
 2. chemotherapy + salvage RLA
- Stage II/B
 1. ind. chemotherapy + salvage RLA

Retroperitoneal lymph node dissection (RPLND)

- Bilateral dissection
- Unilateral dissection
- Nerve sparing RLA
- Salvage RLA
- Laparoscopic RLA



Chemotherapy

- Cisplatin
- Etoposide
- Bleomycin
- Vinblastin

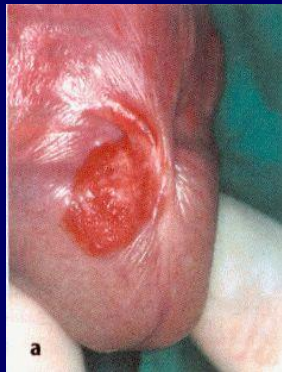
+ SYSTEMATIC FOLLOW UP

Penile cancers



In situ carcinoma

- Erythroplasia of Queyrat →



- ← ■ Bowen disease

- Bowenoid papulosis →



- ← ■ Buschke-Löwenstein tumor



Invasive carcinoma of the penis

Etiology

- prolonged contact of the smegma
- recidiv inflammation
- HPV infection

Histology

- 90% Squamous cell cancer
- Sarcoma (Kaposi)
- Melanoma
- Basal cell cancer

TNM

Stage

- Tis carcinoma in situ
- T1 involves subepithelial connective tissue
- T2 involves corpus spongiosum or cavernosum
- T3 involves urethra or prostate
- T4 involves other adjacent structures

Grade I-III

Symptoms

Presentation of the lesion:

- area of induration or erythema
- ulceration
- small nodule
- exophytic growth

Phimosis may obscure the lesion.

Diagnosis

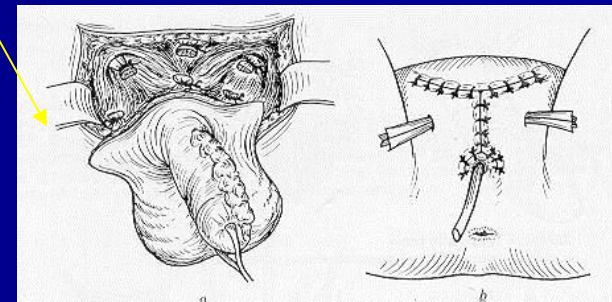
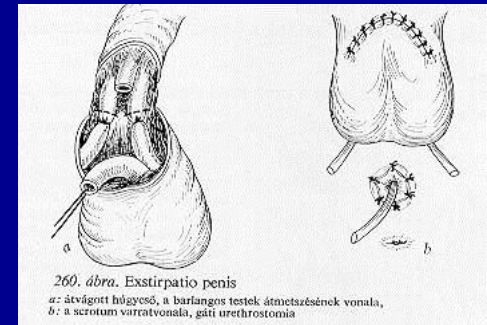
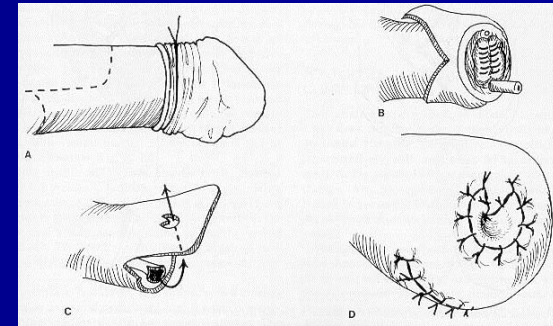
- Palpation of primary lesion
- Palpation of the enlarged (metastatic) inguinal lymph nodes (50% of the patients)
- Abdominal ultrasound and CT, bone scan, chest X-ray:

lymph nodes (iliacal) and other metastasis (lung, liver, bones brain)



Surgical Treatment

- Biopsy (exscisio) of the primaer laesion
- Circumcisio
- Partial resection of the penis
- Total penectomy with perineal urethrostomy
- Emasculinatio with perineal urethrostomy



- Bilateral inguino-femoral lymphadenectomy
- Pelvic lymphadenectomy
- Chemotherapy:
vincristin, methotrexat, bleomycin,
5-fluorouracyl, cisplatin
- Radiotherapy

A photograph of a large, multi-story brick building with a prominent tree in the foreground. The text "Thank you for your attention!" is overlaid in yellow. The building is a multi-story structure made of light-colored brick with decorative architectural elements, including arched windows and a balcony. A large tree with green and yellowing leaves is in the foreground on the left. A silver car is visible in the lower right corner. The sky is bright and clear.

Thank you for your attention!