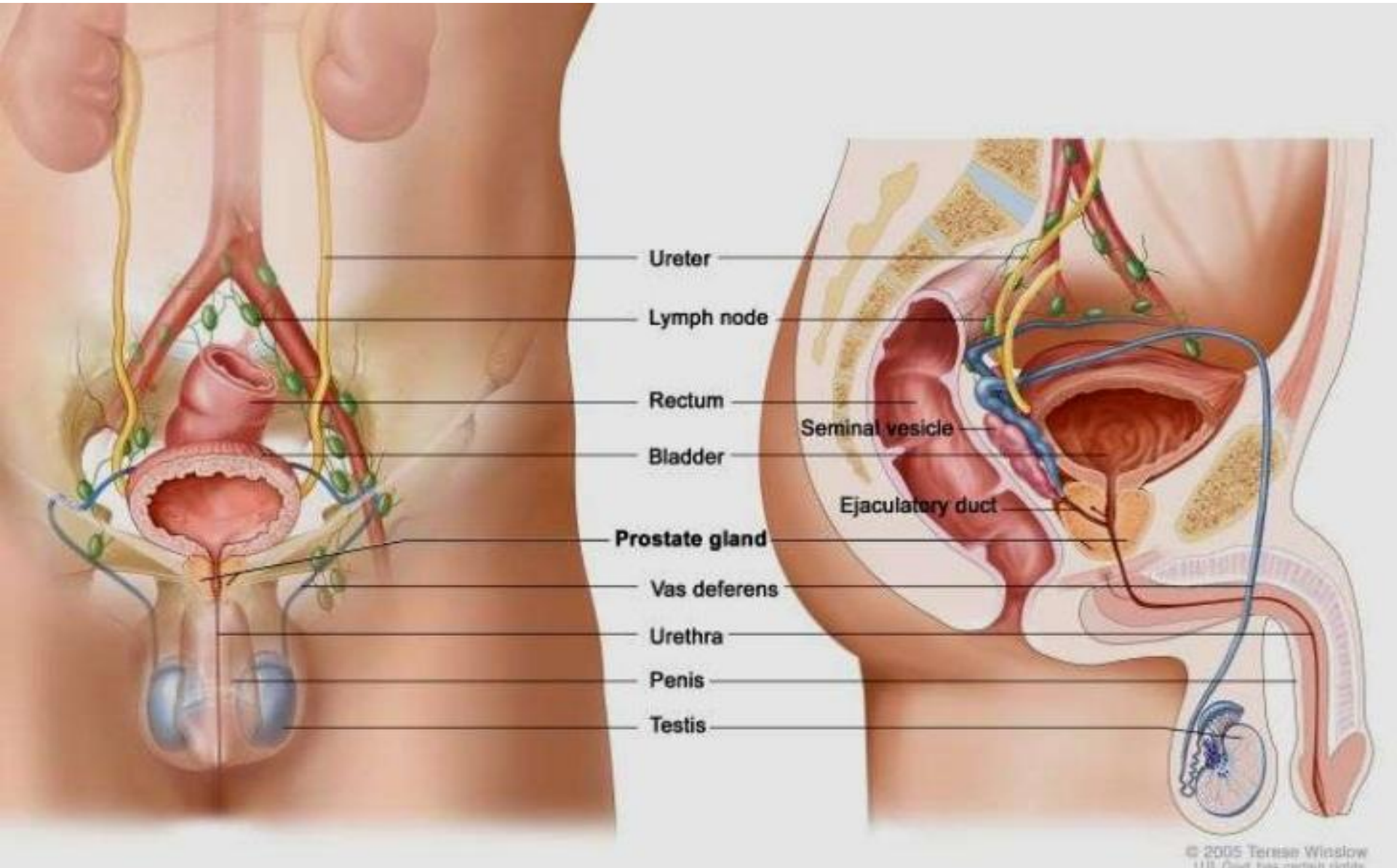
Рак мочевого пузыря

Муканова Балжан
Тауман Омиржан

Топография


Ureter
Lymph node
Rectum
Seminal vesicle
Bladder
Ejaculatory duct
Prostate gland
Vas deferens
Urethra
Penis
Testis
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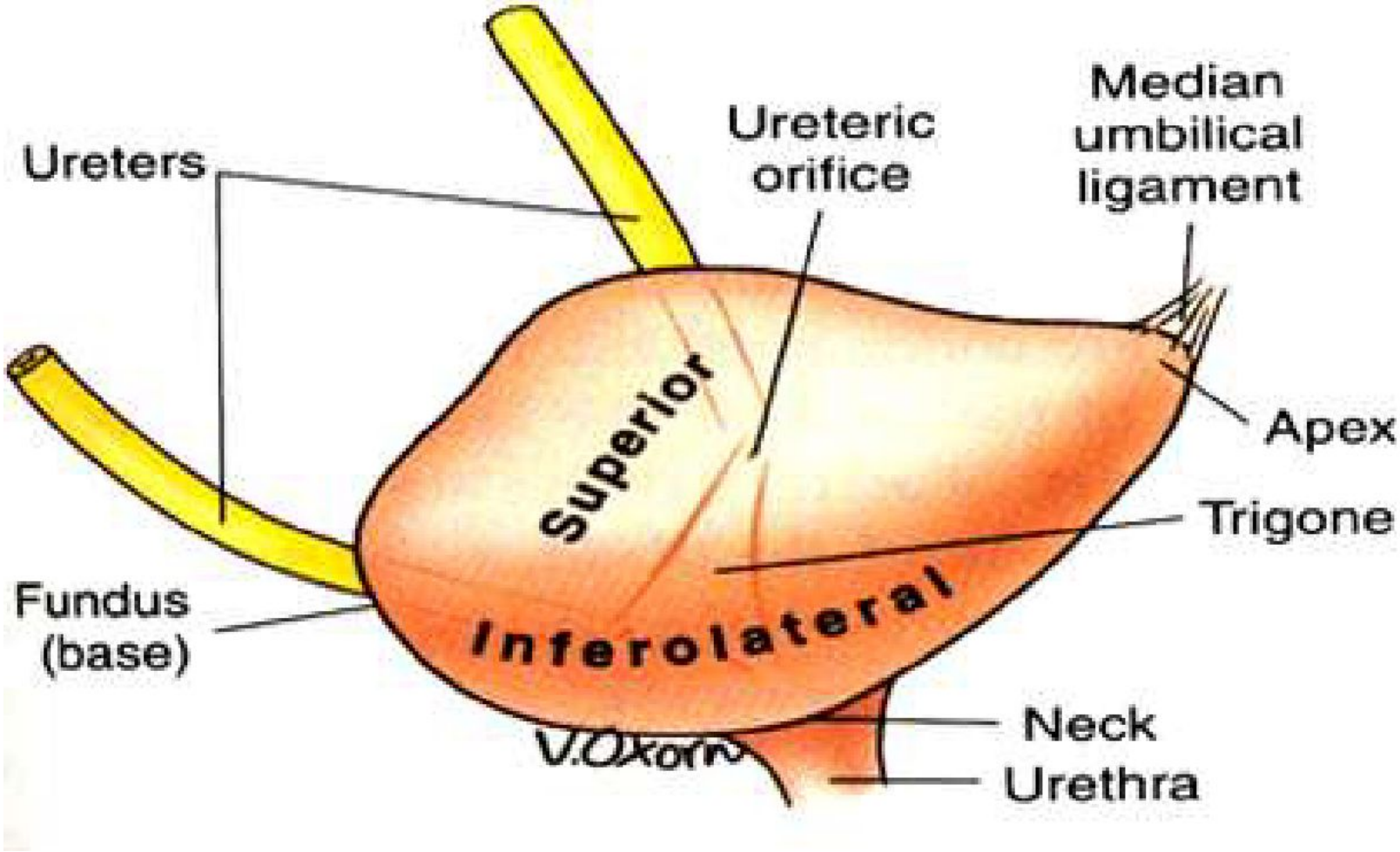
Анатомия


Ureters
Ureteric orifice
Median umbilical ligament
Apex
Trigone
Superior
Interolateral
Fundus (base)
Neck
Urethra

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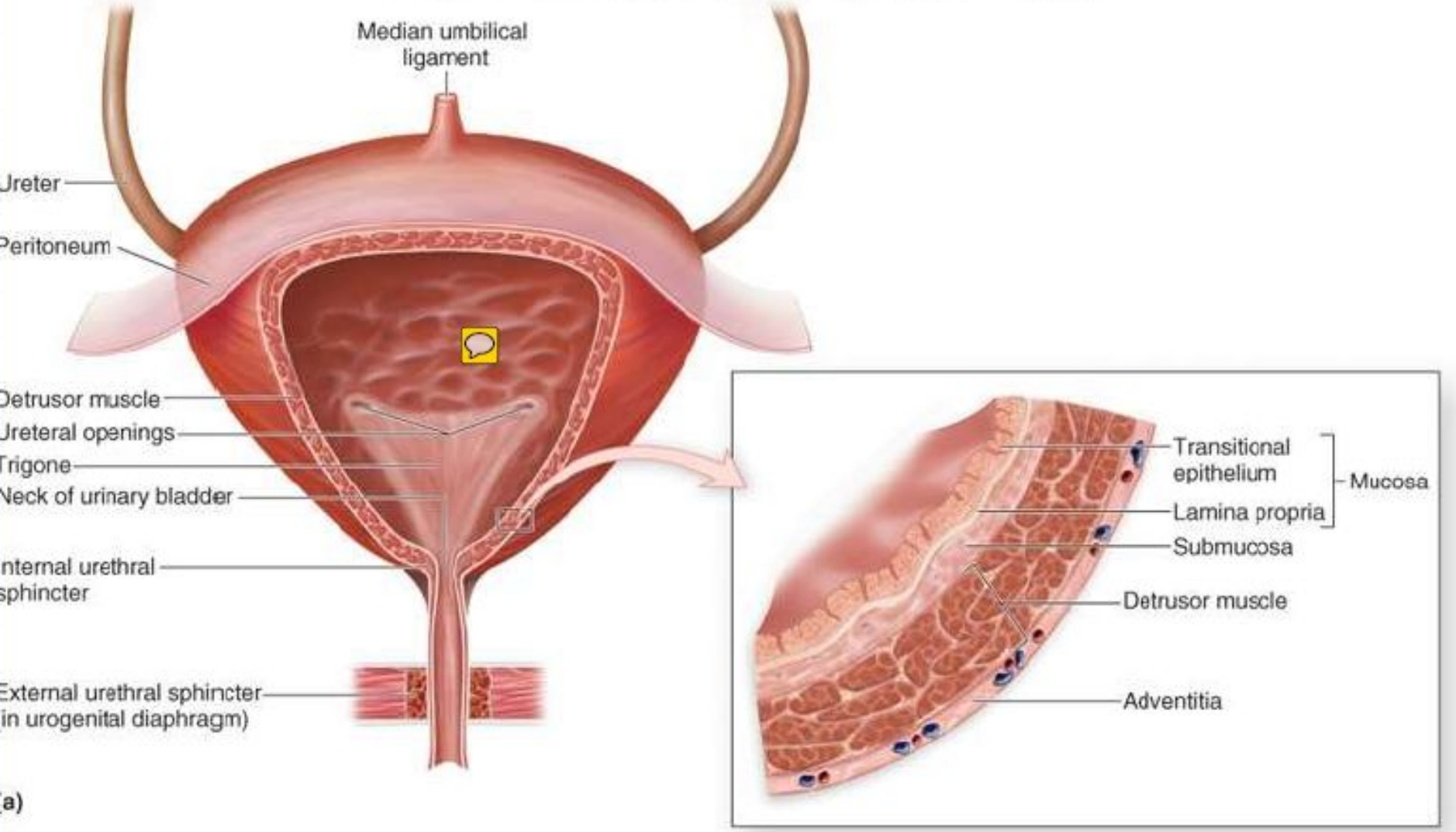
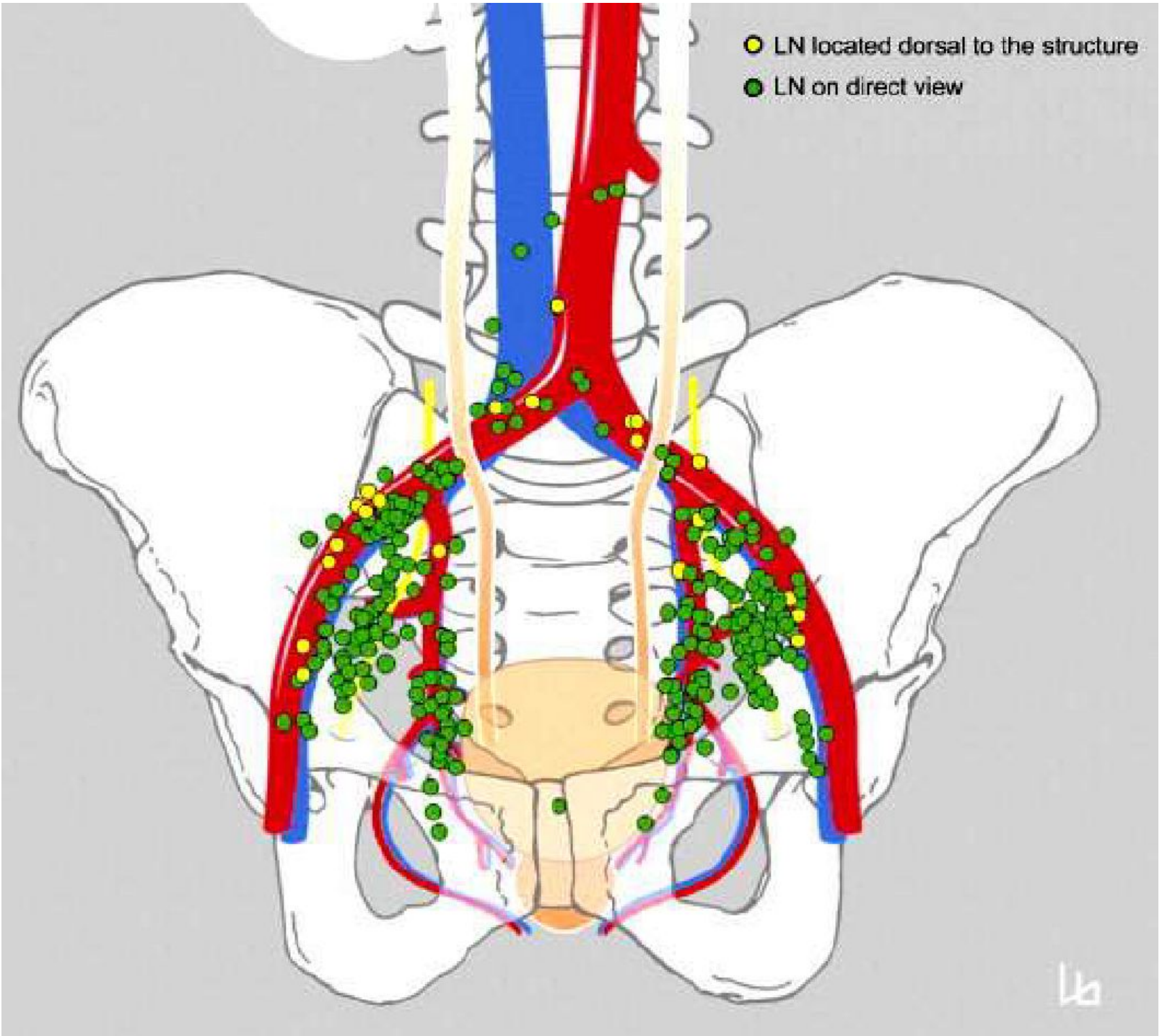
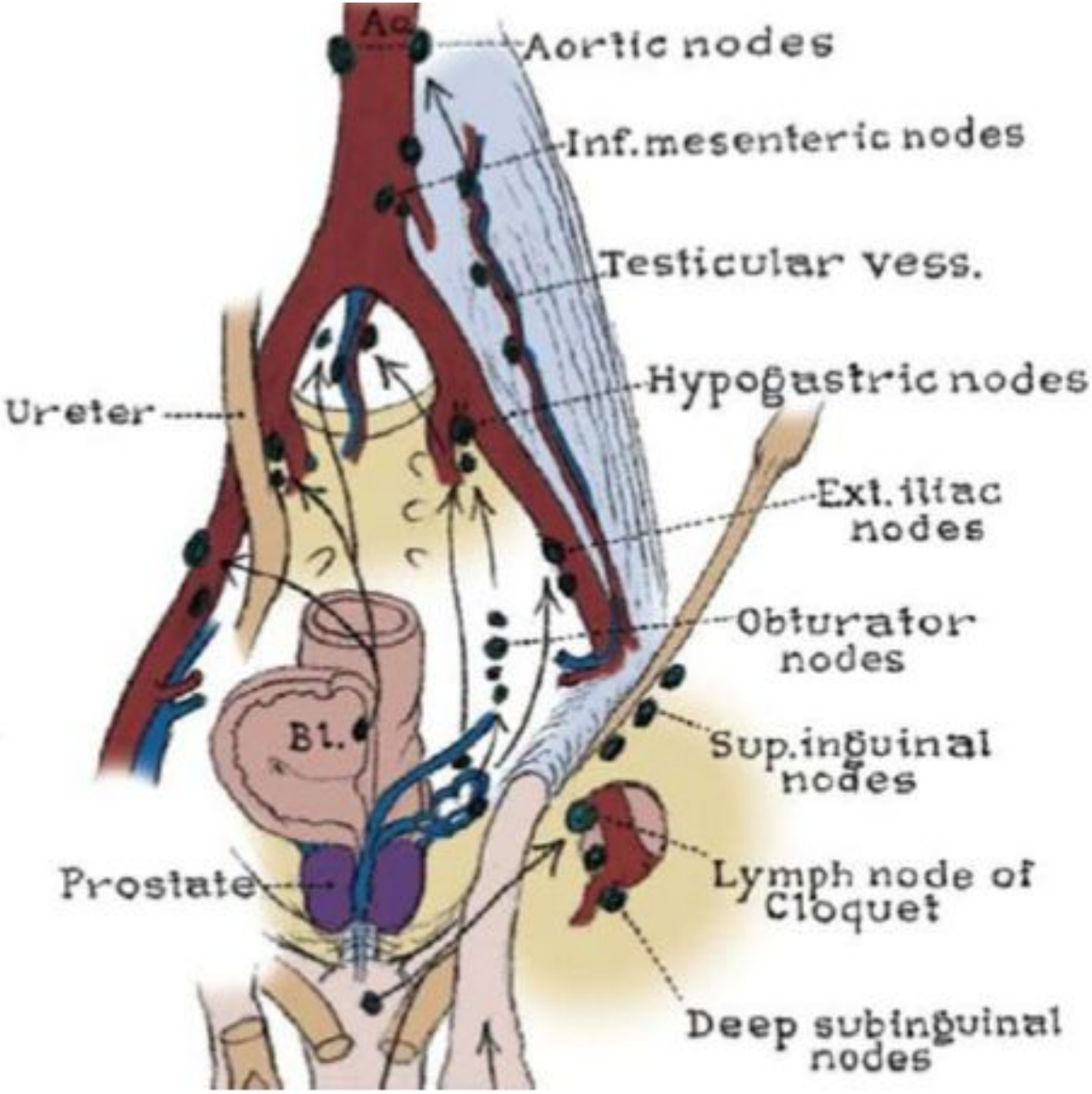
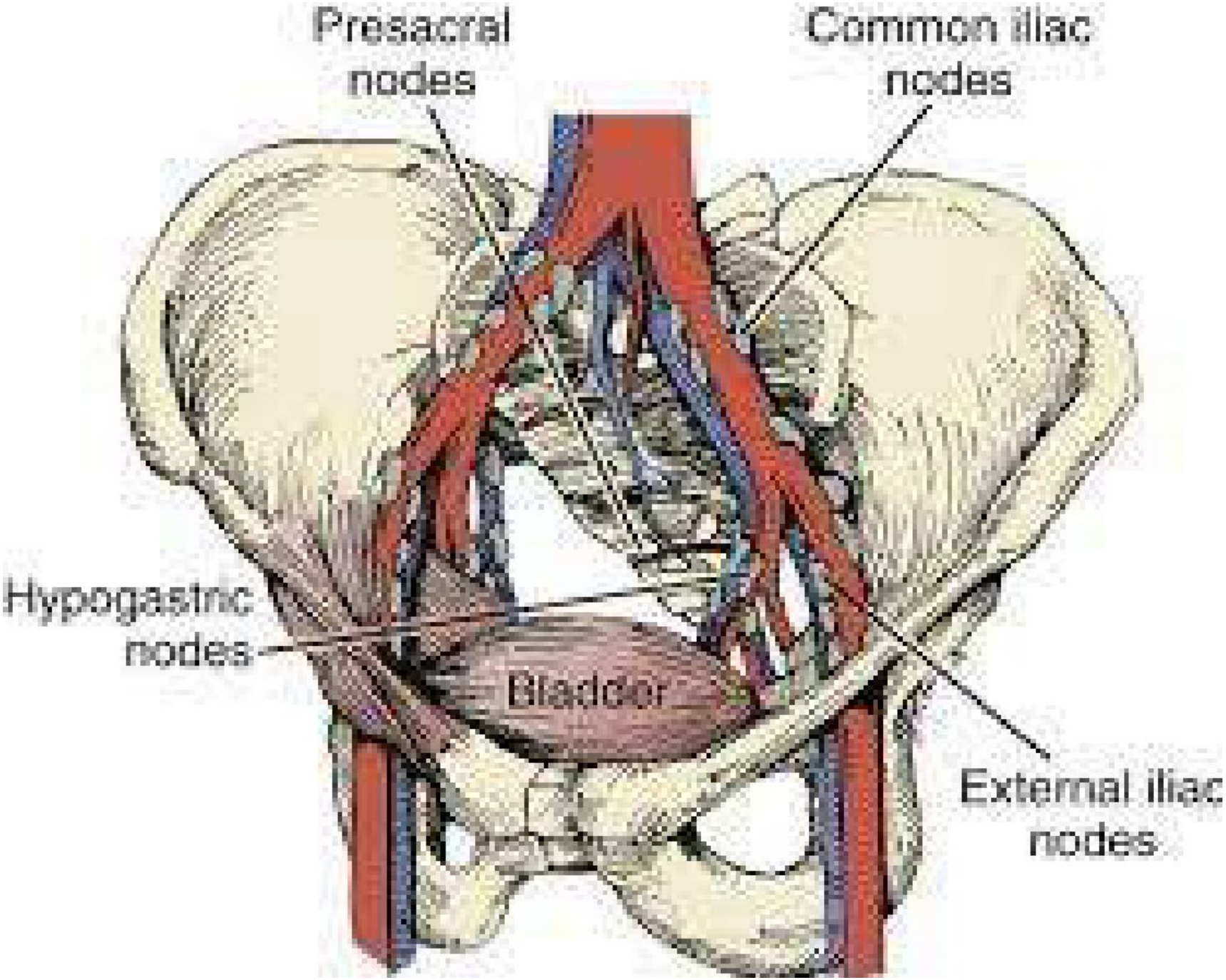


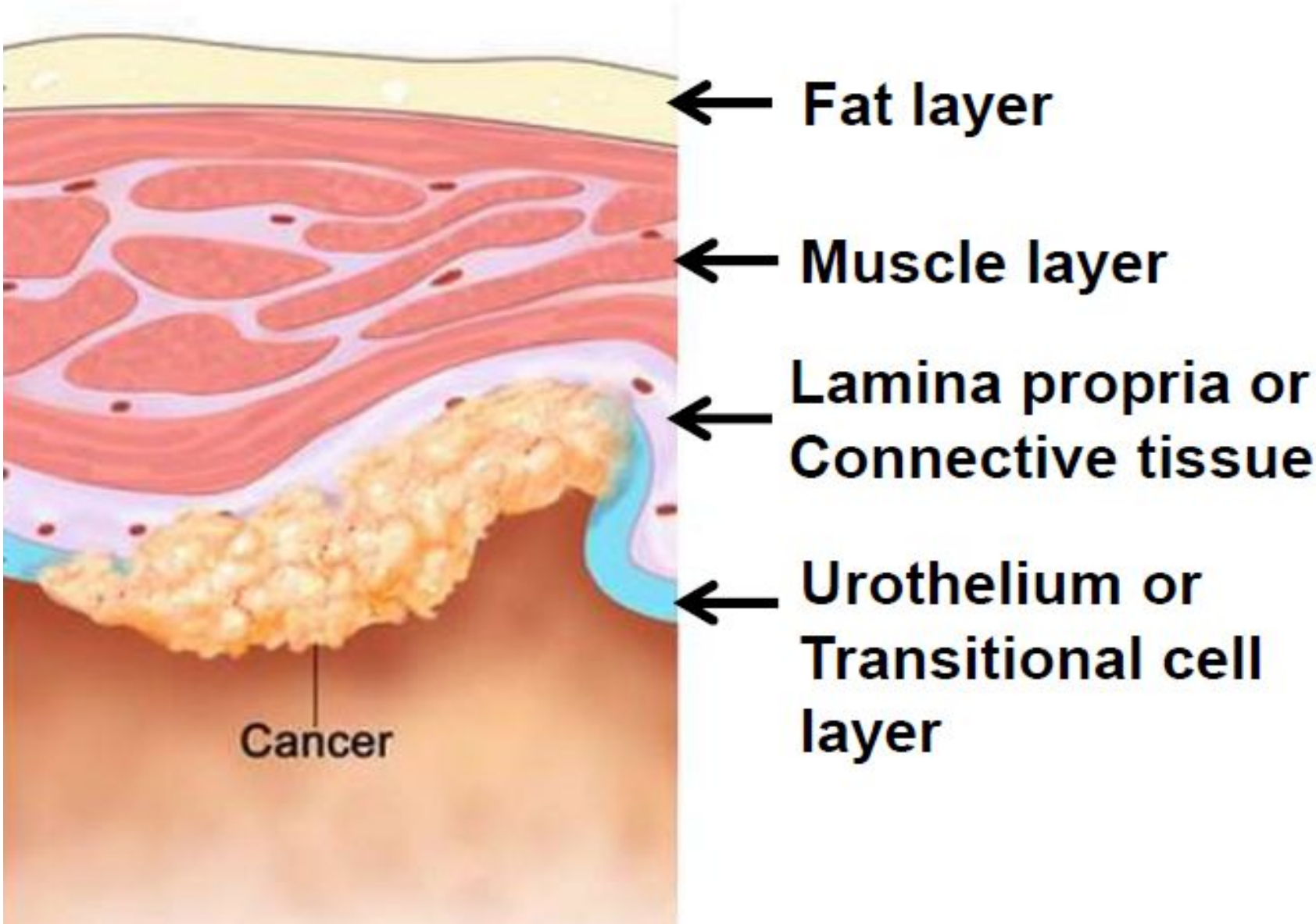
(a)


LN located dorsal to the structure
LN on direct view

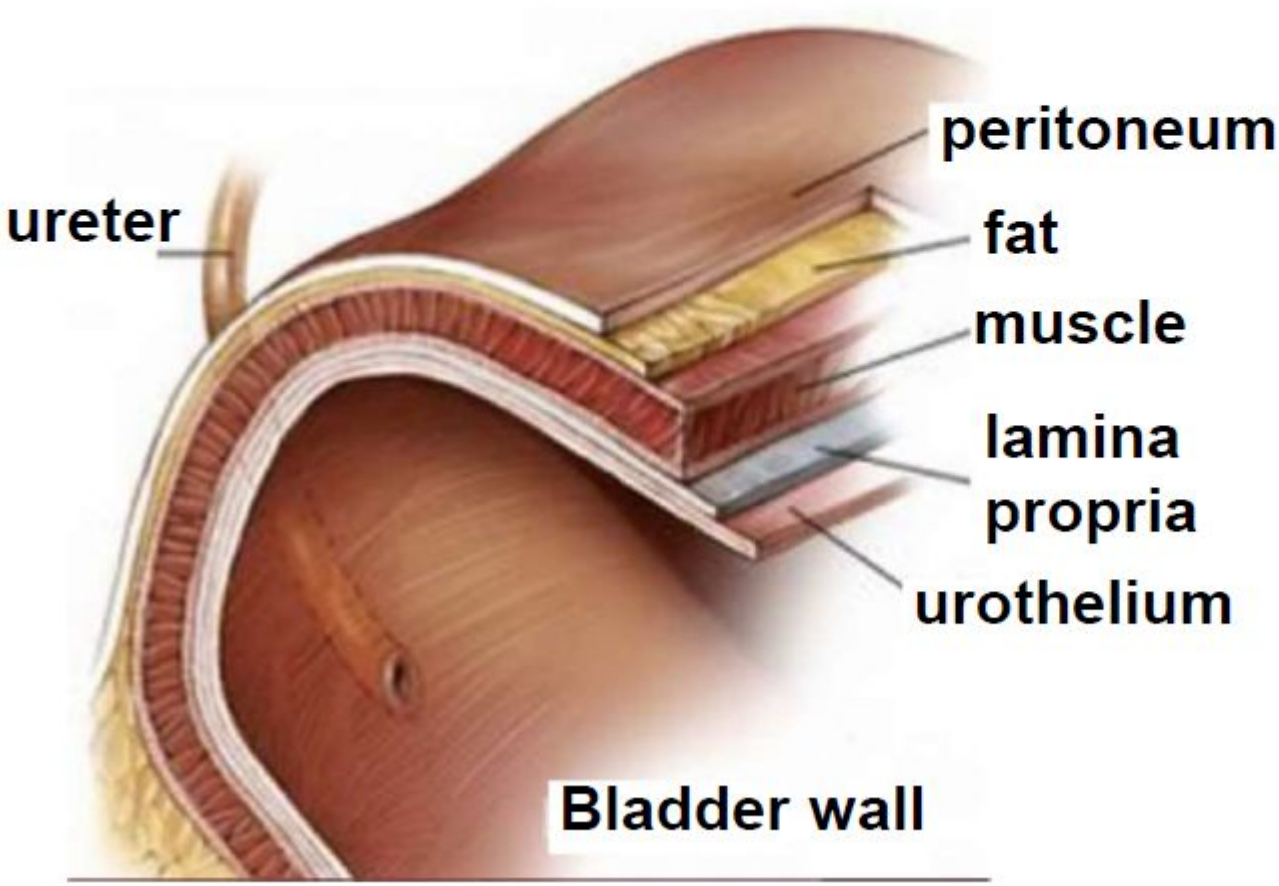

Ao
Aortic nodes
Inf. mesenteric nodes
Testicular vess.
Hypogastric nodes
Ureter
Ext. iliac nodes
Obturator nodes
Bl.
Sup. inguinal nodes
Prostate
Lymph node of Cloquet
Deep subinguinal nodes


Presacral nodes
Common iliac nodes
Hypogastric nodes
Bladder
External iliac nodes

Гистология


Fat layer
Muscle layer
Lamina propria or
Connective tissue
Urothelium or
Transitional cell
layer
Cancer

Layers of the Bladder Wall



Физиология

Когда ощущается позыв к мочеиспусканию

- 100–150 мл: рецепторы в мышечной стенке мочевого пузыря активируются и передают сигнал в головной мозг о том, что мочевой пузырь начинает наполняться;
- 250–300 мл: отчетливый позыв к мочеиспусканию;
- 300 мл: непреодолимый позыв.

Регулируют работу мочевого пузыря – рецепторы.

- мускариновые рецепторы, чья активность вызывает выделение мочи,
- β3-адренорецепторы, задача которых – расслабление мочевого пузыря и увеличение его объема.

Рак мочевого пузыря

Эпидемиология

79,030 diagnosed in 2017

600K + living with bladder cancer

5th most common cancer

16,870 will die in 2017

"Statistics are human beings with the tears wiped away."

50% - 80% recurrence rate

4th most common in men

11th most common in women

В мире (РМП) занимает 9-е место среди всех злокачественных новообразований.

Ежегодно диагностируется более 330 000 новых случаев РМП. Около 130 000 человек умирают от данного заболевания.

- **Эпидемиология в мире и в Казахстане**

За 10-летний период в РК доля рака мочевого пузыря в структуре злокачественных опухолей составила 2,07%.

Стабильными с незначительной тенденцией к снижению, с 4,0% 000 (2004)до 3,8% 000 (2013).

Лидирующую позицию по заболеваемости РМП занимает

Северо-Казахстанская область (7,7% ооо),

Костанайская (7,0% ооо),

Акмолинская (5,8% ооо) области и г. Алматы (5,7% ооо).

Наиболее низкие показатели заболеваемости РМП отмечены в Южно-Казахстанской (1,4% ооо), Атырау-ской (1,4% ооо) и Мангистауской (1,9% ооо) областях.

Казахский научно-исследовательский институт онкологии и радиологии, Алматы, РК
Тип: Статистика
УДК: 616.64-006.6-036.22(574)
Год: 2015 **выпуск:** 35 **номер:** 1 **стр:** 3-6

Факторы Риска

- 3x more common in smokers
- Chemical/occupational exposure
- Arsenic in water
- Race, age, gender, birth defects
- Chronic bladder inflammation
- Medical history recurrence
- Low fluid intake
- Previous cancer treatment

Патология

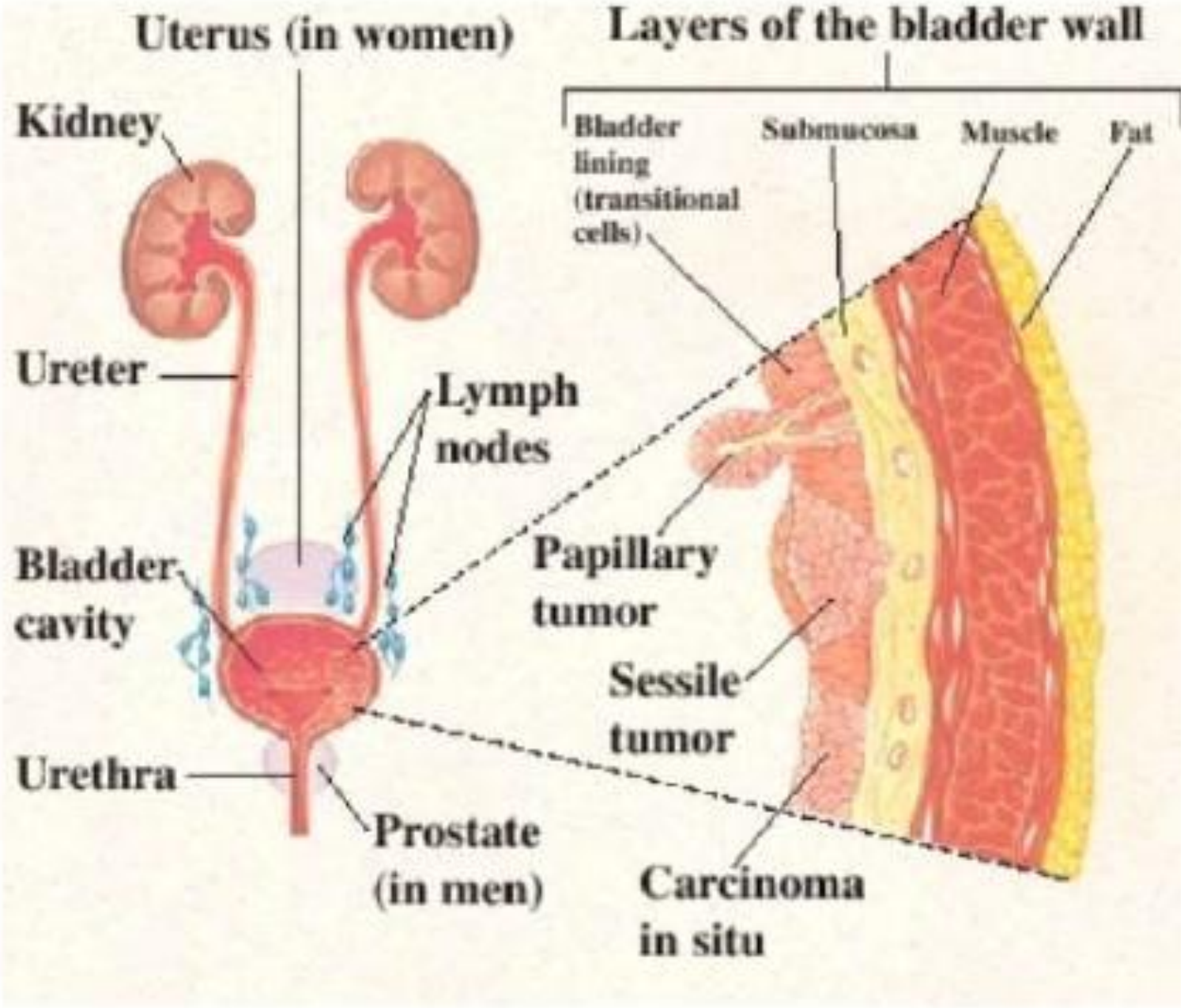
- 95% всех опухолей МП эпителиального происхождения

- 90% из них Переходно – клеточный рак

Папилярный
(70-75%)

непапилярный

Cis инвазивный


Uterus (in women)
Layers of the bladder wall
Kidney
Bladder lining (transitional cells)
Submucosa
Muscle
Fat
Ureter
Lymph nodes
Papillary tumor
Bladder cavity
Sessile tumor
Urethra
Prostate (in men)
Carcinoma in situ

Pathology

- Squamous Cell Carcinoma
- Adenocarcinoma
- Small Cell Cancer
- Rhabdomyosarcoma
- Lymphoma
- Melanoma
- Secondaries frm other sites
- Primary UB Pheochromocytoma

TYPES OF BLADDER TUMORS

Non-invasive

Papilloma
Papillary carcinoma

Invasive

Invasive
Papillary carcinoma

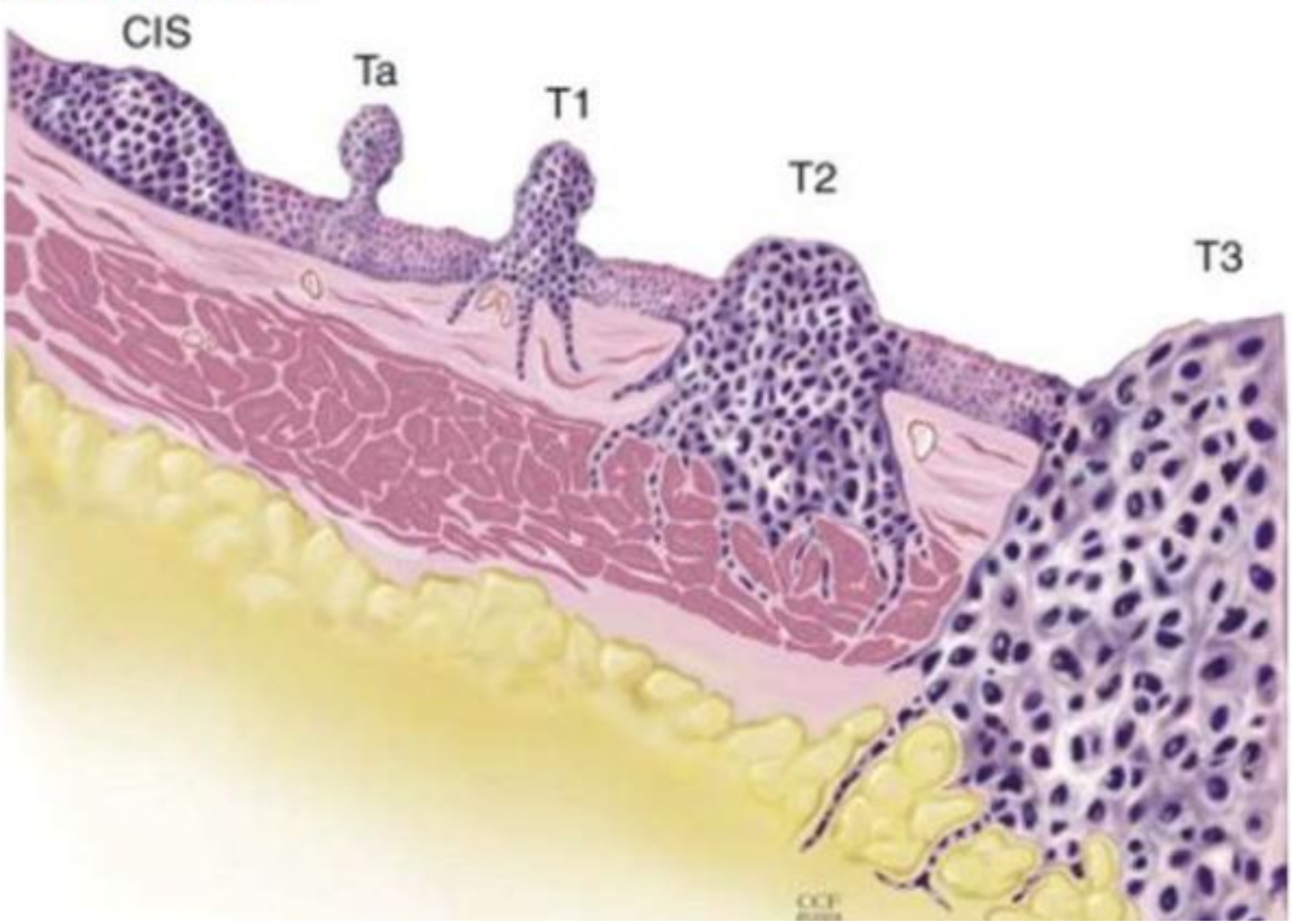
In situ

Flat (sessile)
non-invasive carcinoma

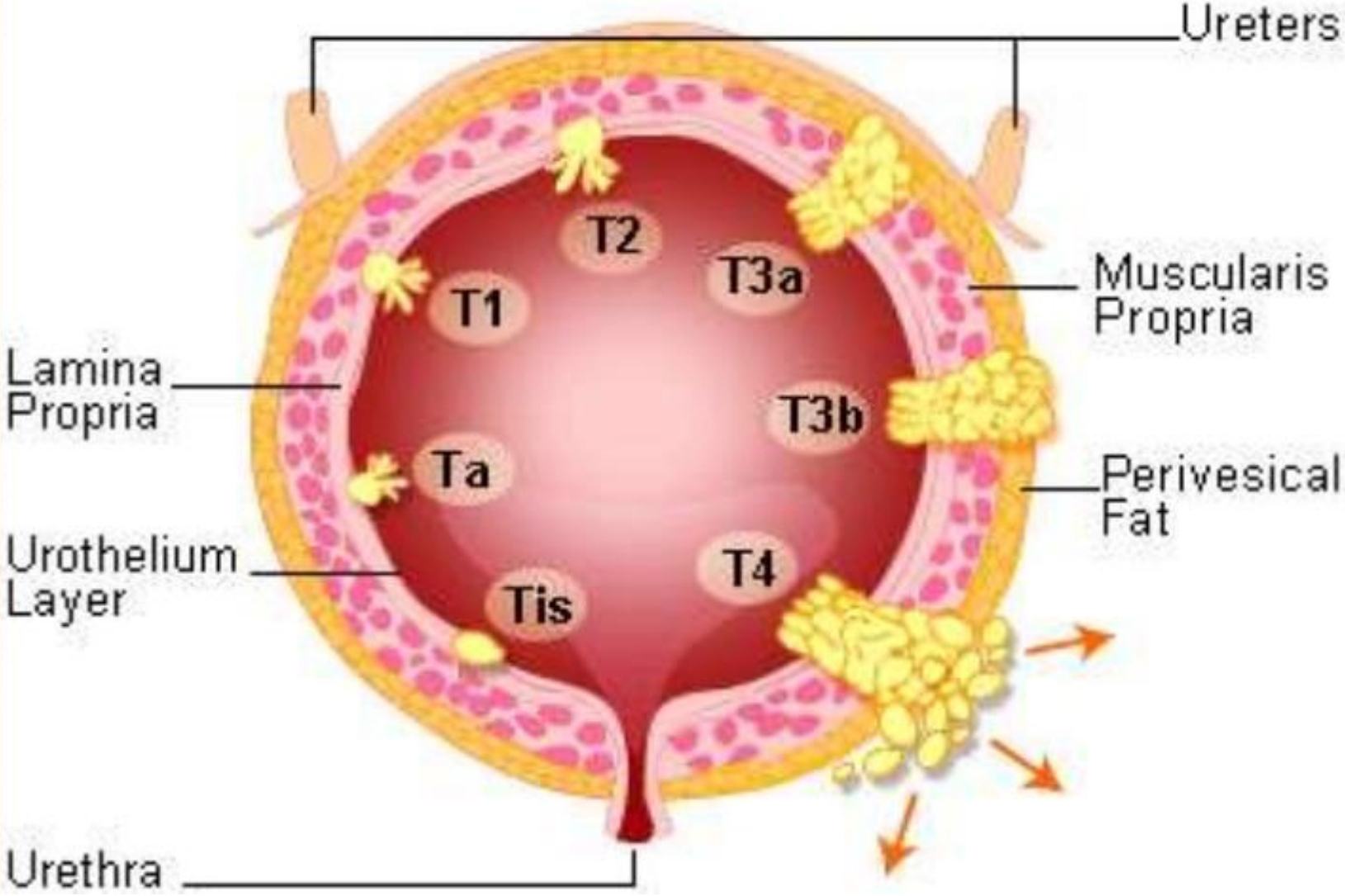
Invasive

Flat (sessile)
invasive carcinoma

Стадии



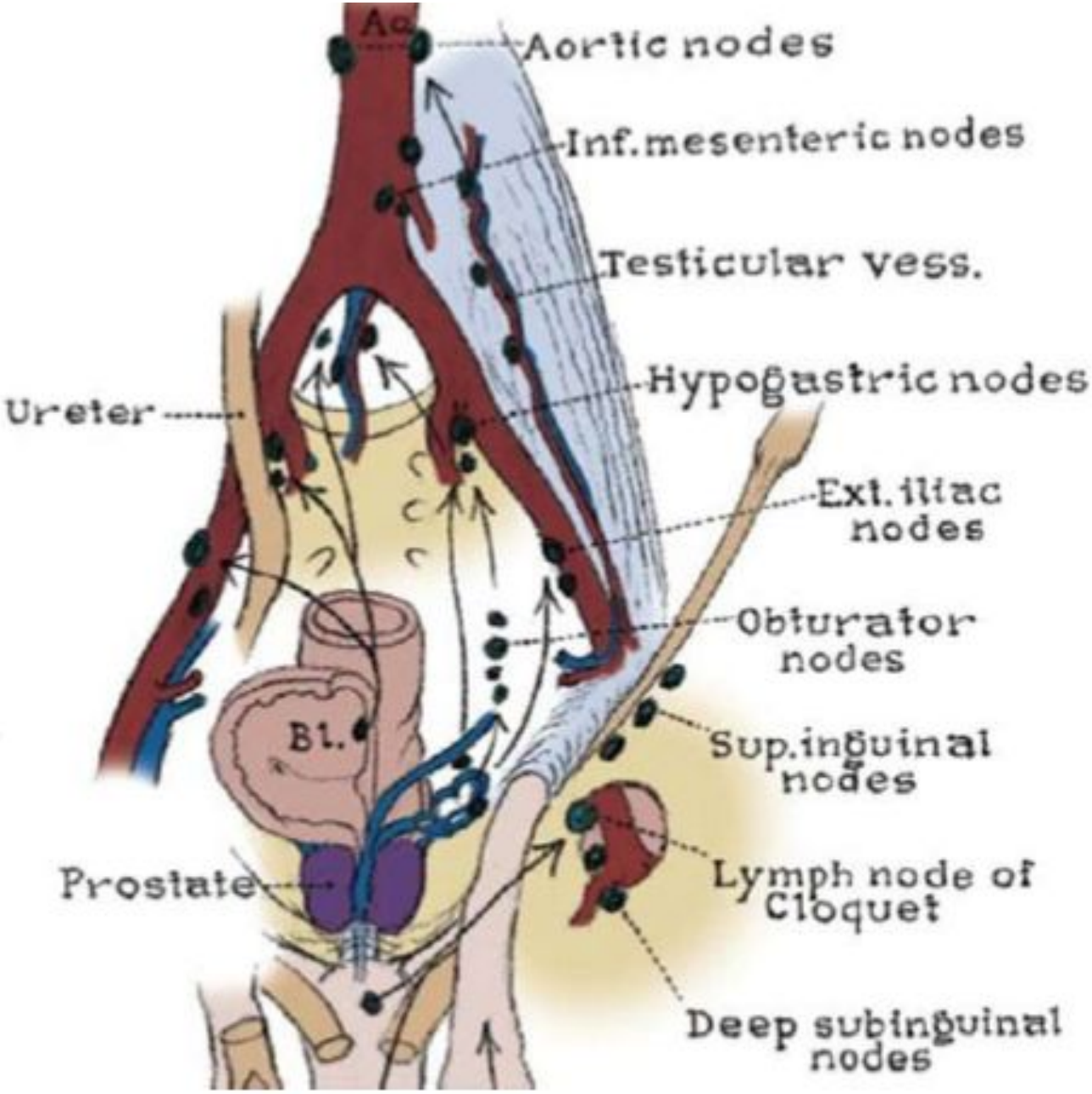
Bladder Cancer



Regional Lymph Nodes (N)

Regional lymph nodes include both primary and secondary drainage regions. All other nodes above the aortic bifurcation are considered distant lymph nodes.

NX	Lymph nodes cannot be assessed
N0	No lymph node metastasis
N1	Single regional lymph node metastasis in the true pelvis (hypogastric, obturator, external iliac, or presacral lymph node)
N2	Multiple regional lymph node metastasis in the true pelvis (hypogastric, obturator, external iliac, or presacral lymph node metastasis)
N3	Lymph node metastasis to the common iliac lymph nodes


Ao
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Testicular vess.
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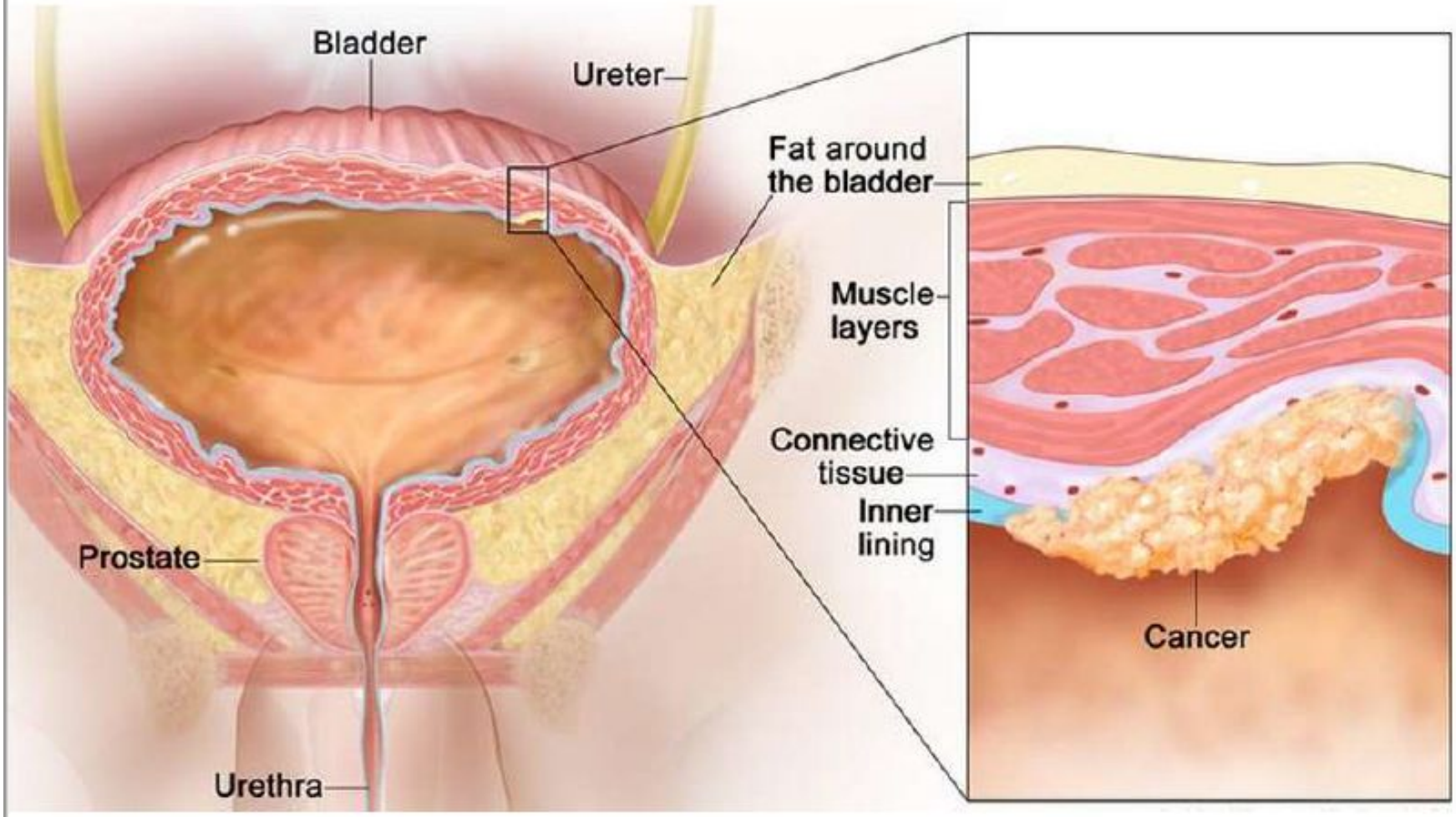
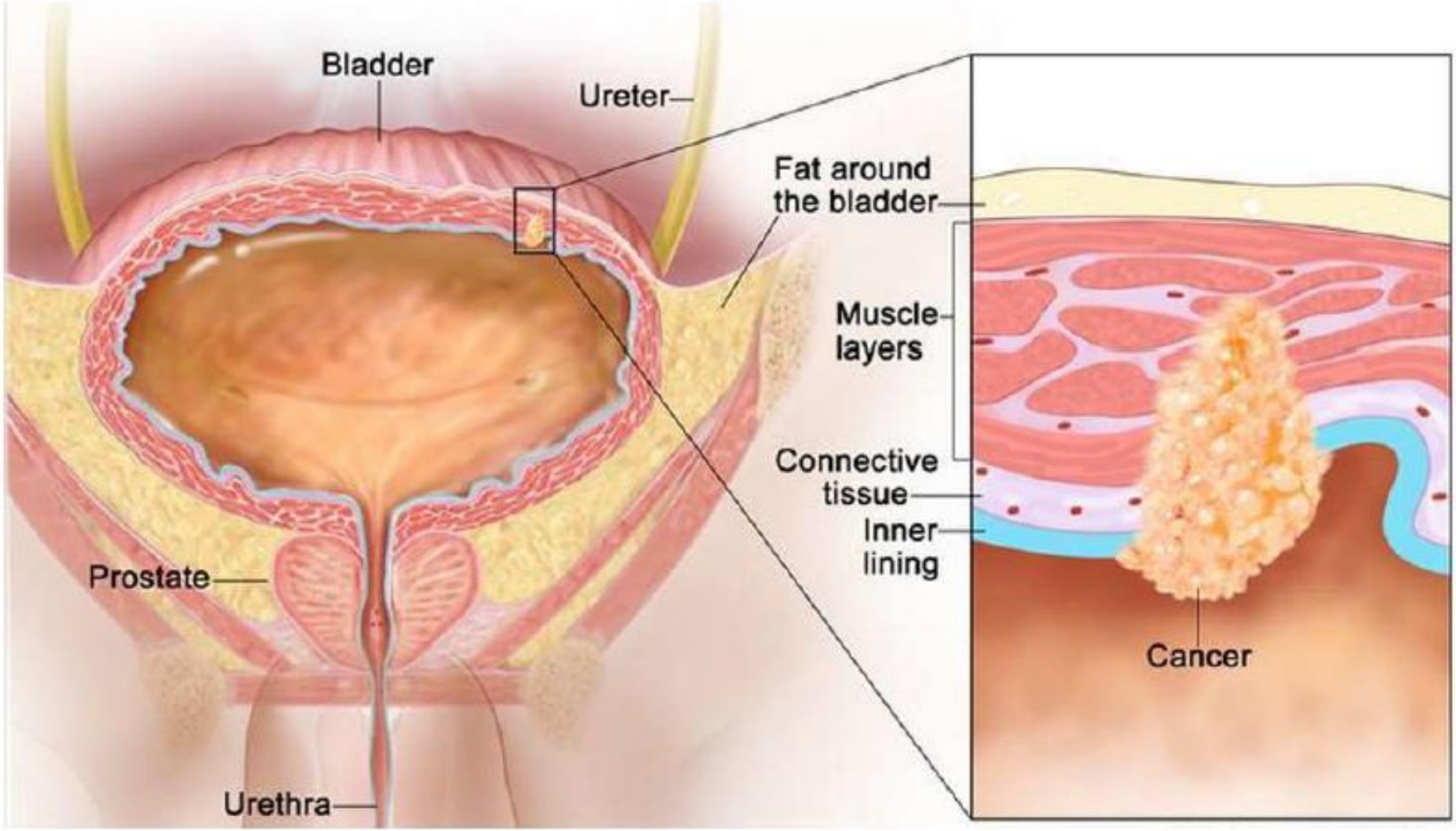
Prostate
Lymph node of Cloquet
Deep subinguinal nodes

Stage I Bladder Cancer



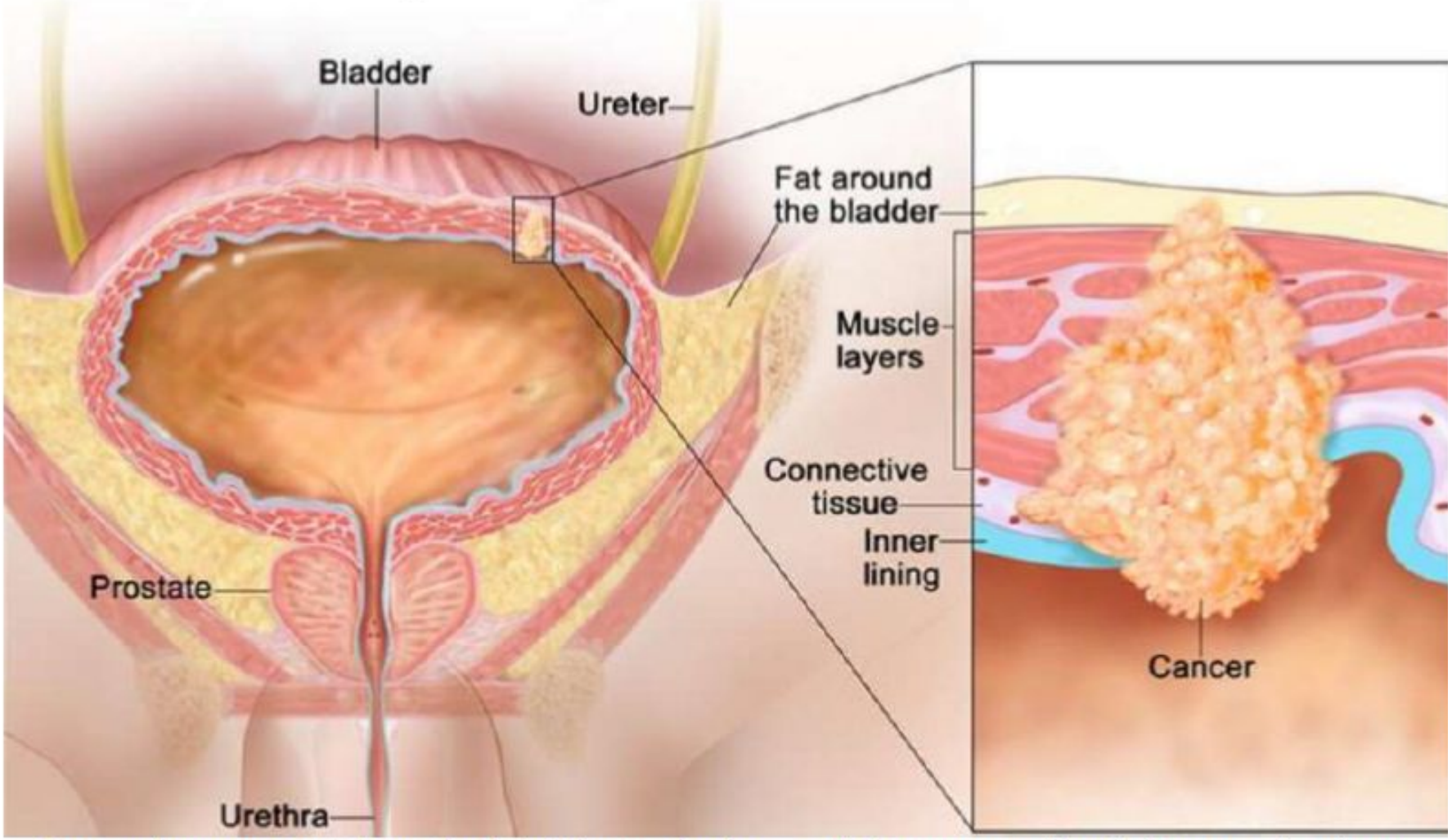
Cancer has spread to the layer of connective tissue next to the inner lining of the bladder.

Stage II Bladder Cancer



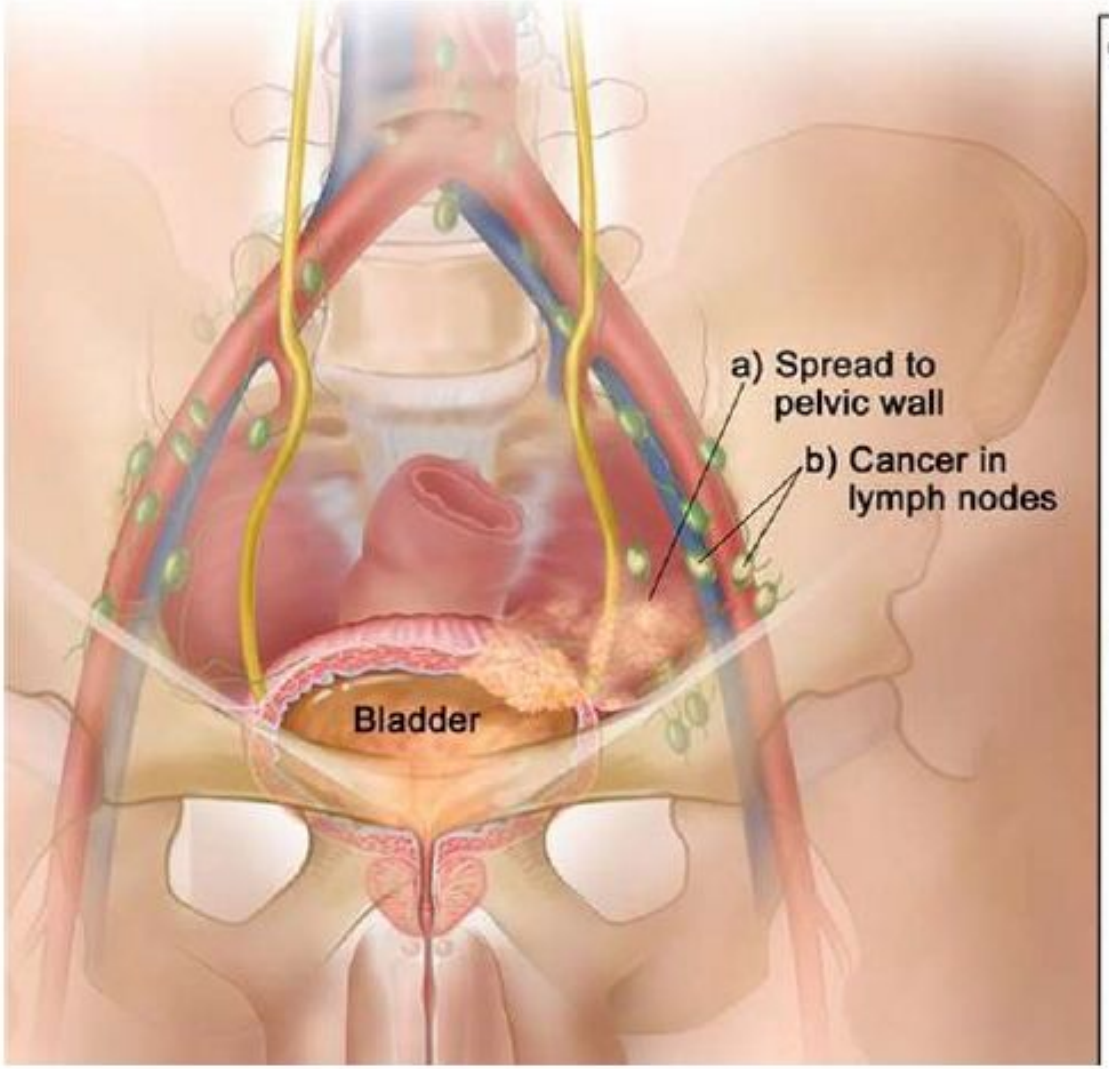
Cancer has spread to the layers of muscle tissue of the bladder.

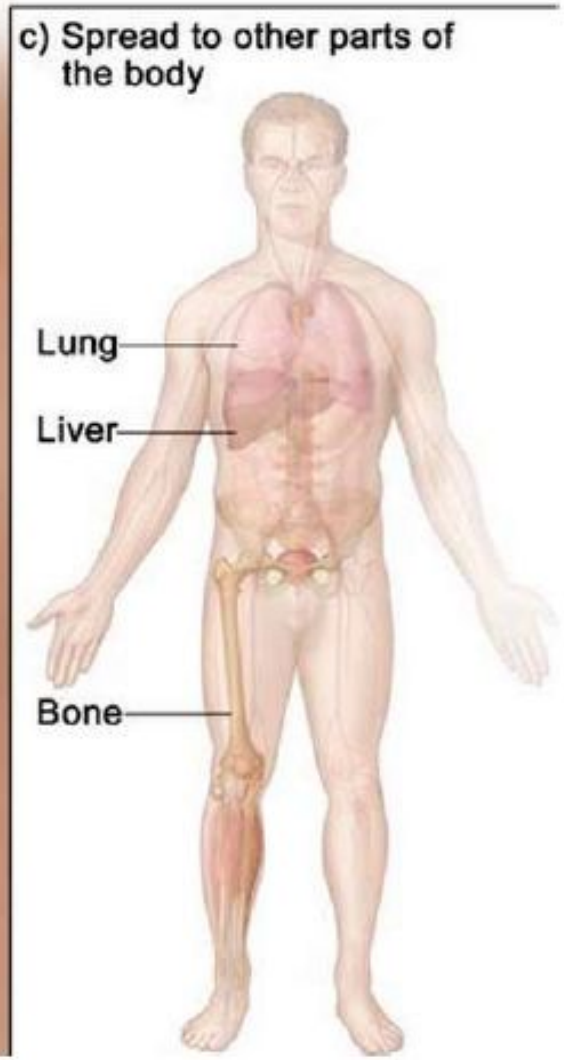
Stage III Bladder Cancer



Cancer has spread from the bladder to the layer of fat surrounding it. It may also have spread to the prostate and/or seminal vesicles in men or the uterus and/or vagina in women.

Stage IV Bladder Cancer





Cancer has spread from the bladder to (a) the wall of the abdomen or pelvis, (b) one or more lymph nodes, and/or (c) other parts of the body, such as the lung, liver, or bone.

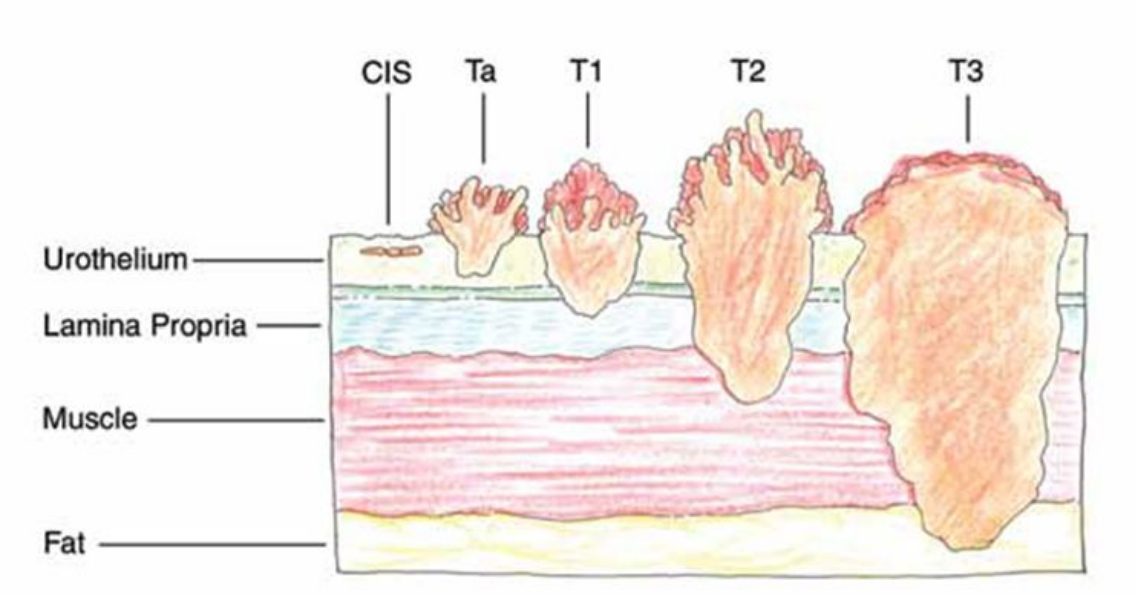
What are the Signs & Symptoms?

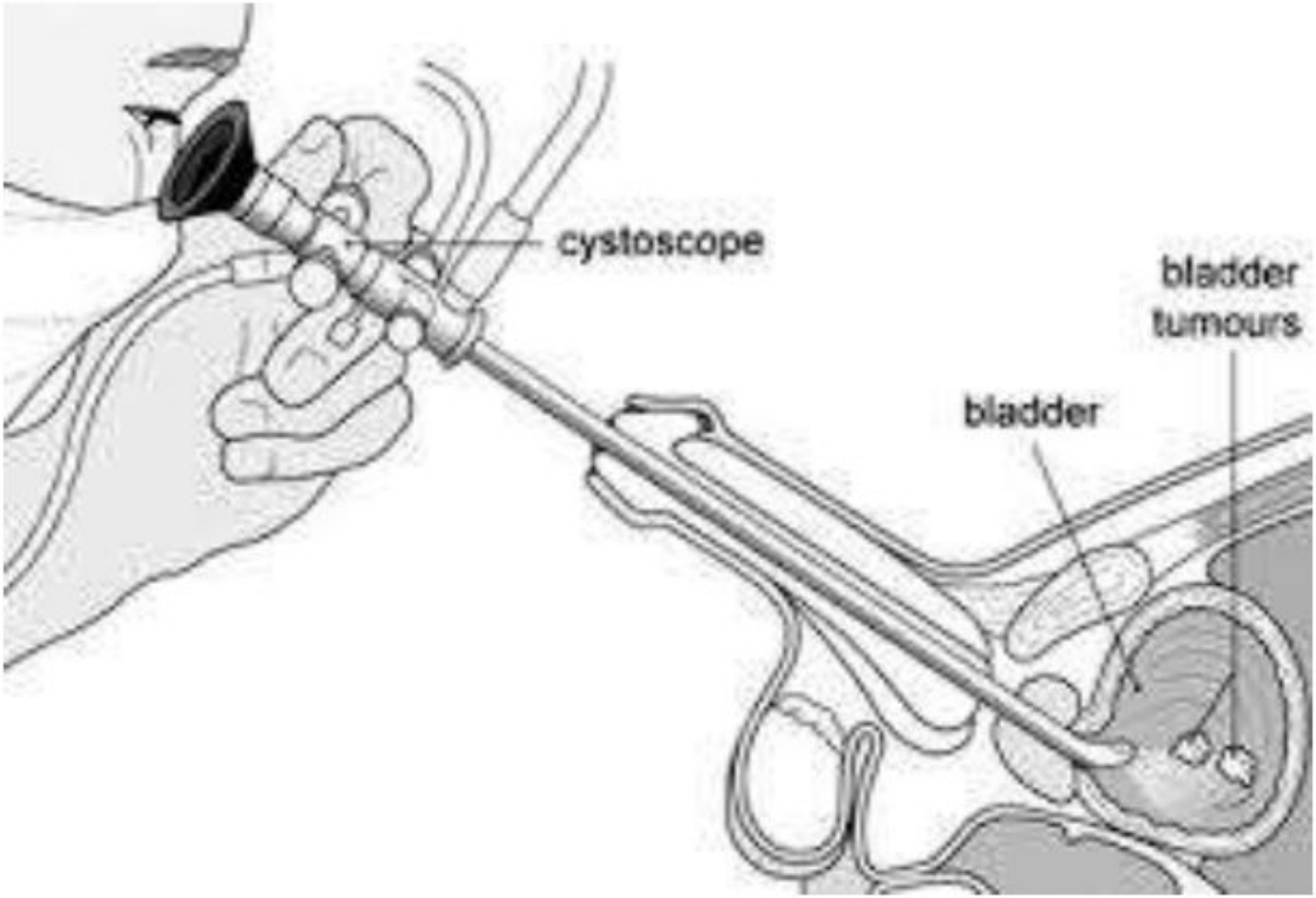
Signs	Symptoms
Blood in the urine	Abdominal pain
Painful urination	Fatigue
Urgent need to urinate	Lower back pain
Feeling the need (but unable) to urinate	Appetite or weight loss

How is it Diagnosed?

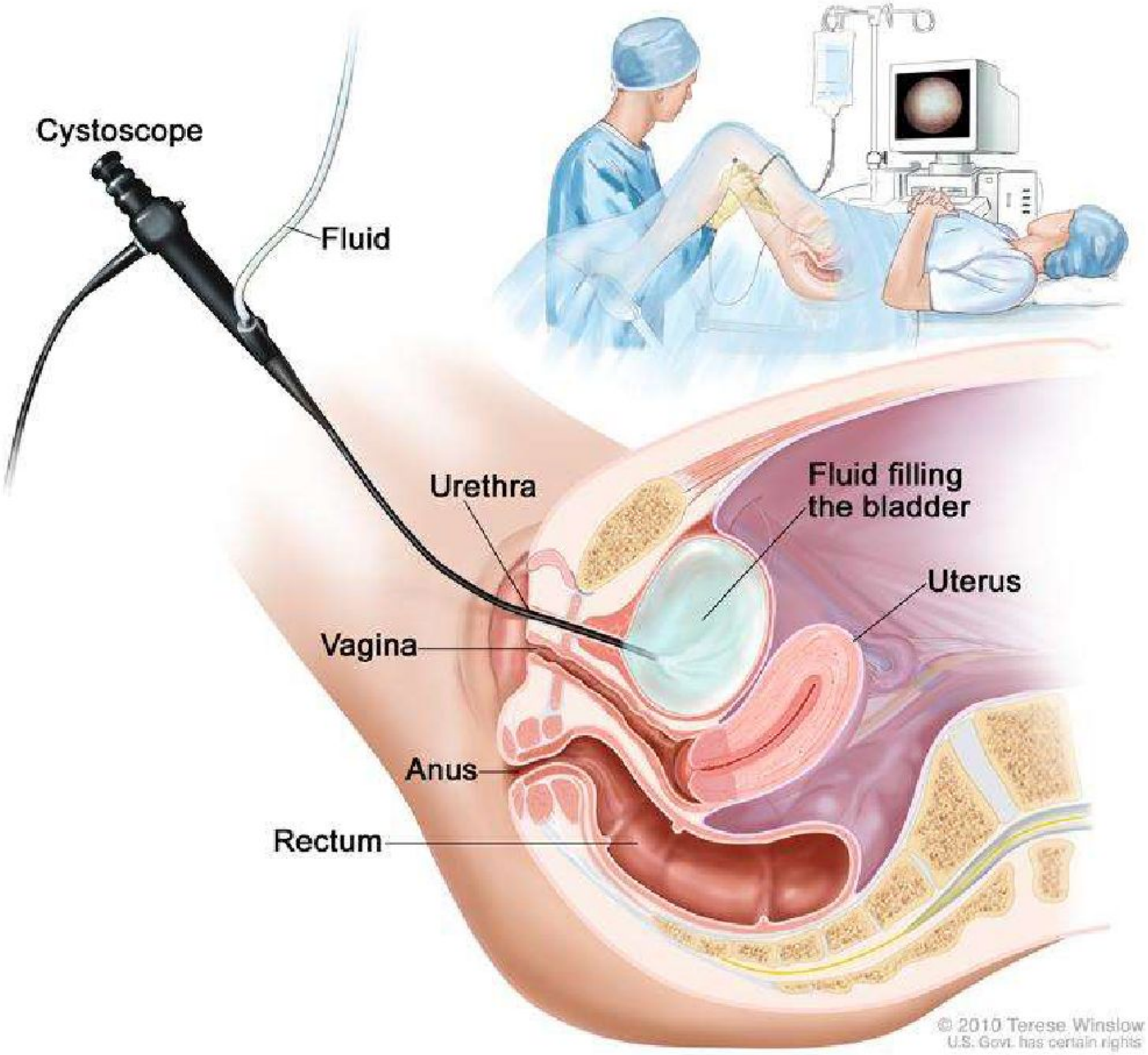
Diagnostics

- Cystoscopy
- Tissue sample
- Radiologic Tests
- CT scan
- Stage & Grade




cystoscope
bladder tumours
bladder

Cystoscopy



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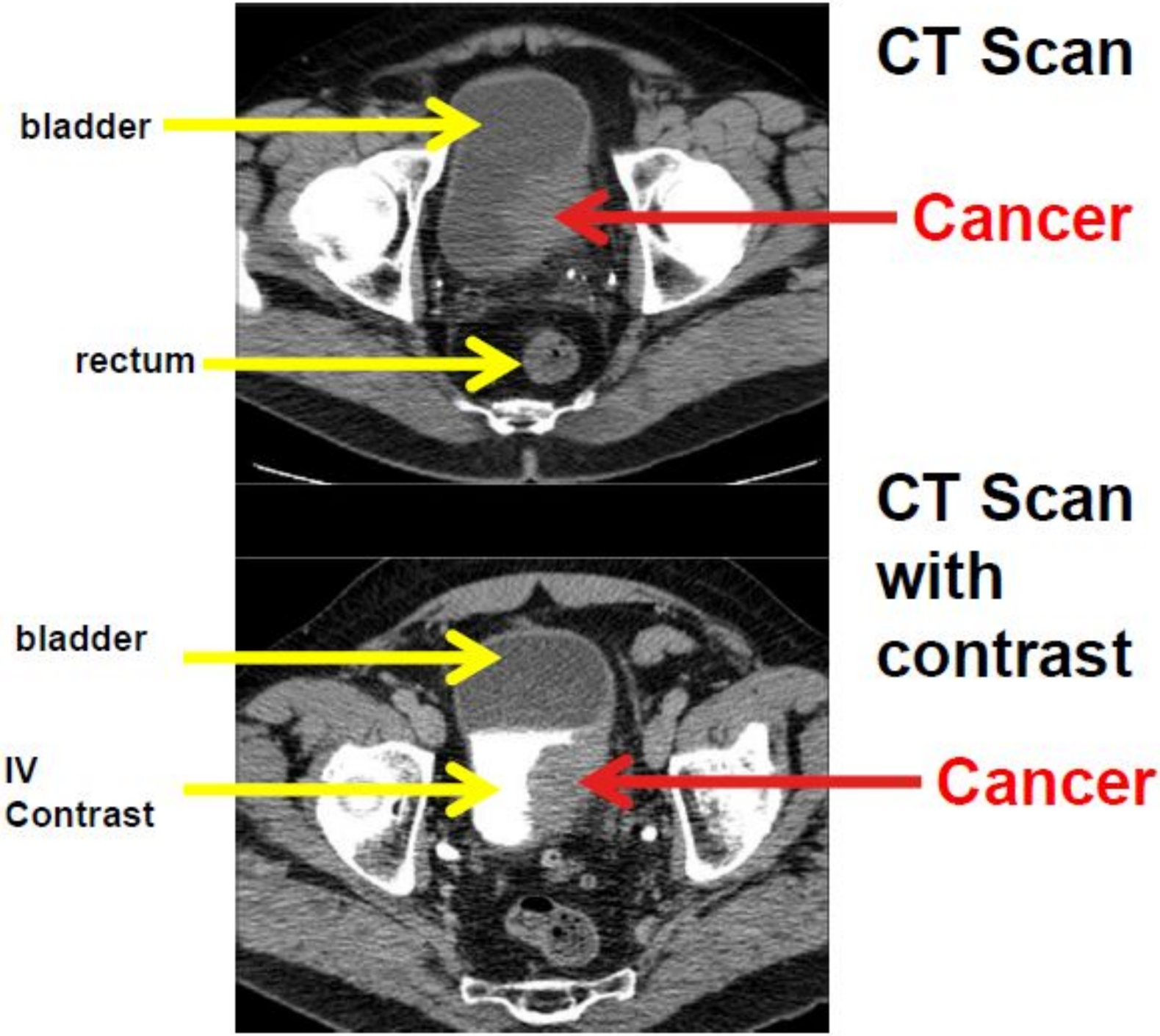
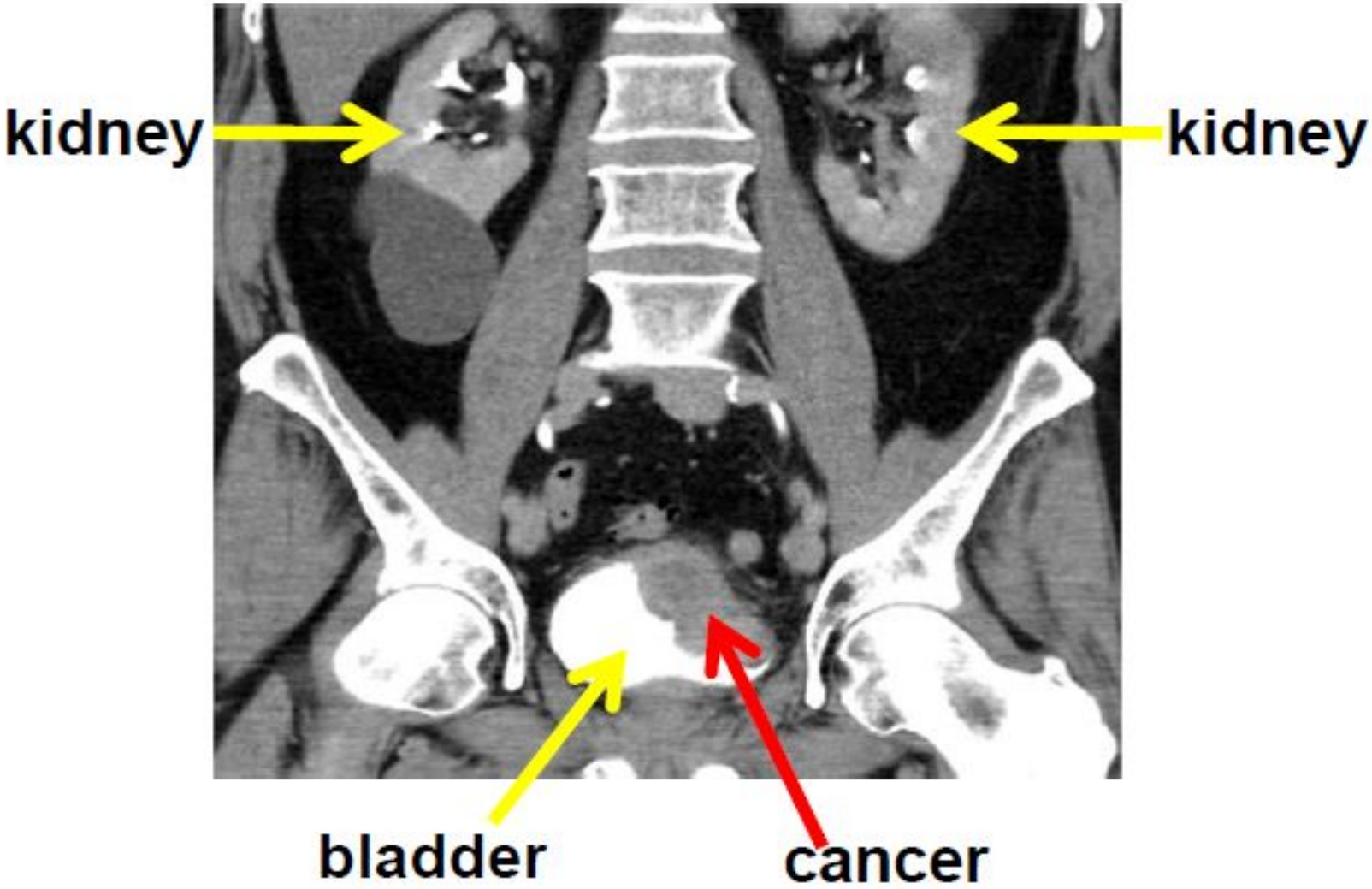
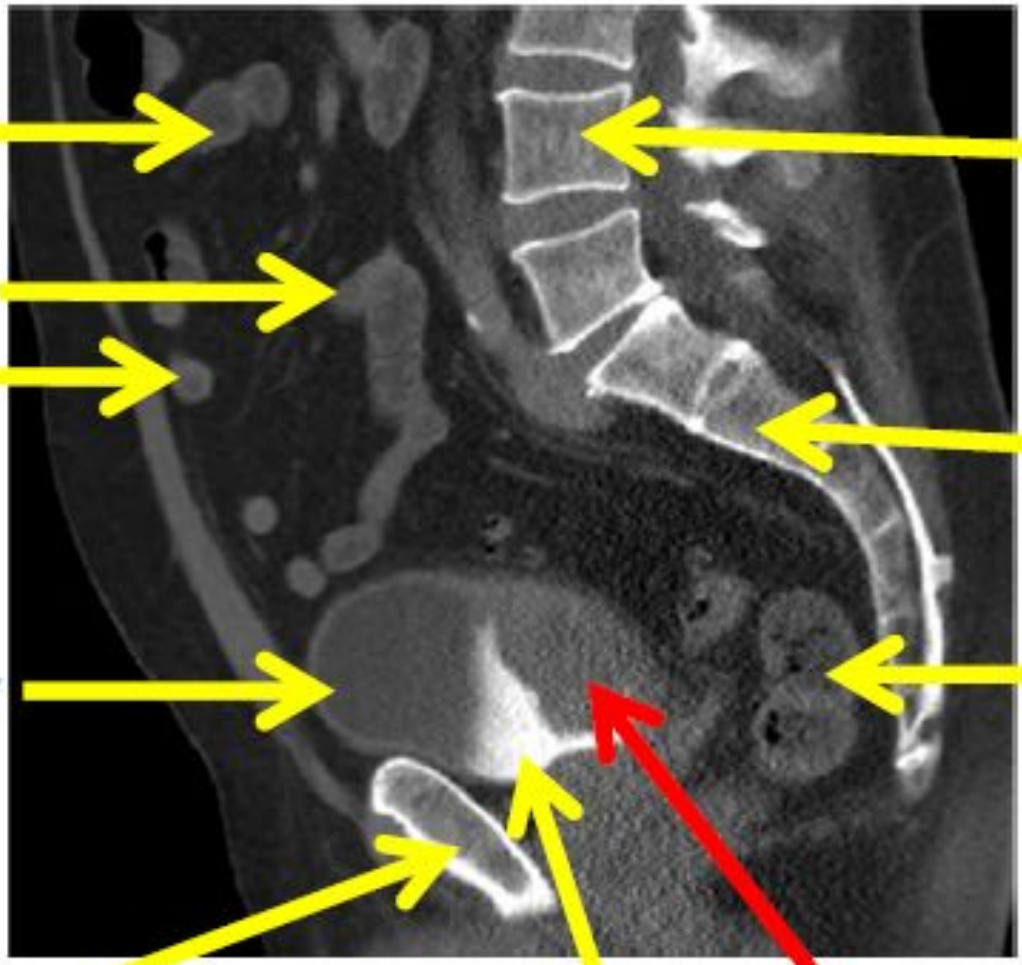

CT Scan
bladder
Cancer
rectum
CT Scan
with
contrast
bladder
IV
Contrast
Cancer

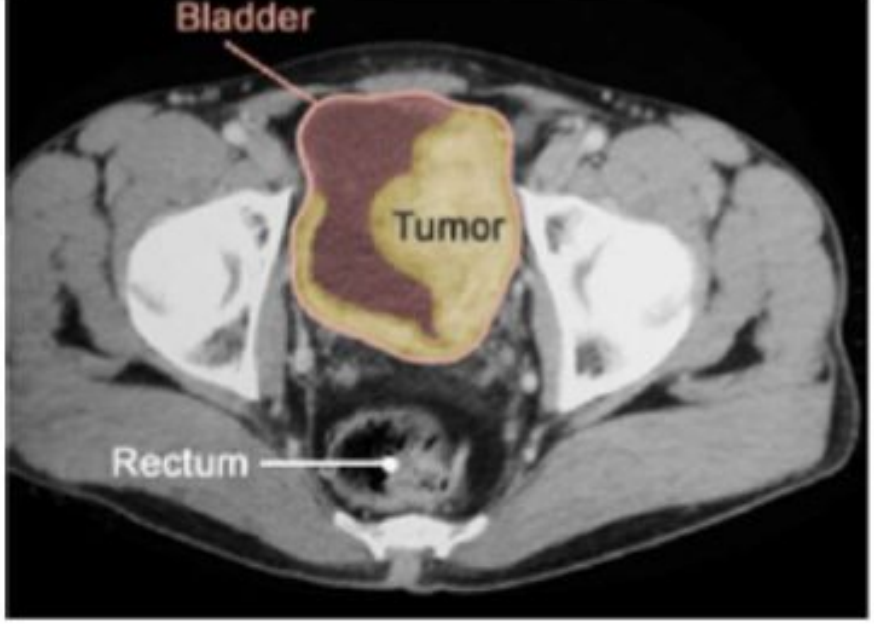
CT Scan with contrast



CT Scan with contrast

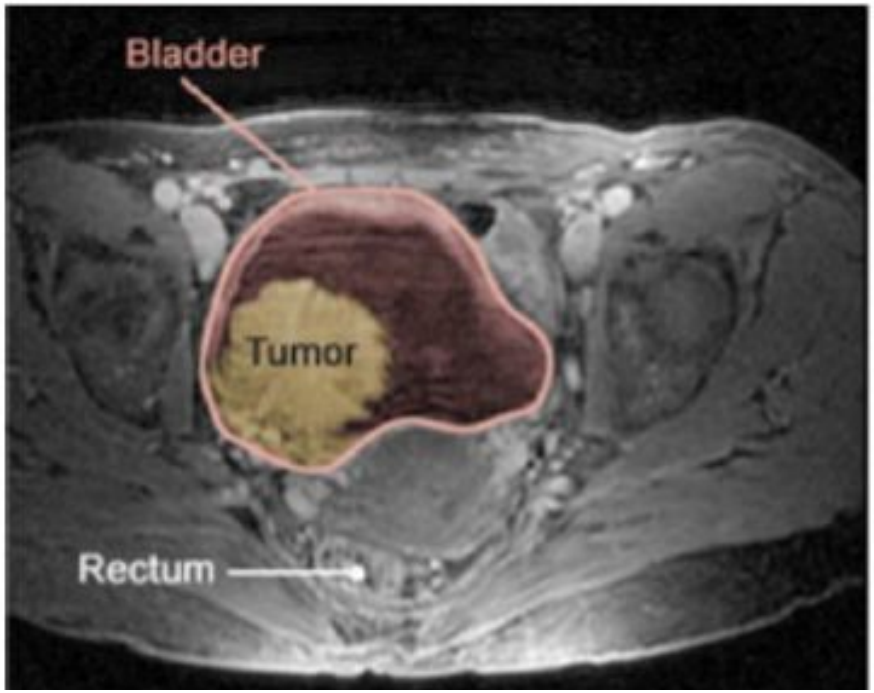


CT

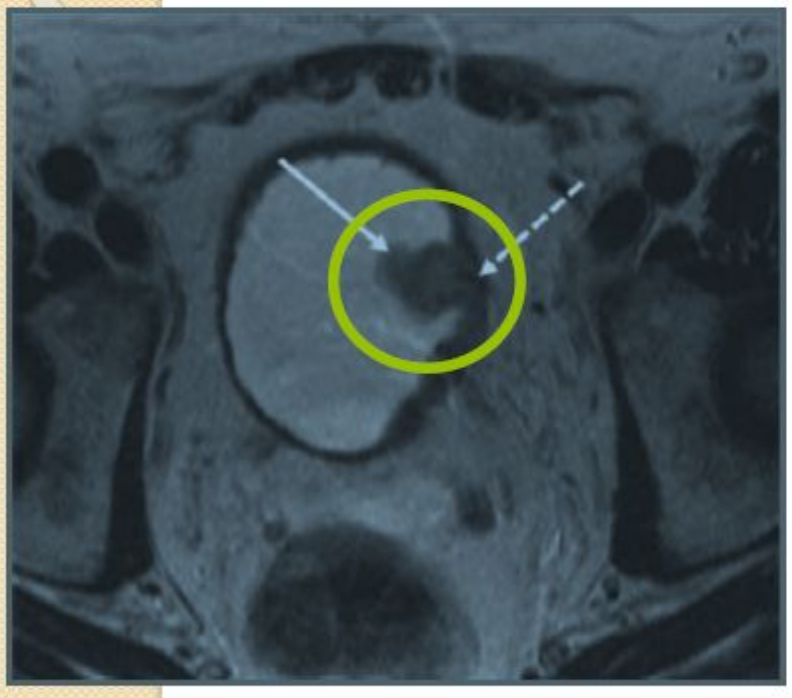


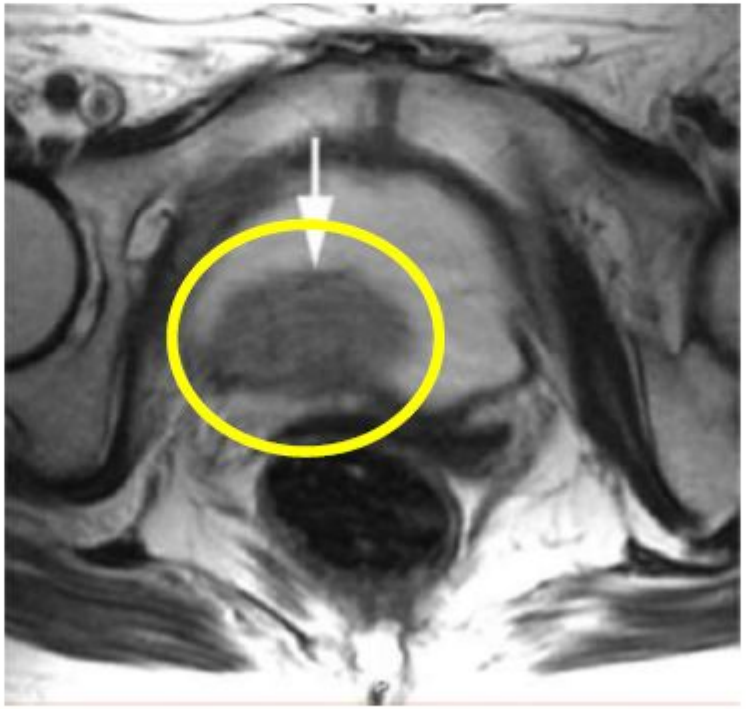
or

MRI



MRI Bladder Cancer

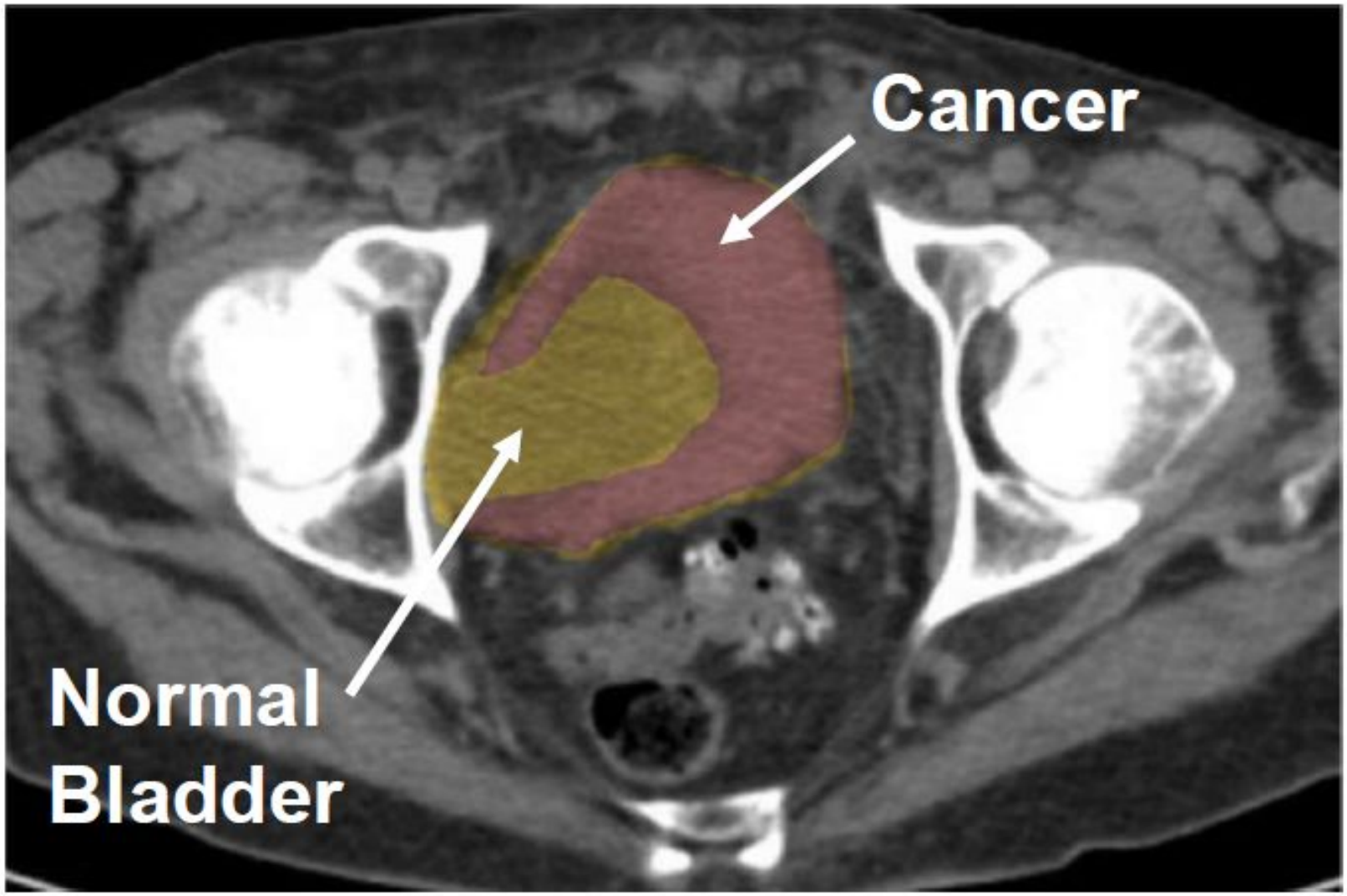




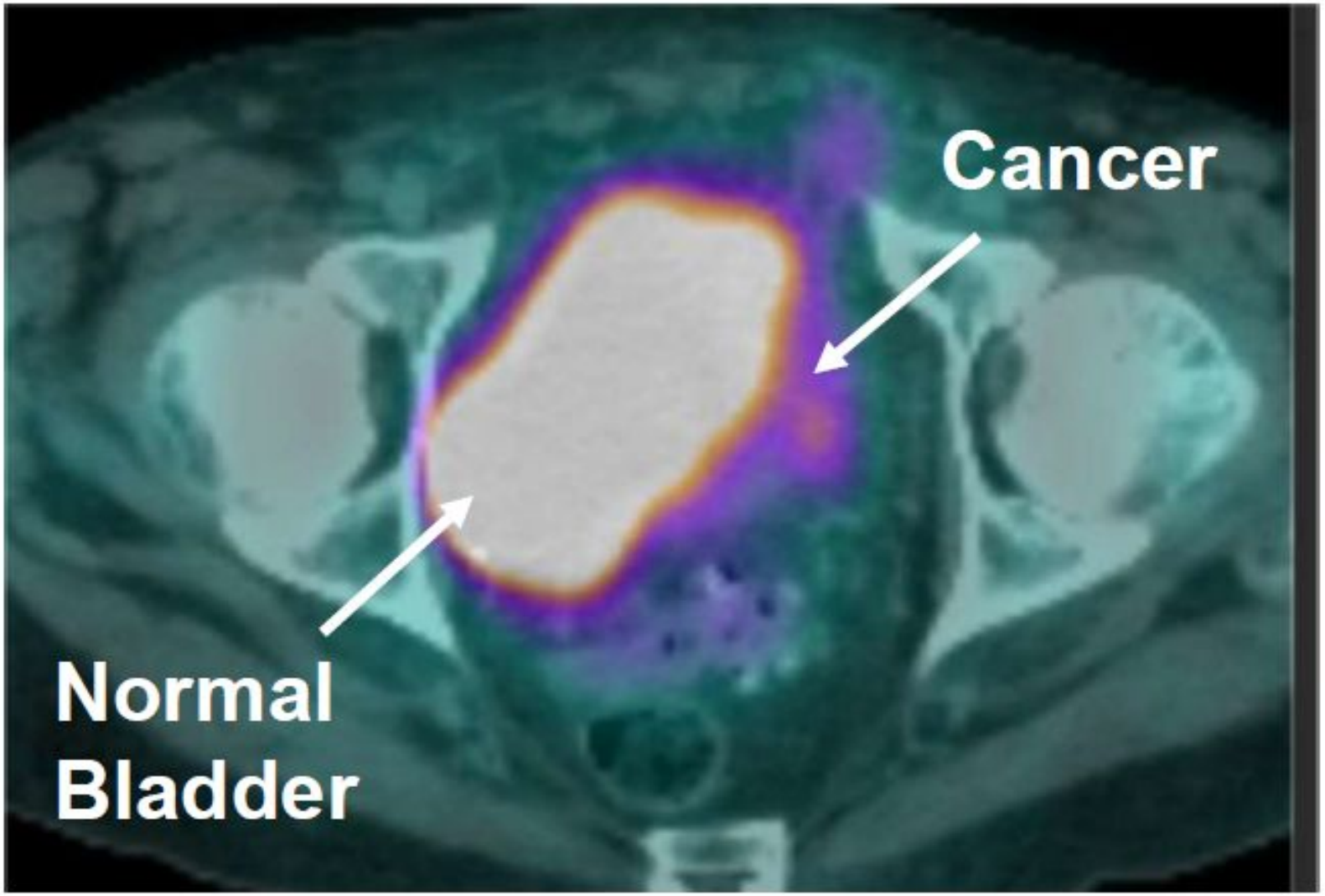
MRI

CT and PET

CT and PET



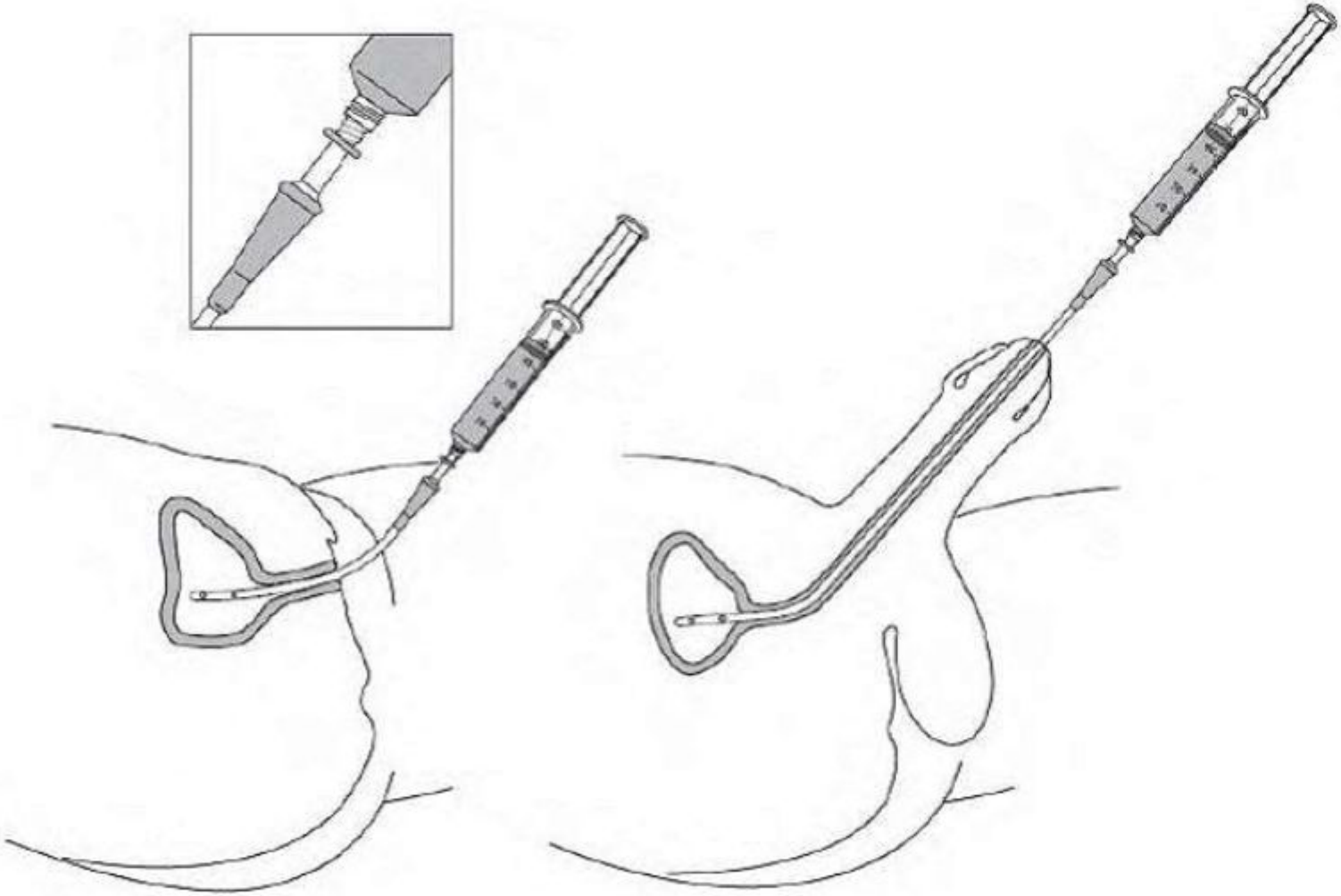
PET Scan



Лечение

Intravesical therapy

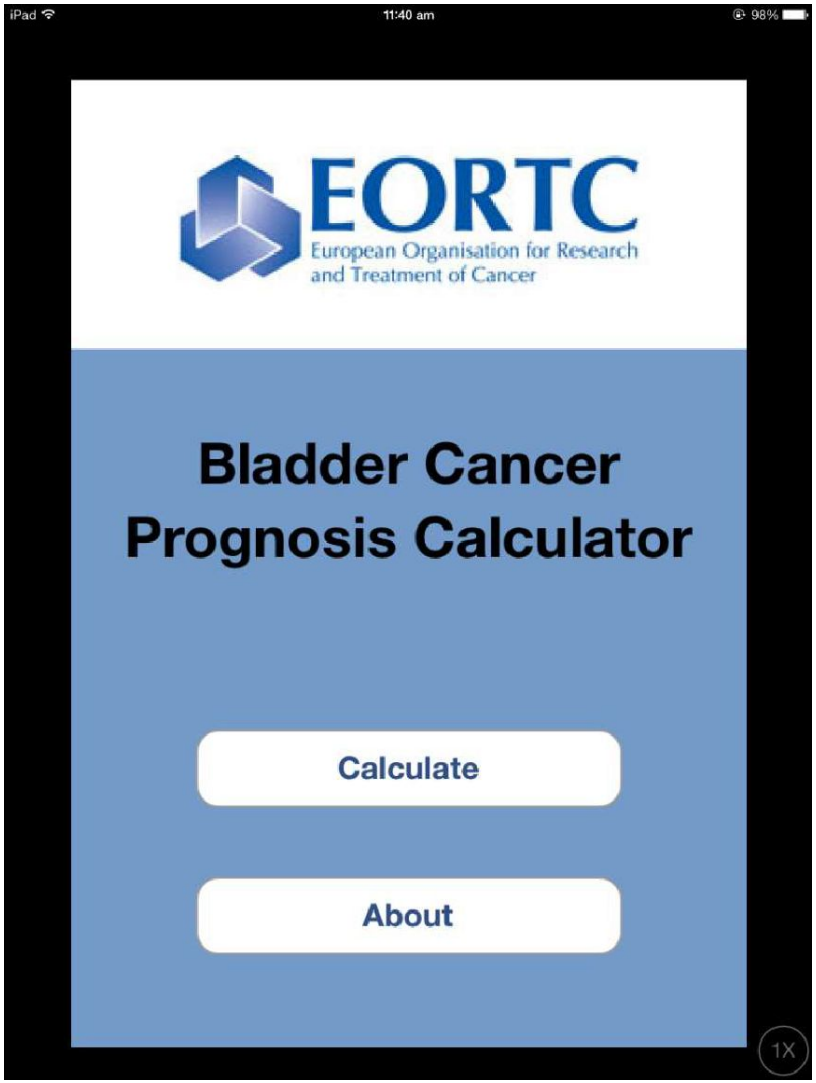
CHEMOTHERAPY	IMMUNOTHERAPY
Directly kills tumor cells	Stimulates patient's immune response to fight the tumor
Increasing dose increases cell killing	Increasing dose will only suppress patient's immune response
Penetrates bladder by diffusion	Attaches by receptors
When given within 6 hours of resection prevents tumor seeding	Immediate immunotherapy is very toxic
Low grade tumor more responsive to chemo	High grade tumors are more responsive

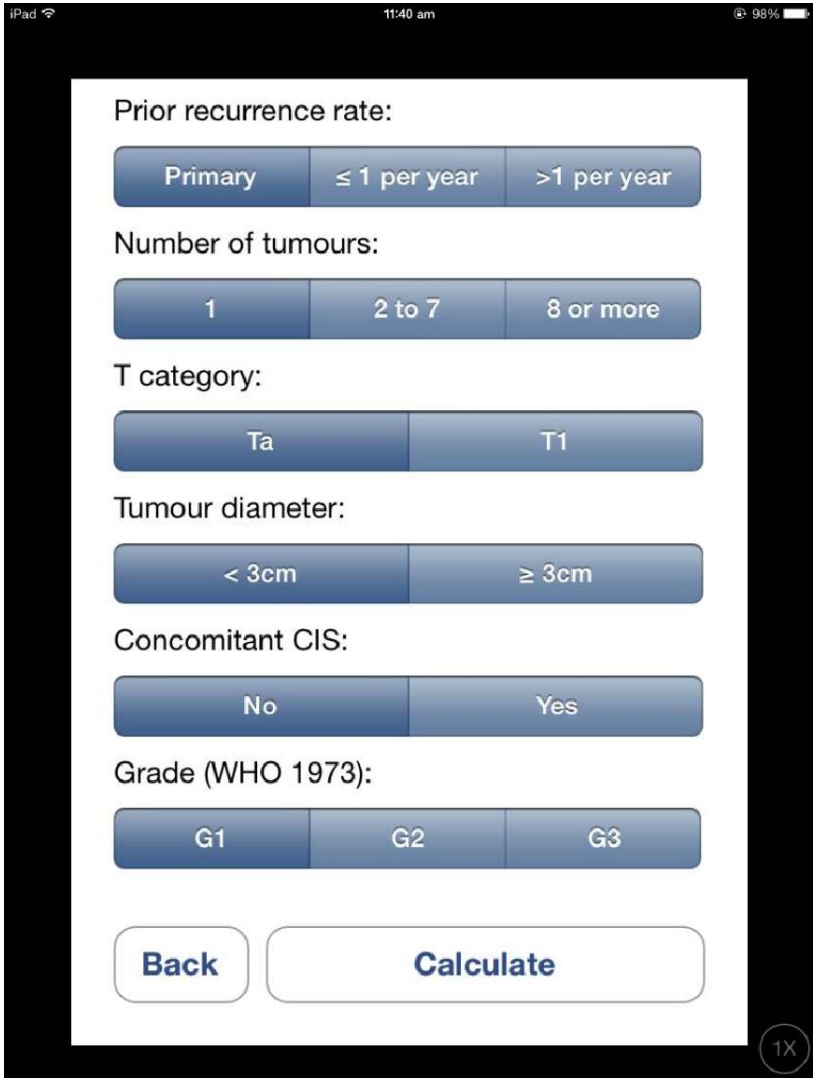


Прогноз

APPROXIMATE PROBABILITY OF RECURRENCE AND PROGRESSION

Pathology	Approximate Probability of Recurrence in 5 years	Approximate Probability of Progression to Muscle Invasion
Ta, low grade	50%	Minimal
Ta, high grade	60%	Moderate
T1, low grade (rare)	50%	Moderate
T1, high grade	50%-70%	Moderate-High
Tis	50%-90%	High


iPad
11:40 am
98%
EORTC
European Organisation for Research and Treatment of Cancer
Bladder Cancer Prognosis Calculator
Calculate
About
1X


iPad
11:40 am
98%
Prior recurrence rate:
Primary
≤ 1 per year
>1 per year
Number of tumours:
1
2 to 7
8 or more
T category:
Ta
T1
Tumour diameter:
< 3cm
≥ 3cm
Concomitant CIS:
No
Yes
Grade (WHO 1973):
G1
G2
G3
Back
Calculate
1X