NCG GUIDELINES- 2019
Urological Malignancies Management Guidelines

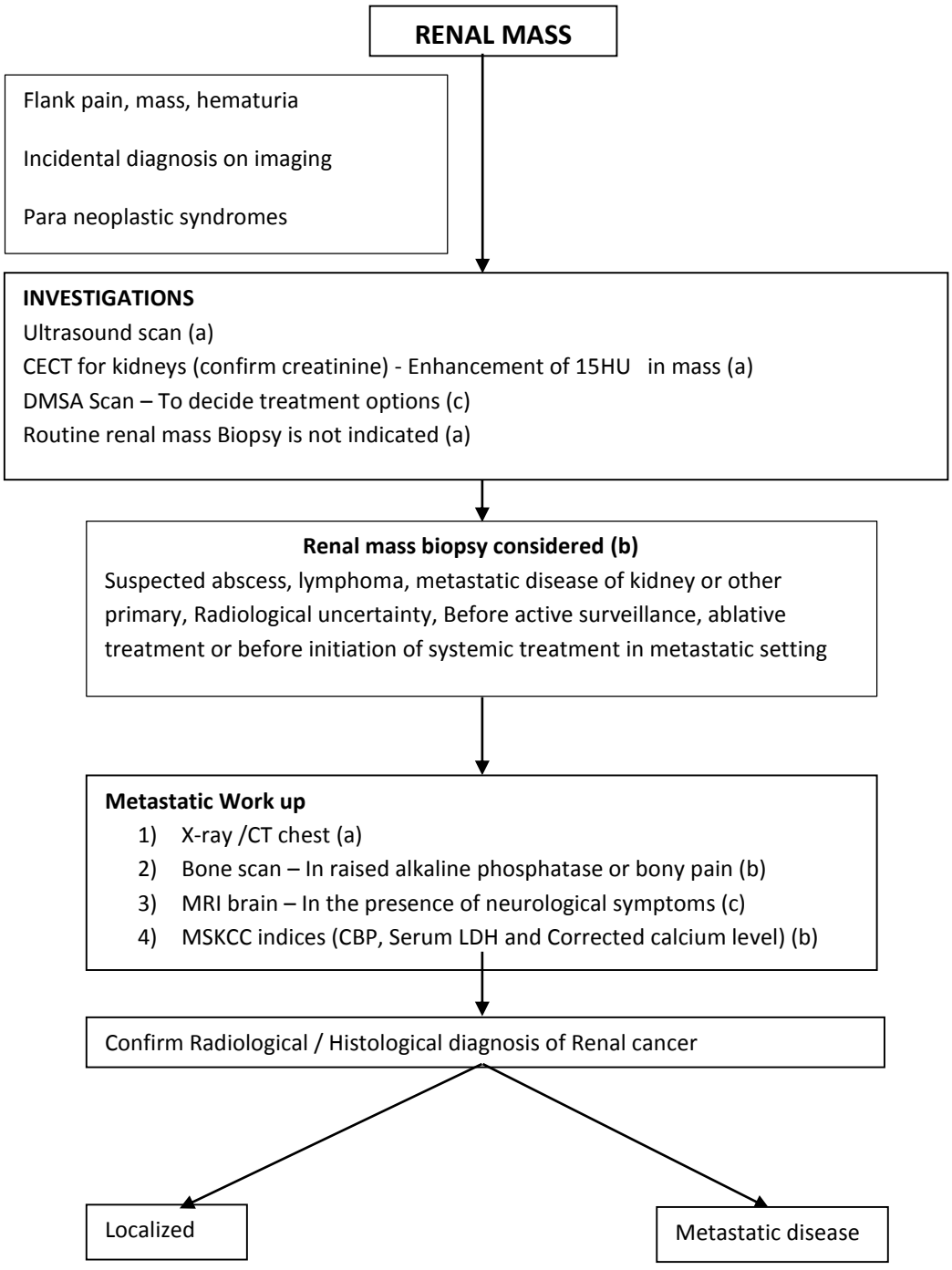
Categories of the guidelines

a) Essential
b) Optimal
c) Optional

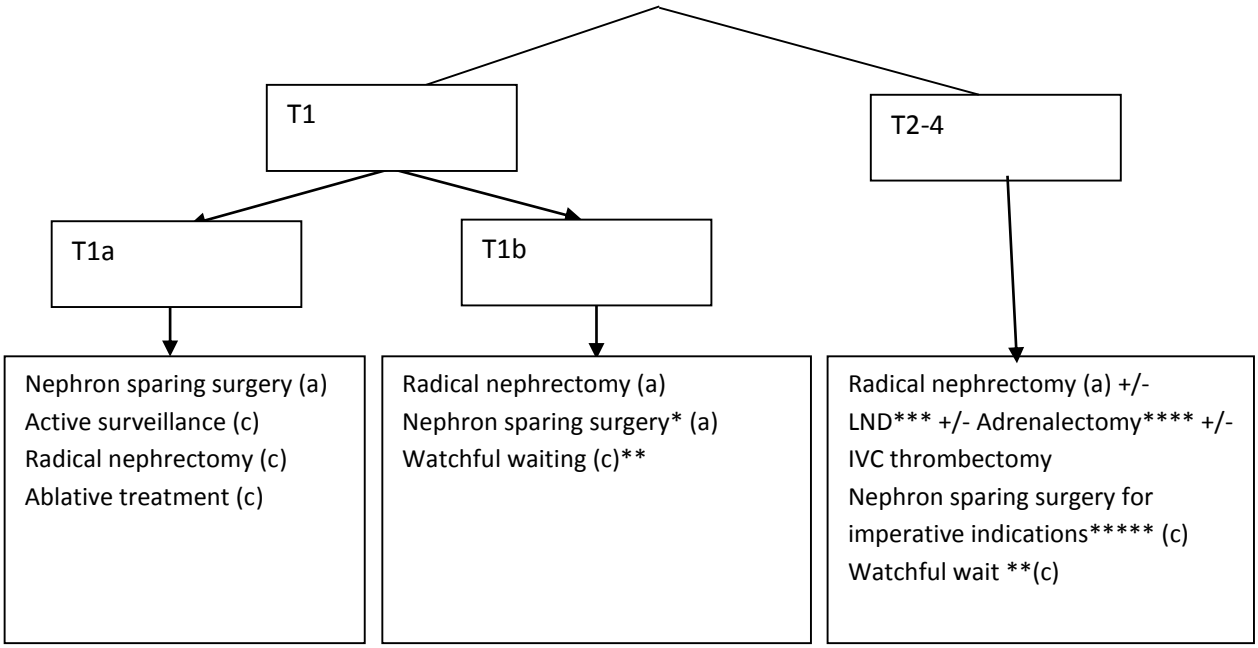
**Herewith essential will be referred as (a), optimal as (b) and optional as (c)*

Content

INVESTIGATIONAL PATHWAY FOR RENAL CELL CARCINOMA



Treatment pathway for localized disease



Surgical approach - Open/ Laparoscopic / Robotic-Individual surgeon discretion

*Nephron sparing surgery when technically feasible

**Watchful waiting: In patient with poor Performance status, significant comorbidity, asymptomatic, poor renal function

***LND – Lymph Node Dissection (18,19)

In patients of cT3-4, cN+, Intraoperative N+

Rt side extent – Hilar, precaval, retrocaval, interaortocaval

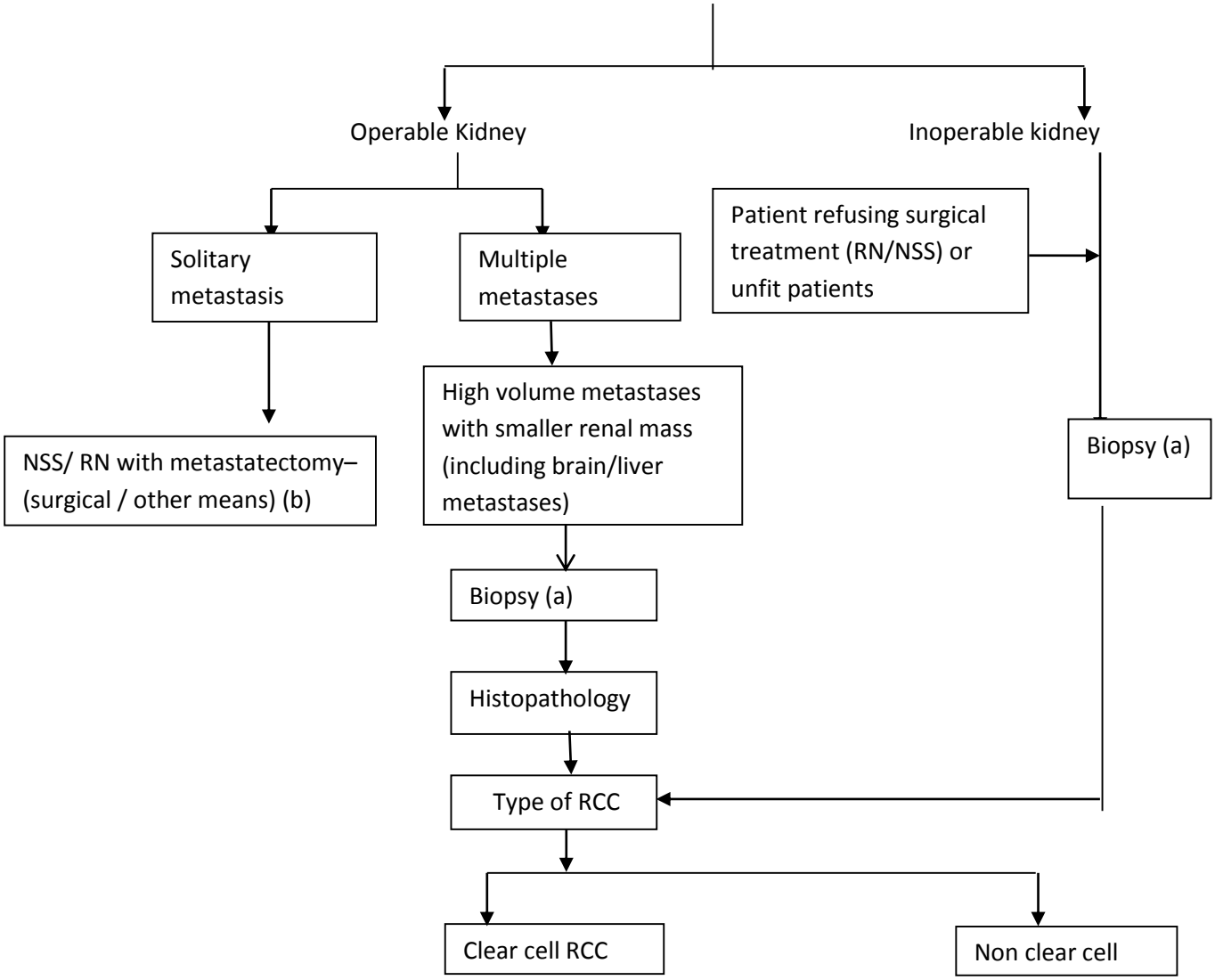
Lt side extent – hilar, paraaortic, retroaortic, interaortocaval

****Adrenalectomy – only if contagious involvement

CT shows on abnormal adrenal gland, intra-operative findings suggest intra-adrenal metastatic spread or large upper pole tumour

***** Nephron sparing surgery when technically feasible in young patients who have bilateral disease, borderline renal function, multiple tumours.

Treatment pathway for metastatic disease

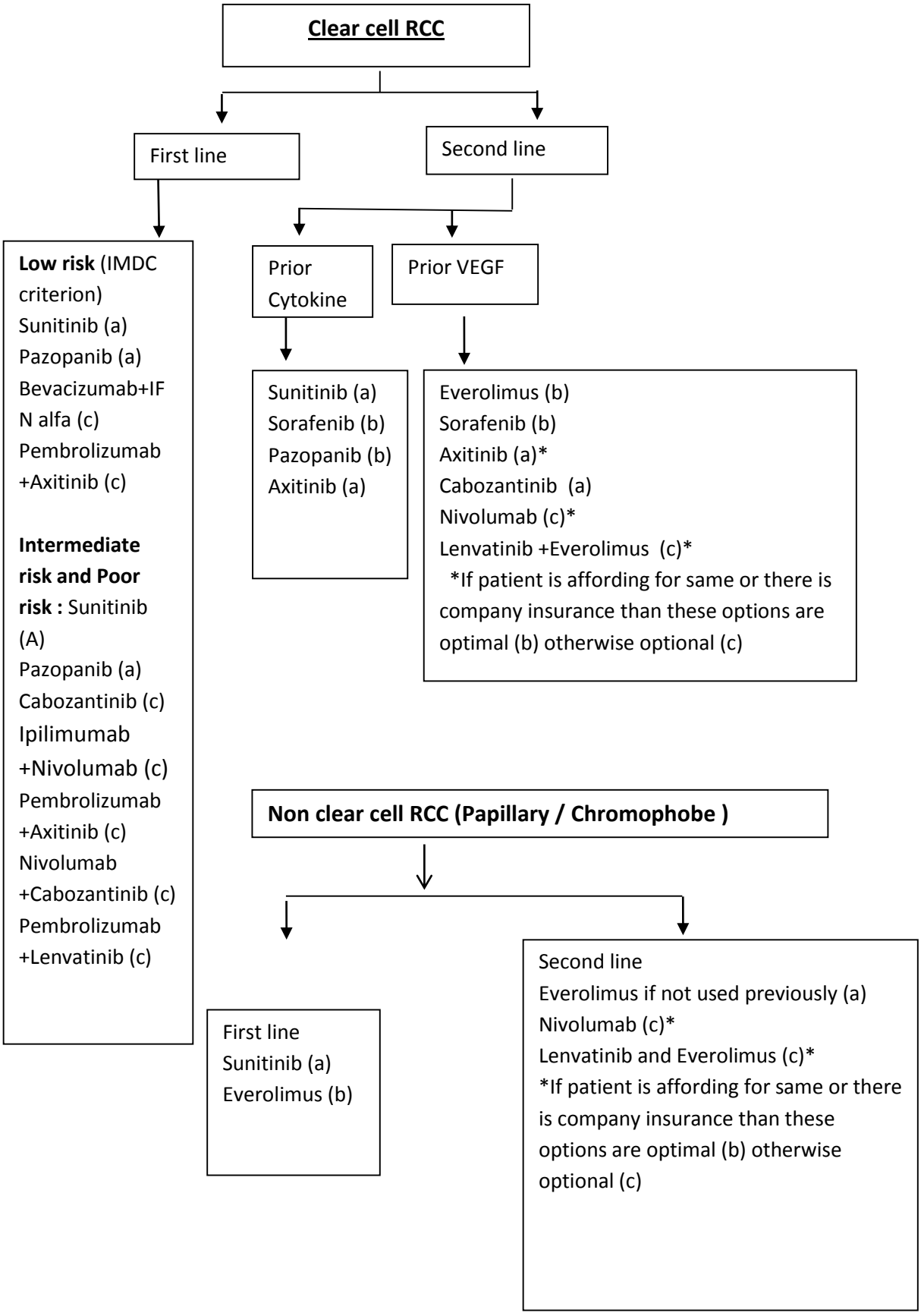


Surgery of primary renal mass in presence metastatic disease if planned for TKIs: As per MSKCC risk criteria: (b)

GOOD RISK: Primary renal mass surgery to be considered

INTERMEDIATE RISK: may or may not Individualized approach

POOR RISK: Primary renal mass surgery not to be done


Clear cell RCC
First line
Second line
Low risk (IMDC criterion)
Sunitinib (a)
Pazopanib (a)
Bevacizumab+IFN alfa (c)
Pembrolizumab +Axitinib (c)
Intermediate risk and Poor risk : Sunitinib (A)
Pazopanib (a)
Cabozantinib (c)
Ipilimumab +Nivolumab (c)
Pembrolizumab +Axitinib (c)
Nivolumab +Cabozantinib (c)
Pembrolizumab +Lenvatinib (c)
Prior Cytokine
Prior VEGF
Sunitinib (a)
Sorafenib (b)
Pazopanib (b)
Axitinib (a)
Everolimus (b)
Sorafenib (b)
Axitinib (a)*
Cabozantinib (a)
Nivolumab (c)*
Lenvatinib +Everolimus (c)*
*If patient is affording for same or there is company insurance than these options are optimal (b) otherwise optional (c)
Non clear cell RCC (Papillary / Chromophobe)
First line
Sunitinib (a)
Everolimus (b)
Second line
Everolimus if not used previously (a)
Nivolumab (c)*
Lenvatinib and Everolimus (c)*
*If patient is affording for same or there is company insurance than these options are optimal (b) otherwise optional (c)

Proposed surveillance schedule following treatment for RCC, taking into account patient risk profile and treatment efficacy

		Surveillance						
Risk profile	Treatment	6 mo	1yr	2yr	3yr	4yr	5yr	>5yr
Low	RN/PN only	US	CT	US	CT	US	CT	Discharge
Intermediate	RN/PN/cryo /RFA	CT	CT	CT	US	CT	CT	CT once every 2 years
High	RN/PN/cryo /RFA	CT	CT	CT	CT	CT	CT	CT once every 2 years

- Blood test must include sr creatinine, blood urea nitrogen, electrolytes, sr calcium, alkaline phosphatise, and a liver function panel

Tab Sunitinib 50 mg OD for 2 weeks and then one week gap and then again 50 mg OD for 2 weeks ,this cycle will continue till disease progression

Tab Pazopanib 800 mg OD daily till disease progression

Tab Cabozantinib 60 mg OD till disease progression

Inj Nivolumab (3 mg/kg) plus Ipilimumab (1 mg/kg) was given every three weeks for four doses, followed by single-agent nivolumab (3 mg/kg or a flat dose of 240 mg till progression or every two weeks for up to two years

Inj Pembrolizumab 200 mg every 3 weekly with Tab Axitinib 5 mg BD for two year

Tab Everolimus 10 mg OD till disease progression

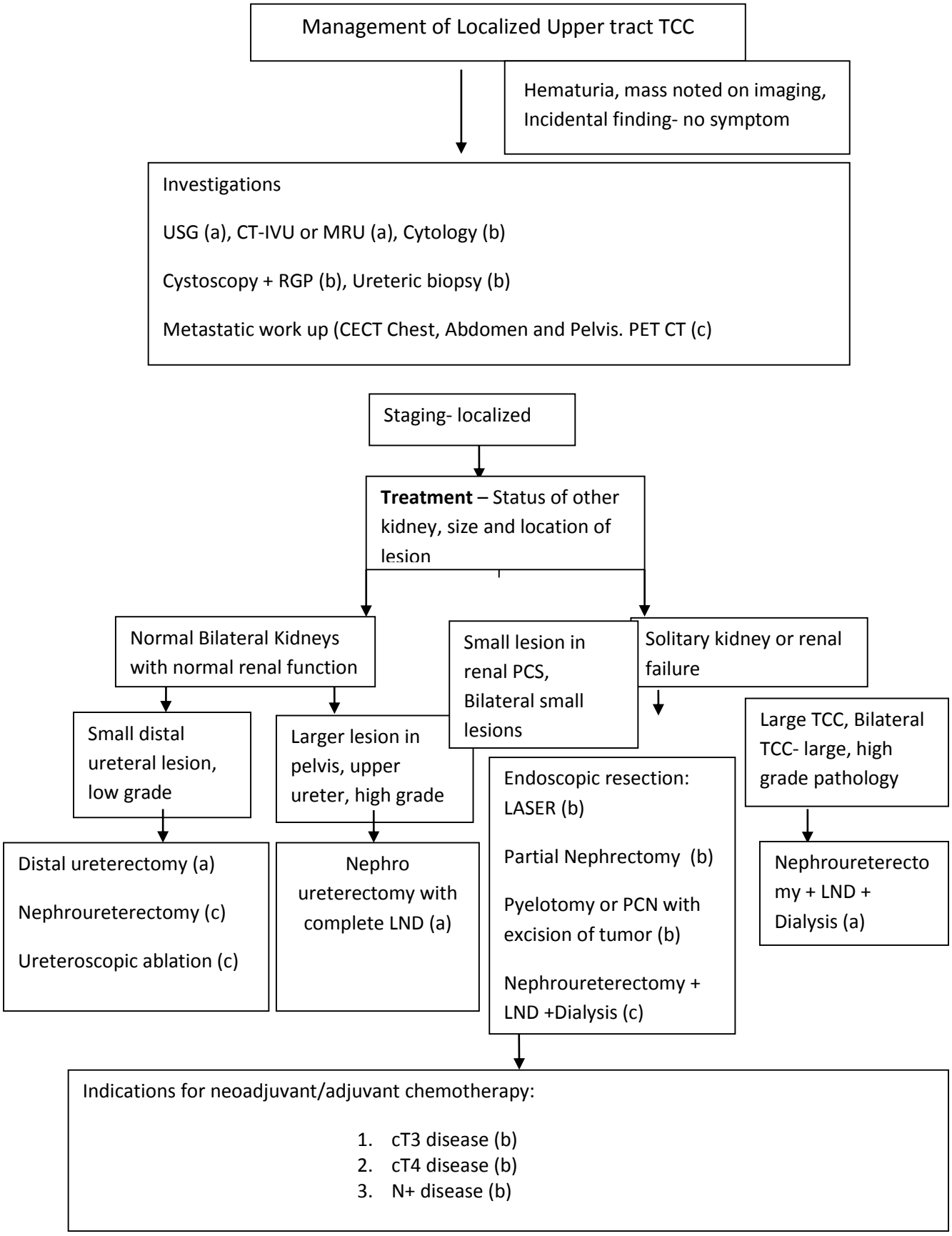
Tab Lenvatinib 18 mg +Tab Everolimus 5 mg OD till disease progression

Tab Axitinib 5 mg BD till disease progression

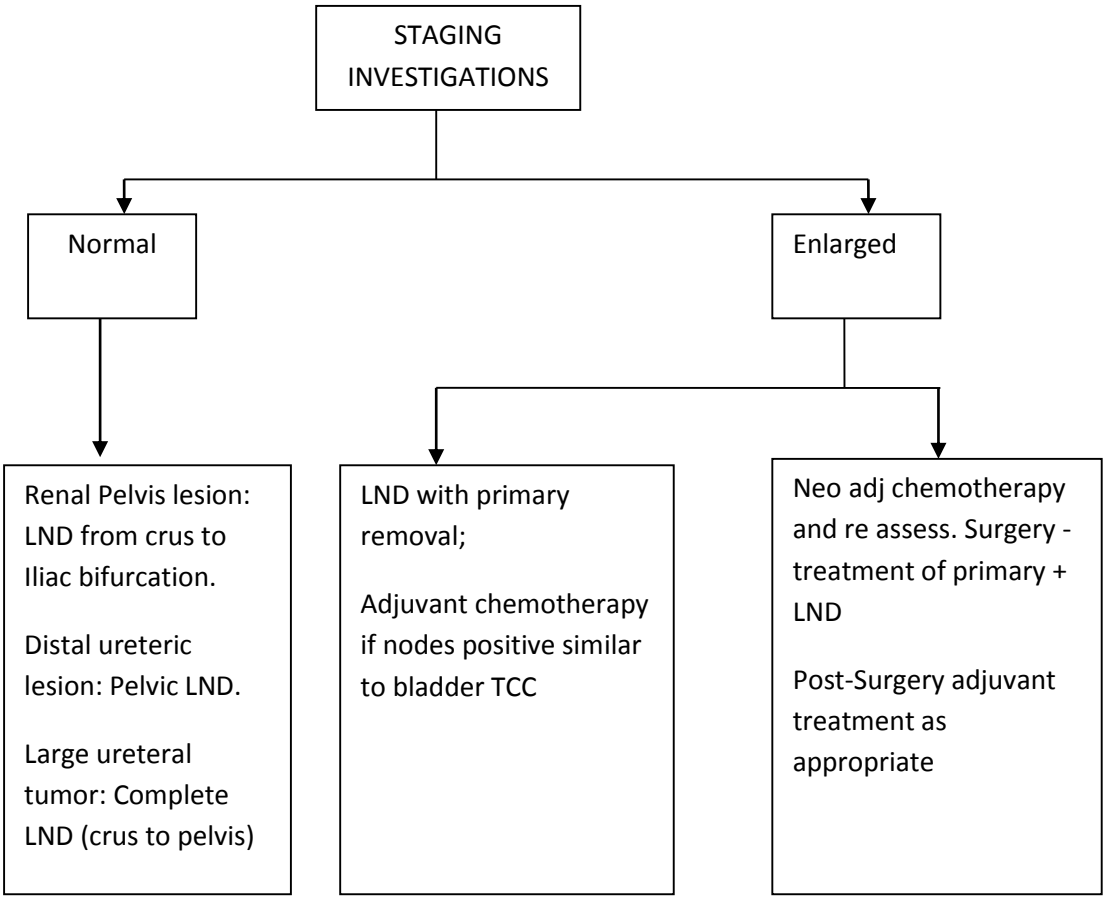
Tab Sorafinib 400 mg BD till disease progression

Inj Nivolumab 240 mg IV every 2 weekly till disease progression

UPPER TRACT UROTHELIAL CARCINOMA



MANAGEMENT OF METASTATIC DISEASE IN UPPER TRACT UROTHELIAL CARCINOMA



Metastatic disease

(Managed in same line as metastatic urinary bladder cancer)

Neoadjuvant chemotherapy in carcinoma of urinary tract (NACT) :

Inj Gemcitabine (1000 mg/m^2 on days 1, 8, 15) plus cisplatin (70 mg/m^2 on day 2), repeated every 28 days for a maximum of 4 cycles .
Or
Inj Gemcitabine (1200/1000 mg/m^2 on days 1 and 8) and cisplatin (75 mg/m^2 on day 2), repeated every 21 days for a median of 4 cycles
Or
Inj Gemcitabine (1000 mg/m^2 on days 1 and 8) and cisplatin (35 mg/m^2 on day 1 and day 8) , repeated every 21 days for a median of 4 cycles

Dose-dense MVAC :
Inj Methotrexate (30 mg/m^2 on day 1), Inj vinblastine (3 mg/m^2 on day 2), Inj doxorubicin (30 mg/m^2 on day 2), and Inj cisplatin (70 mg/m^2 on day 2) with granulocyte-colony stimulating factor (G-CSF) support, repeated every 14 days for six cycles

Adjuvant chemotherapy:

Inj Gemcitabine (1000 mg/m^2 on days 1, 8, 15) plus cisplatin (70 mg/m^2 on day 2), repeated every 28 days for a maximum of 4 cycles .
Or
Inj Gemcitabine (1200/1000 mg/m^2 on days 1 and 8) and cisplatin (75 mg/m^2 on day 2), repeated every 21 days for a median of 4 cycles
Or
Inj Gemcitabine (1000 mg/m^2 on days 1 and 8) and cisplatin (35 mg/m^2 on day 1 and day 8) , repeated every 21 days for a median of 4 cycles
Or
Inj Carboplatin AUC 5 on Day 1 and Inj Gemcitabine 1000 mg /m2 on day 1 and day 8, cycle every 3 weekly for maximum 4 cycles

Treatment of metastatic urothelial cancer of the urinary tract:

Cisplatin eligible:

Inj Gemcitabine (1000 mg/m^2 on days 1, 8, 15) plus cisplatin (70 mg/m^2 on day 2), repeated every 28 days for a maximum of 6 cycles .
Or
Inj Gemcitabine (1200 mg/m^2 on days 1 and 8) and cisplatin (75 mg/m^2 on day 2), repeated every 21 days for a median of 6 cycles
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Dose-dense MVAC :
Methotrexate (30 mg/m^2 on day 1), vinblastine (3 mg/m^2 on day 2), doxorubicin (30 mg/m^2 on day 2), and cisplatin (70 mg/m^2 on day 2) with granulocyte-colony stimulating factor (G-CSF) support, repeated every 14 days for six cycles

Inj Avelumab 800 mg once every 2 weeks until disease progression or unacceptable toxicity as a maintenance therapy in patients who has stable disease, partial response or complete response after 4 to 6 cycles of platinum based chemotherapy

Cisplatin ineligible:

Inj Carboplatin AUC 5 on Day 1 and Inj Gemcitabine 1000 mg /m2 on day 1 and day 8, cycle every 3 weekly for maximum 6 cycles .

Inj Paclitaxel 200 mg/m(2) by 1-hour intravenous (IV) infusion on day 1 and Gemcitabine 1,000 mg/m(2) IV on days 1, 8, and 15; courses were repeated every 21 days for 4 cycles

Inj Pembrolizumab 200 mg once every 3 weekly

Inj Atezolizumab 1,200 mg once every 3 weeks

Second line therapy:

Inj Paclitaxel 80 mg/m2 weekly till disease progression or unacceptable toxicities

Inj Pemetrexed 500 mg /m2 every 3 weekly till disease progression or unacceptable toxicities

Inj Gemcitabine 1000 mg /m2 day 1 and day 8 every 3 weekly till disease progression or unacceptable toxicities

Inj Docetaxel 75 mg/m2 3 weekly for 6 cycles

Inj Nivolumab 240 mg every 2 weekly till disease progression or unacceptable toxicities

Inj Pembrolizumab 200 mg every 3 weekly till disease progression or unacceptable toxicities

BLADDER CARCINOMA

Investigational pathway for Bladder carcinoma

Symptoms: Visible and non-visible haematuria, passing clots or tissue bits in urine, persistent irritative urinary symptoms

Imaging
USS Abdomen and Pelvis (a)
Intravenous Urography /CT Urogram (a)
MR Urogram (b)

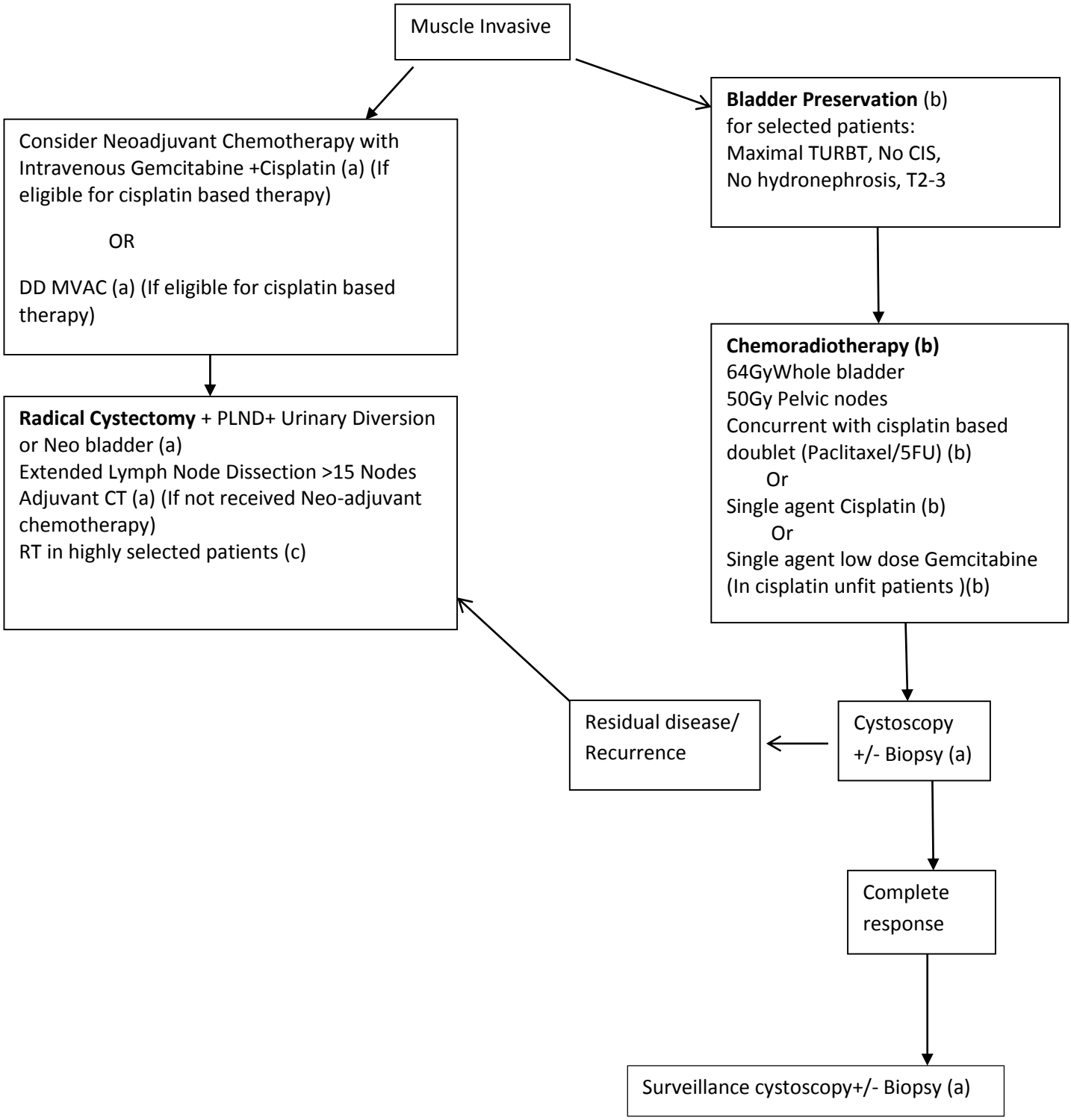
Investigations
-CBP and Renal profile (a)
-Diagnostic Cystoscopy ± biopsy (b)
- Urine Cytology (c)
- Advanced vision investigation (Narrow band imaging/ Fluorescent cystoscopy) (c)

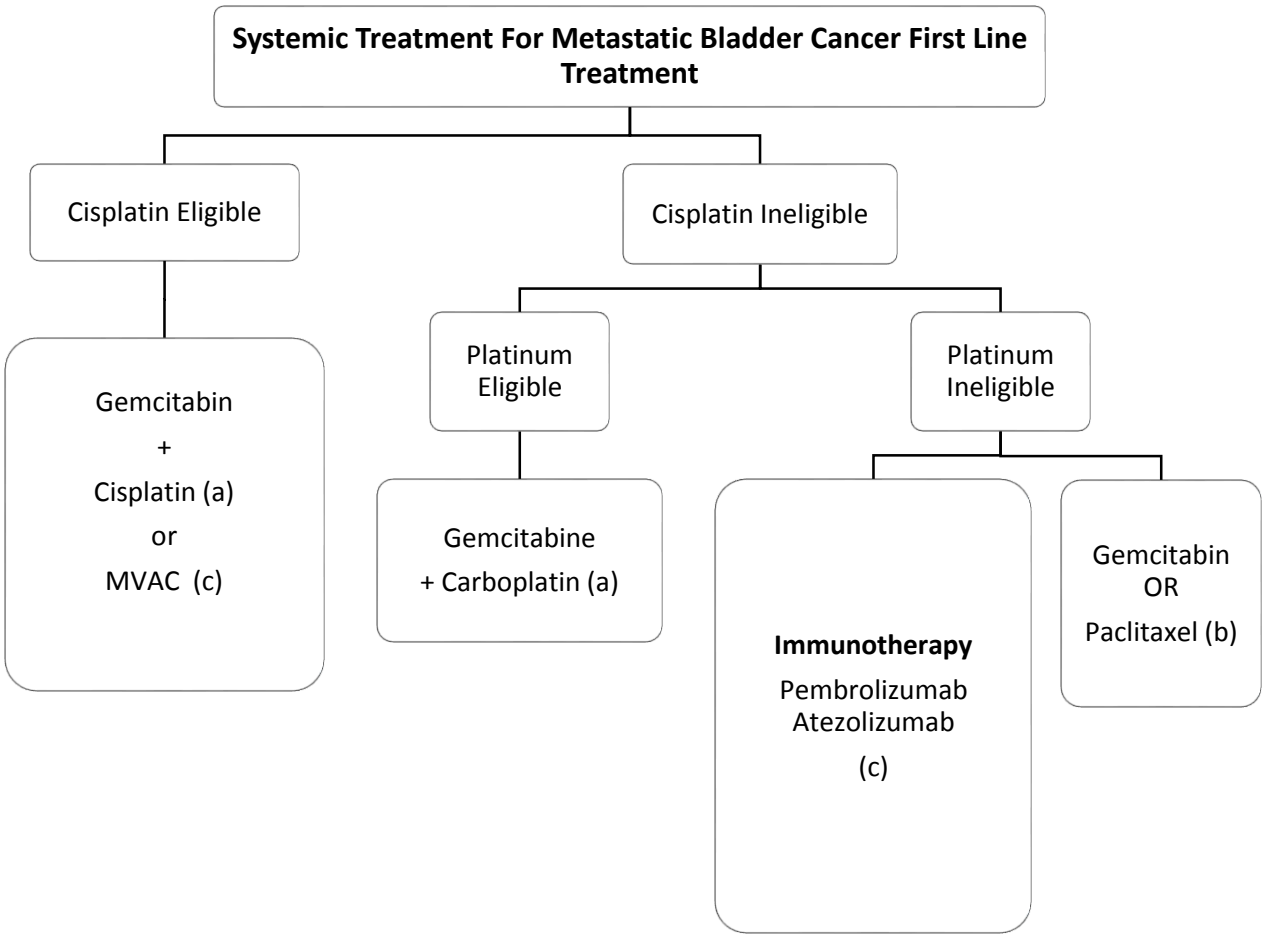
Investigations when muscle invasive bladder tumour is suspected
- CT Chest abdomen and Pelvis with contrast (b)
FDG PET CT (c)

Examination under anesthesia and Transurethral resection of Bladder tumour.
TURBT findings should include: Number and size of tumours, relation to ureteric orifices, comment on urethra, Prostate and bladder neck (a).
Following TURBT for suspected non-muscle invasive bladder tumour patients, one dose of Intravesicle Mitomycin at the dosage of 40mg in 50 ml of saline should be administered for Intravesicle treatment within 24hrs of resection (a)

- Non-Metastatic disease
  - Non-Muscle invasive
  - Muscle invasive
- Metastatic disease

Trans urethral resection of bladder tumour


Muscle Invasive
Consider Neoadjuvant Chemotherapy with Intravenous Gemcitabine +Cisplatin (a) (If eligible for cisplatin based therapy)
OR
DD MVAC (a) (If eligible for cisplatin based therapy)
Bladder Preservation (b) for selected patients: Maximal TURBT, No CIS, No hydronephrosis, T2-3
Chemoradiotherapy (b) 64GyWhole bladder 50Gy Pelvic nodes Concurrent with cisplatin based doublet (Paclitaxel/5FU) (b)
Or
Single agent Cisplatin (b)
Or
Single agent low dose Gemcitabine (In cisplatin unfit patients)(b)
Radical Cystectomy + PLND+ Urinary Diversion or Neo bladder (a)
Extended Lymph Node Dissection >15 Nodes
Adjuvant CT (a) (If not received Neo-adjuvant chemotherapy)
RT in highly selected patients (c)
Residual disease/ Recurrence
Cystoscopy +/- Biopsy (a)
Complete response
Surveillance cystoscopy+/- Biopsy (a)



Cisplatin Ineligible is defined as presence of one of the following:

1. ECOG PS ≥ 2 OR KPS < 60 to 70 %
2. Creatinine Clearance < 60 mL/min
3. Grade ≥ Hearing Loss
4. Grade ≥ 2 Peripheral Neuropathy
5. NYHA Class ≥ III Heart Failure

Systemic Treatment For Metastatic Bladder Cancer (Second Line And Subsequent Treatment)

Rechallange with Platin +Gemcitabine (If previous platin based therapy >12 months back) (a)

Weekly paclitaxel (b)

Pemetrexed (b)

Docetaxel (b)

Gemcitabine (b)

Immunotherapy (c)

Pembrolizumab

Nivolumab

Avelumab

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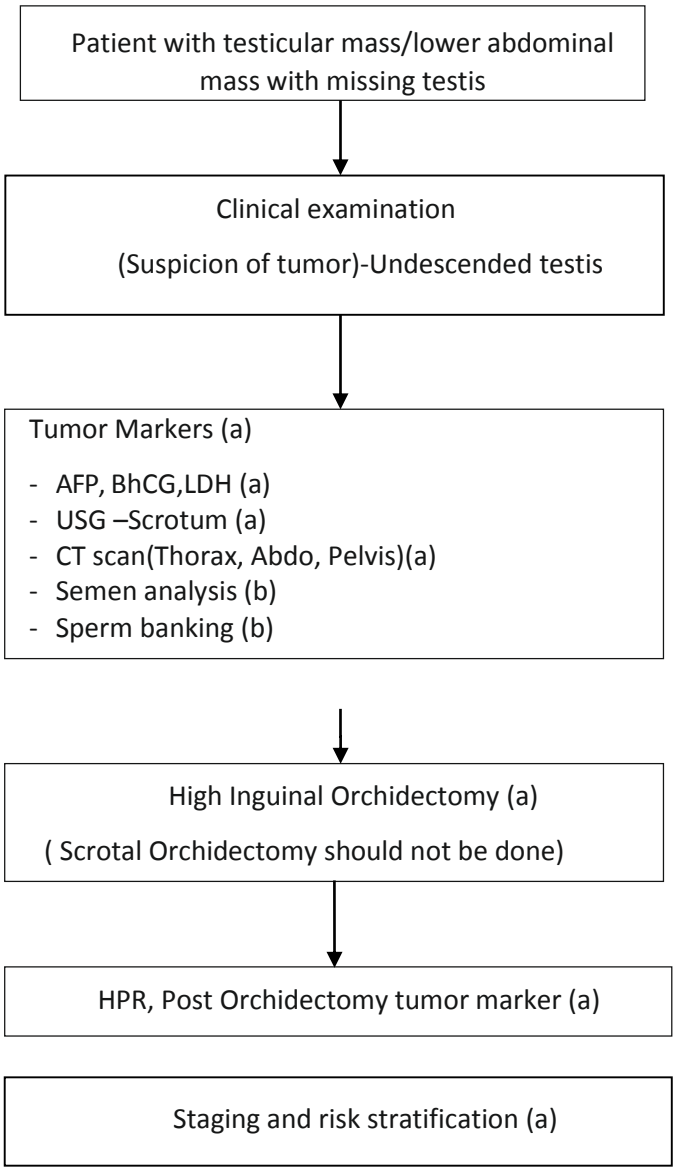
Inj Docetaxel 75 mg/m2 3 weekly for 6 cycles

Inj Nivolumab 240 mg every 2 weekly till disease progression or unacceptable toxicities

Inj Pembrolizumab 200 mg every 3 weekly till disease progression or unacceptable toxicities

TESTICULAR TUMORS

MANAGEMENT OF TESTICULAR TUMORS



- USG Testis(a)

- Ejaculated sperm preservation if family not completed (b)

- Risk Stratification (a)

- CT (T+A+P) (a)

- Repeat Tumour Markers after High Inguinal Orchidectomy at least after 7-10 days (a)

- USG guided FNAC (c)

- Onco TESE if ejaculated sperm cryopreservation not feasible.(c)

- Brain Imaging if case of symptoms and patients with metastatic disease with multiple lung metastases or high b-hCG values.(b)

- Fertility investigations: Total testosterone; Luteinising hormone; Follicle-stimulating hormone (c)

STAGE – I SEMINOMA

Seminoma Stage I Disease

↓

High Inguinal Orchidectomy (a)

↓

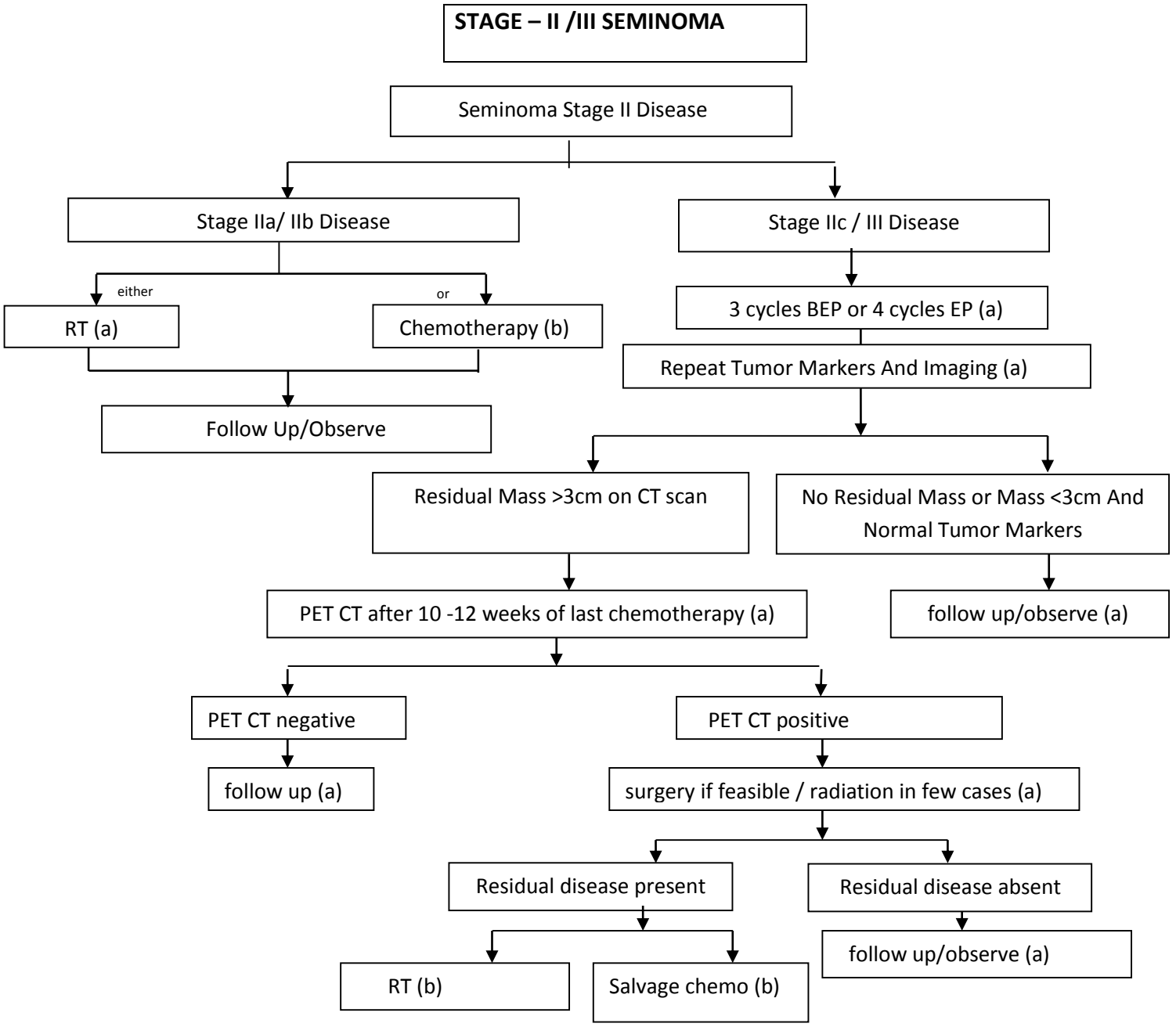
Risk Stratification (b)

- Size > 4cm

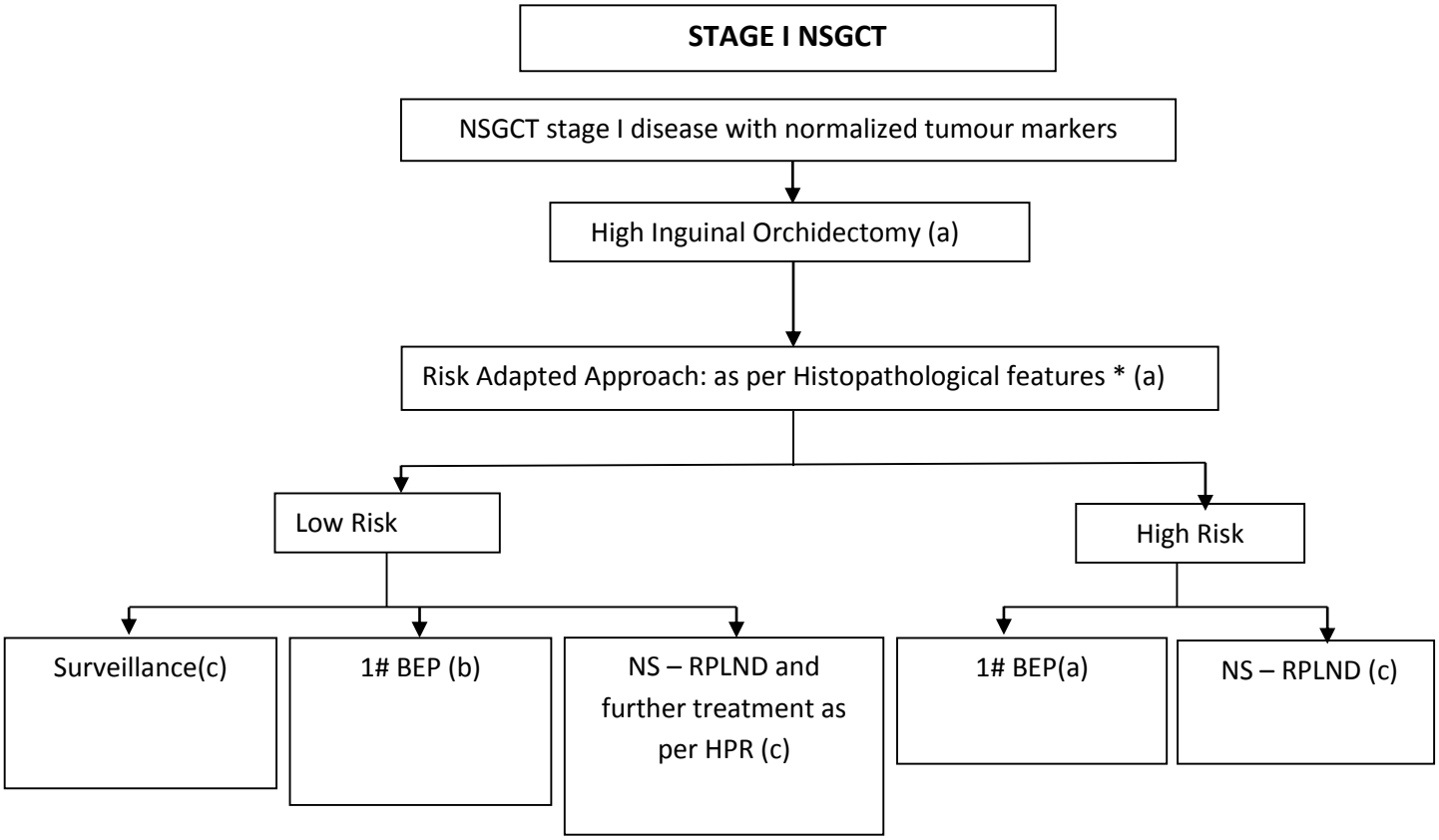
- Stromal invasion of the rete testis

↓

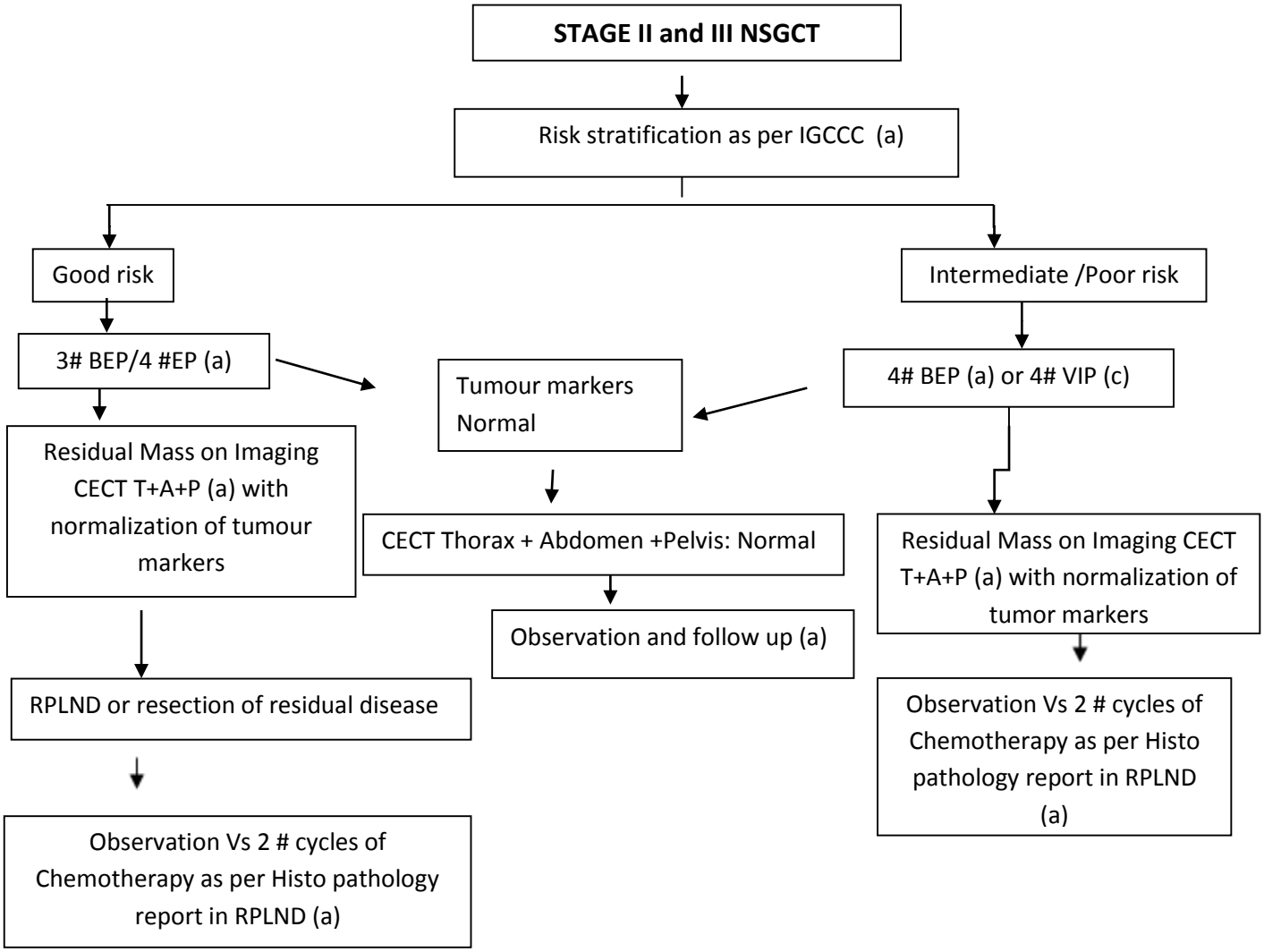
Single Agent Carboplatin AUC 7 x 1 cycle (a)
Dose of Carboplatin as per GFR calculated as per DTPA
Or as per 24 hrs Urinary Creatinine (a)
Or
- Prophylactic RT to paraaortic nodes(a)
Or
2 cycle of Carboplatin AUC 7 (b)
Or
Close Surveillance (Imaging and Tumor Markers) (b)

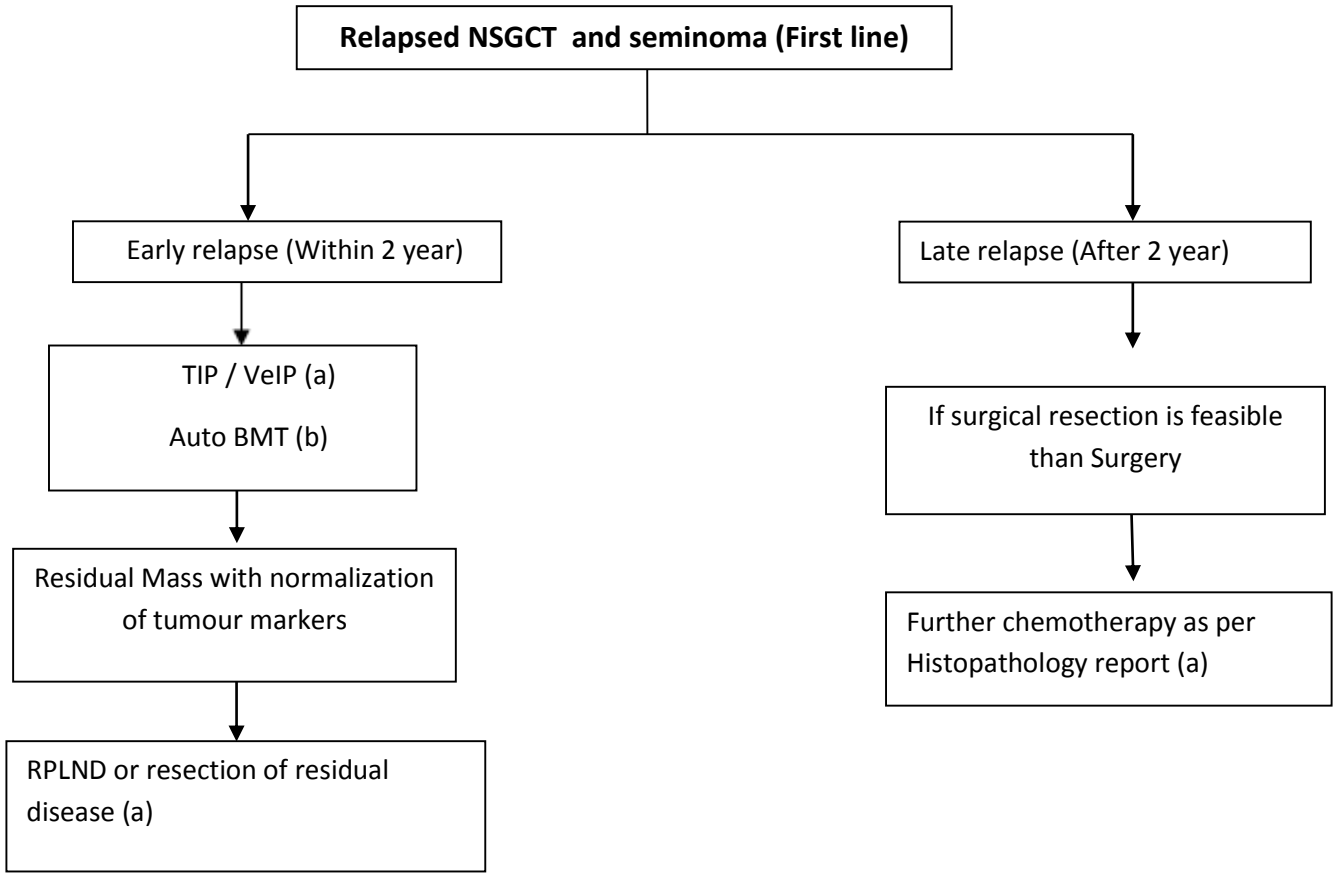


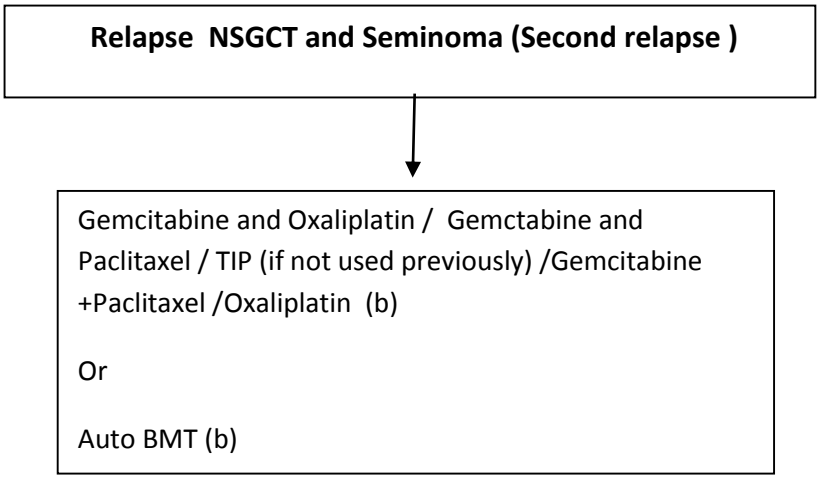
- For Stage II A: RT (a)
- For Stage II B: Chemotherapy (a)
- FDG PET CT for Post chemo seminoma if residual lesion > 3cm (a)
- For PET positive residual masses, consider surgery if feasible preferably at high volume center (a)
- For Stage II A: Chemotherapy (b)
- For Stage II B: RT (b)
- RT to PET positive residual disease if inoperable (c)



* High risk for stage I includes: Lymphovascular invasion (LVI) + or Embryonal carcinoma component > 40%


STAGE II and III NSGCT
Risk stratification as per IGCCC (a)
Good risk
Intermediate /Poor risk
3# BEP/4 #EP (a)
4# BEP (a) or 4# VIP (c)
Tumour markers Normal
Residual Mass on Imaging CECT T+A+P (a) with normalization of tumour markers
CECT Thorax + Abdomen +Pelvis: Normal
Residual Mass on Imaging CECT T+A+P (a) with normalization of tumor markers
Observation and follow up (a)
RPLND or resection of residual disease
Observation Vs 2 # cycles of Chemotherapy as per Histo pathology report in RPLND (a)
Observation Vs 2 # cycles of Chemotherapy as per Histo pathology report in RPLND (a)


Relapsed NSGCT and seminoma (First line)
Early relapse (Within 2 year)
Late relapse (After 2 year)
TIP / VeIP (a)
Auto BMT (b)
If surgical resection is feasible than Surgery
Residual Mass with normalization of tumour markers
Further chemotherapy as per Histopathology report (a)
RPLND or resection of residual disease (a)


Relapse NSGCT and Seminoma (Second relapse)
Gemcitabine and Oxaliplatin / Gemctabine and Paclitaxel / TIP (if not used previously) /Gemcitabine +Paclitaxel /Oxaliplatin (b)
Or
Auto BMT (b)

BEP (1st line) :

Bleomycin: 30 U IV on days 2, 9, and 16 Etoposide: 100 mg/m2 IV on days 1–5 Cisplatin: 20 mg/m2 IV on days 1–5. Repeat cycle every 21 days.

Total 3 cycles in Good risk cases or 4 cycles in intermediate and poor risk cases

EP (1st line) Etoposide: 100 mg/m2 IV on days 1–5

Cisplatin: 20 mg/m2 IV on days 1–5.

Repeat cycle every 21 days. Total 4 cycles in good risk cases

VIP (First line) : Inj Etoposide 75mg/m2 IV over 60 minutes daily, Days 1-5

Inj Mesna 240mg/m2 IV over 15 minutes before Ifosfamide, then at 4 and 8 hours from start of each Ifosfamide dose, Days 1-5

Inj Cisplatin 20mg/m2 IV over 60 minutes daily , Days 1-5

Repeat cycle every 3 weeks for 4 cycles.

Carboplatin Adjuvant (for patients with stage IA, IB seminoma)

Inj Carboplatin AUC 7 over 30 minutes ,day 1 .

Repeat cycle every 3 weeks for 1-2 cycles

BEP Adjuvant

Bleomycin: 30 U IV on days 2, 9, and 16 Etoposide: 100 mg/m2 IV on days 1–5 Cisplatin: 20 mg/m2 IV on days 1–5. Repeat cycle every 21 days. Total 1-2 cycles

VeIP (salvage regimen) :

Vinblastine: 0.11 mg/kg IV on days 1 and 2

Ifosfamide: 1,200 mg/m2 IV on days 1–5

Cisplatin: 20 mg/m2 IV on days 1–5

Mesna: 400 mg/m2 IV, given 15 minutes before first ifosfamide dose, then 1,200 mg/m2/day IV continuous infusion for 5 days

Repeat cycle every 21 days for 4 cycles

TIP regimen (Salvage regimen):

Inj Paclitaxel 250mg /m2 24 hour infusion Day 1

Ifosfamide 1500 mg/m2 Day 2 to day 5

Mesna 500 mg/m2 just before Ifosfamide and at 4 and 8 hours Day2 to day 5.

Cisplatin 25 mg/m2 Day2 to day 5 , for 4 cycles

Or

Inj Paclitaxel 175 mg /m2 3 hour infusion Day 1

Inj Ifosfamide 1500 mg/m2 Day 2 to day 5

Inj Mesna 500 mg/m2 just before Ifosfamide and at 4 and 8 hours Day2 to day 5.

Inj Cisplatin 25 mg/m2 Day 2 to day 5 , for 4 cycles

Gemcitabine + Paclitaxel + Oxaliplatin :

Inj Paclitaxel 80mg/m2 IV over 60 minutes, Days 1,8

Inj Gemcitabine 800mg/m2 IV over 30 minutes, Days 1,8

Inj Oxaliplatin 130mg/m2 IV over 2 hours Day 1

Repeat cycle every 3 weeks for 8 cycles

Gemcitabine + Oxaliplatin :

Inj Gemicitabine 1000-1.250mg/m2 IV over 30 minutes Days 1,8.

Inj Oxaliplatin 130mg/m2 IV over 2 hours Day 1

Repeat cycle every 3 weeks for 4-6 cycles

Gemcitabine + Paclitaxel

Inj Paclitaxel 100mg/m2 IV over 60 minutes, Days 1,8,15.

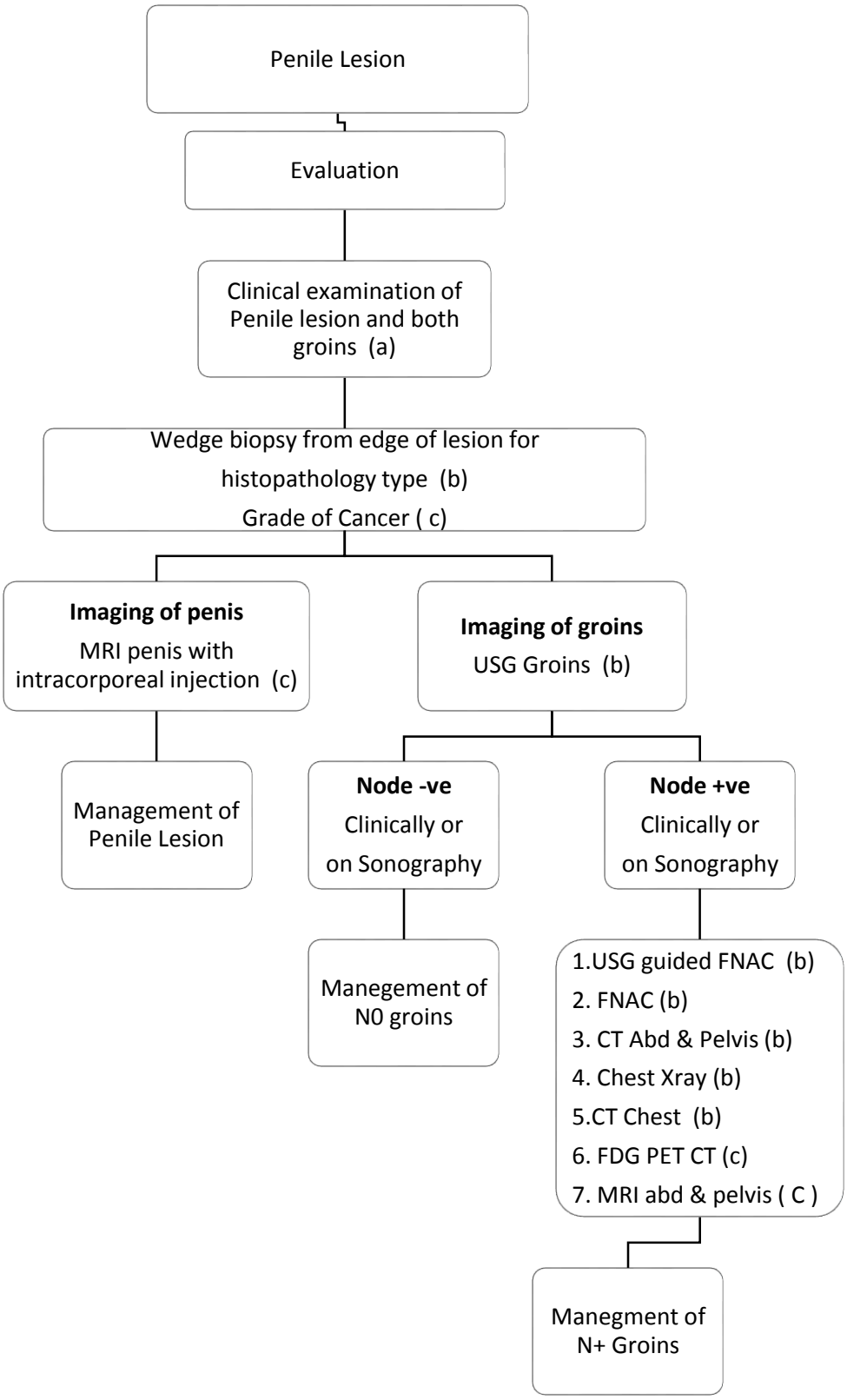
Inj Gemicitabine 1,000mg/m2 IV over 30 minutes,Days 1,8,15

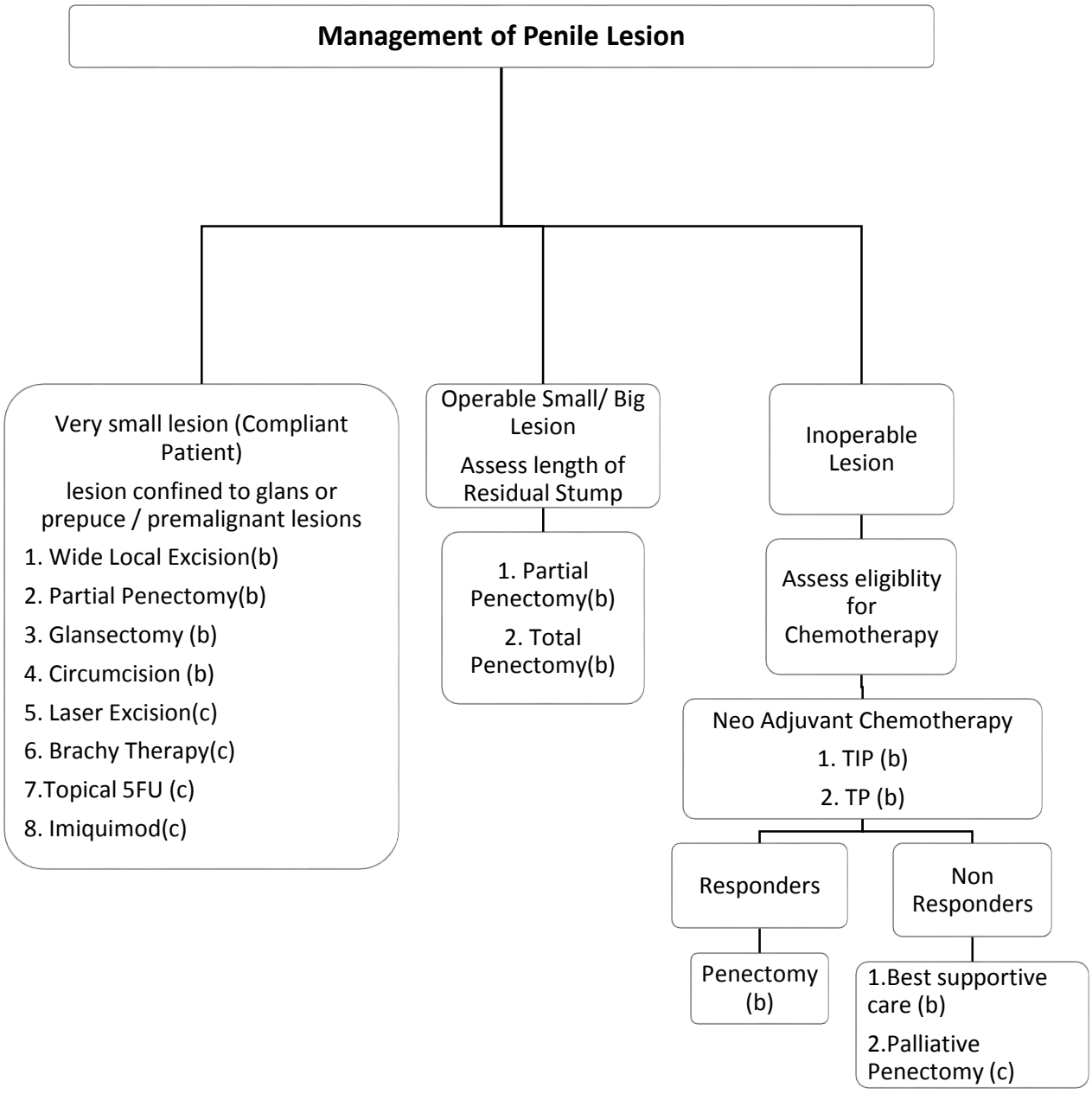
Repeat every 4 weeks for 6 cycles.

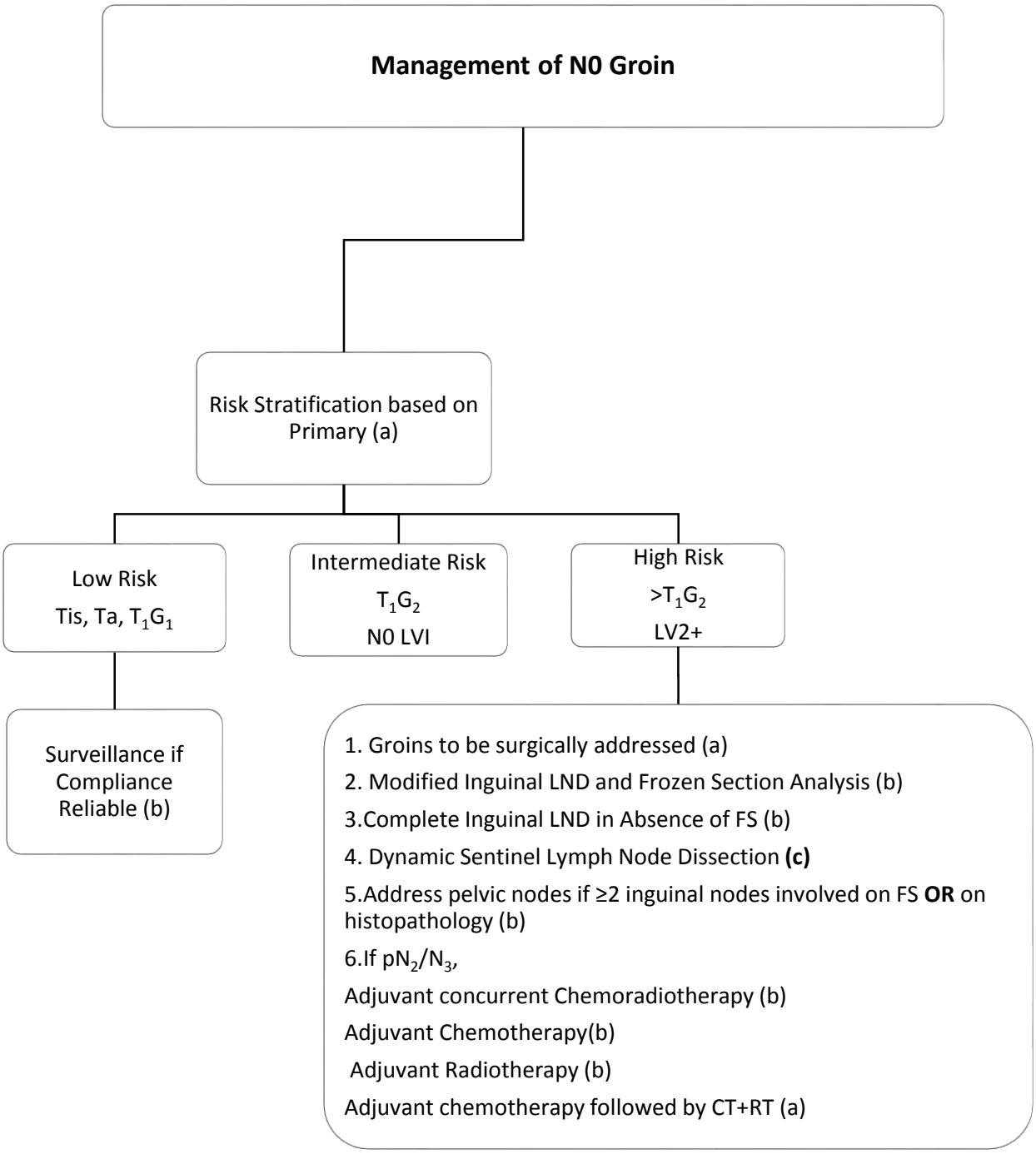
Etoposide (oral) : Tab Etoposide 50-100 mg orally daily, Days 1-21.

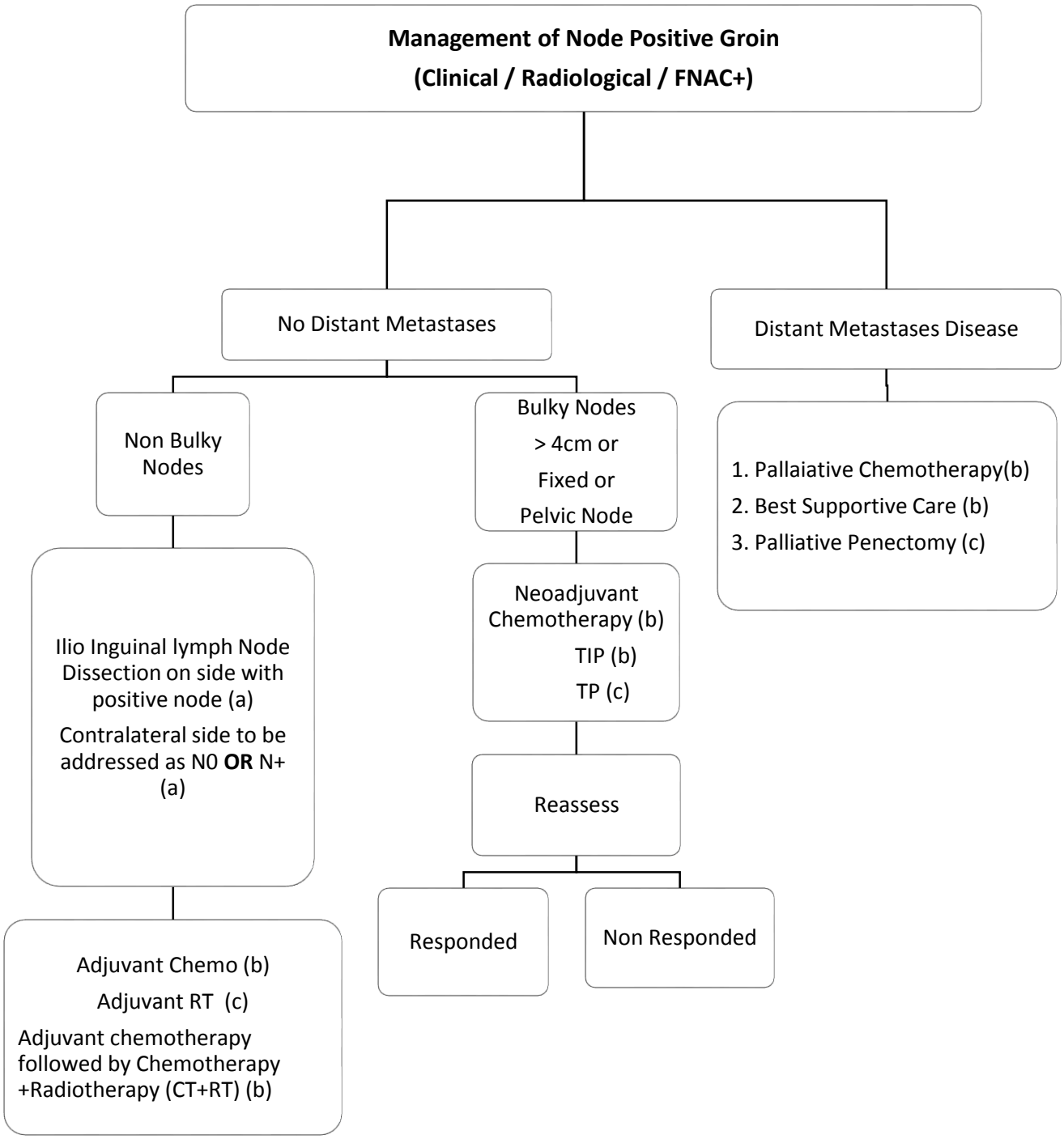
Repeat cycle every 4 weeks till disease progression

PENILE CANCER




Management of Penile Lesion
Very small lesion (Compliant Patient)
lesion confined to glans or prepuce / premalignant lesions
1. Wide Local Excision(b)
2. Partial Penectomy(b)
3. Glansectomy (b)
4. Circumcision (b)
5. Laser Excision(c)
6. Brachy Therapy(c)
7.Topical 5FU (c)
8. Imiquimod(c)
Operable Small/ Big Lesion
Assess length of Residual Stump
1. Partial Penectomy(b)
2. Total Penectomy(b)
Inoperable Lesion
Assess eligiblity for Chemotherapy
Neo Adjuvant Chemotherapy
1. TIP (b)
2. TP (b)
Responders
Non Responders
Penectomy (b)
1.Best supportive care (b)
2.Palliative Penectomy (c)


Management of N0 Groin
Risk Stratification based on Primary (a)
Low Risk
Tis, Ta, T_1G_1
Intermediate Risk
T_1G_2
N0 LVI
High Risk
$>T_1G_2$
LV2+
Surveillance if Compliance Reliable (b)
1. Groins to be surgically addressed (a)
2. Modified Inguinal LND and Frozen Section Analysis (b)
3.Complete Inguinal LND in Absence of FS (b)
4. Dynamic Sentinel Lymph Node Dissection (c)
5.Address pelvic nodes if ≥2 inguinal nodes involved on FS OR on histopathology (b)
6.If pN_2/N_3,
Adjuvant concurrent Chemoradiotherapy (b)
Adjuvant Chemotherapy(b)
Adjuvant Radiotherapy (b)
Adjuvant chemotherapy followed by CT+RT (a)


Management of Node Positive Groin
(Clinical / Radiological / FNAC+)
No Distant Metastases
Distant Metastases Disease
Non Bulky Nodes
Bulky Nodes
> 4cm or
Fixed or
Pelvic Node
1. Pallaiative Chemotherapy(b)
2. Best Supportive Care (b)
3. Palliative Penectomy (c)
Ilio Inguinal lymph Node Dissection on side with positive node (a)
Contralateral side to be addressed as N0 OR N+ (a)
Neoadjuvant Chemotherapy (b)
TIP (b)
TP (c)
Reassess
Responded
Non Responded
Adjuvant Chemo (b)
Adjuvant RT (c)
Adjuvant chemotherapy followed by Chemotherapy +Radiotherapy (CT+RT) (b)

Adjuvant Chemotherapy :

Inj Cisplatin 75 mg /m2 +Inj Paclitaxel 175 mg/m2 every 3 weekly for 4 cycles

OR

Inj Carboplatin AUC 5 + Inj Paclitaxel 175 mg/m2 every 3 weekly for 4 cycles

OR

TIP:

Inj Paclitaxel 175 mg/m2 IV over 3 hours on Day 1, Inj Ifosfamide 1200 mg/m2 IV over 2 hours on Days 1–3 , Inj Cisplatin 25 mg/m2 IV over 2 hours on Days 1–3 for 4 cycles

OR

Inj 5-FU Continuous infusion of 800–1000 mg/m2/day IV on Days 1–4 or Days 2–5

Cisplatin 70–80 mg/m2 IV on Day 1 for 4 cycles

Neoadjuvant chemotherapy :

TIP : Inj Paclitaxel 175 mg/m2 IV over 3 hours on Day 1, Inj Ifosfamide 1200 mg/m2 IV over 2 hours on Days 1–3 , Inj Cisplatin 25 mg/m2 IV over 2 hours on Days 1–3 for 4 cycles

Palliative chemotherapy:

Inj Cisplatin 75 mg /m2 + Inj Paclitaxel 175 mg/m2 every 3 weekly for 6 cycles

OR

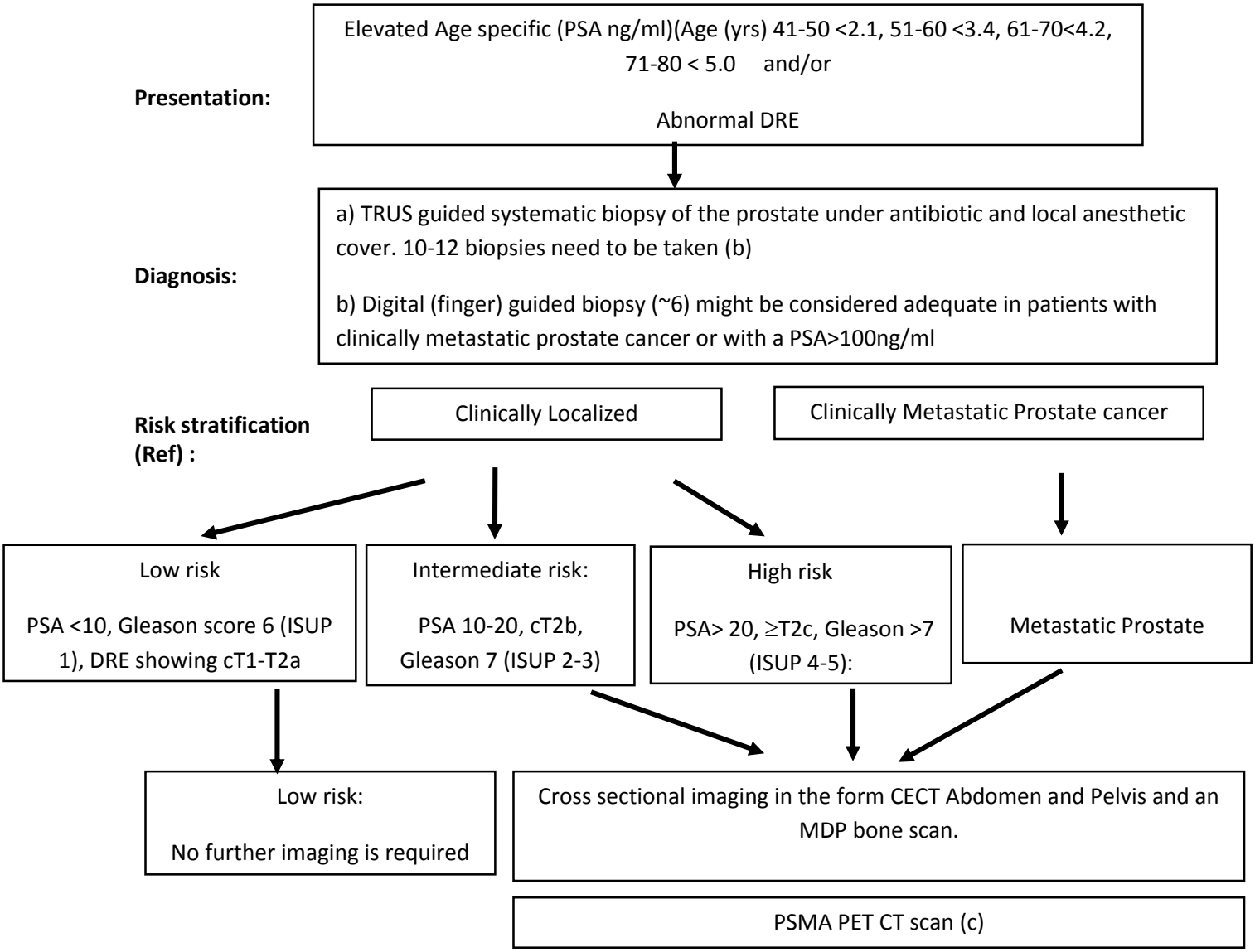
Inj Carboplatin AUC 5 + Inj Paclitaxel 175 mg/m2 every 3 weekly for 6 cycles

OR

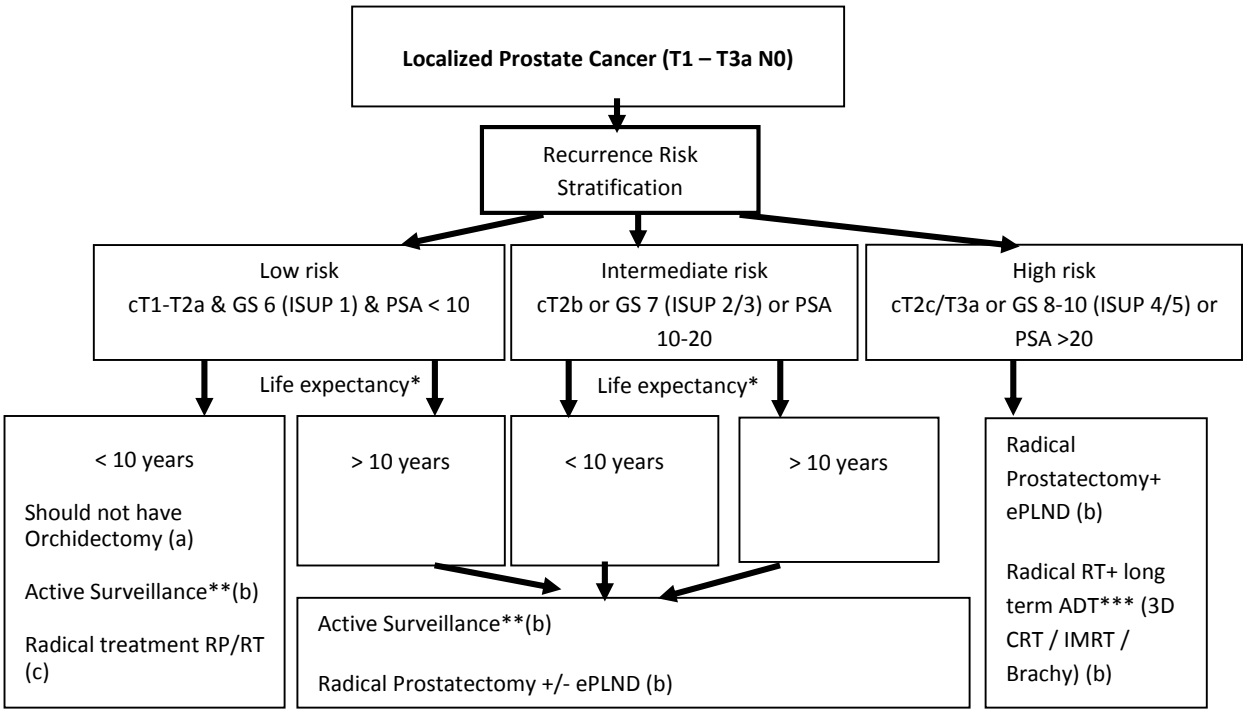
Inj Paclitaxel 80 mg /m2 weekly till disease progression

PROSTATE CANCER

Investigations for Prostate cancer



Treatment Pathway for Localized disease



*Life expectancy: Estimation of life expectancy has to be based on based patients' comorbidity and health assessment using validated tools like Geriatric 8 (G8) screening tool (b)

Active surveillance: All patients need a mpMRI of the prostate within 3 months of biopsy before formal confirmation of Active surveillance pathway

- Any abnormality noted on mpMRI needs to be further assessed using targeted biopsy before confirmation of active surveillance especially in patients with life expectancy of >10 yrs.

Follow up : PSA testing every 3 months in the first year

- DRE every 12 months
- mpMRI every 12-18 months

Progression: PSA rise greater 50% in 12 months or PSA doubling time of <3 yrs warrants repeat biopsy or radical treatment

- Any significant rise in PSA, or abnormal DRE or mpMRI warrants a biopsy or consideration of radical treatment

***ADT: Androgen Deprivation therapy**

- Short term ADT: Neo / concomitant / adjuvant for 4-6 months
- Long term ADT : Neo / concomitant / adjuvant for 2-3 years

Radical RT : Radical Radiation therapy

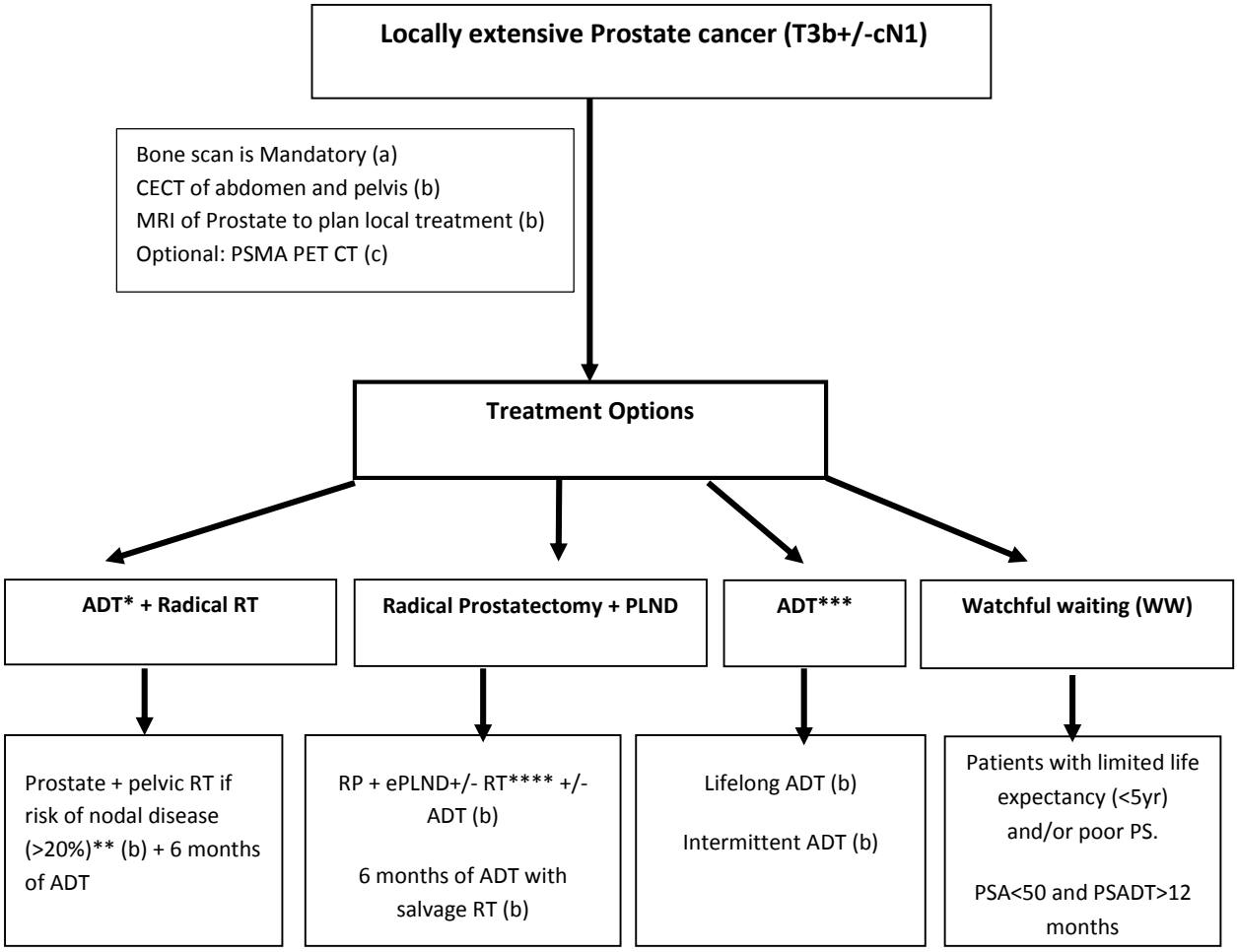
- Low Risk: 3 D CRT / IMRT / Brachytherapy : 70-74Gy
- Intermediate Risk : 3 D CRT / IMRT +/- Brachytherapy : 74 Gy /30 fractions or equivalent
- High Risk: 3 D CRT / IMRT +/-Brachytherapy : >74 using conventional / moderate hypofractionation
- SBRT for low and Intermediate risk prostate cancer (c)

(RT Doses > 74 Gy mandates a component of Image Guided Radiotherapy)

Radical Sx : Radical Surgery

- RP: Radical prostatectomy
- ePLND: Pelvic lymph nodal dissection: When the risk of lymph node involvement is >5% either by using nomogram or Roach formula. Assessment of nodal risk using Roach formula: N+=2/3*PSA+(GS-6) X10

Monthly Intravenous Zoledronic acid is not required in Localised Prostate cancer treatment (a)



Monthly Intravenous Zoledronic acid is not required in Localised/Locally extensive Prostate cancer treatment (a)

*ADT in locally advanced disease is started as neo-adjuvant treatment and is continued for 18-36 months' overall

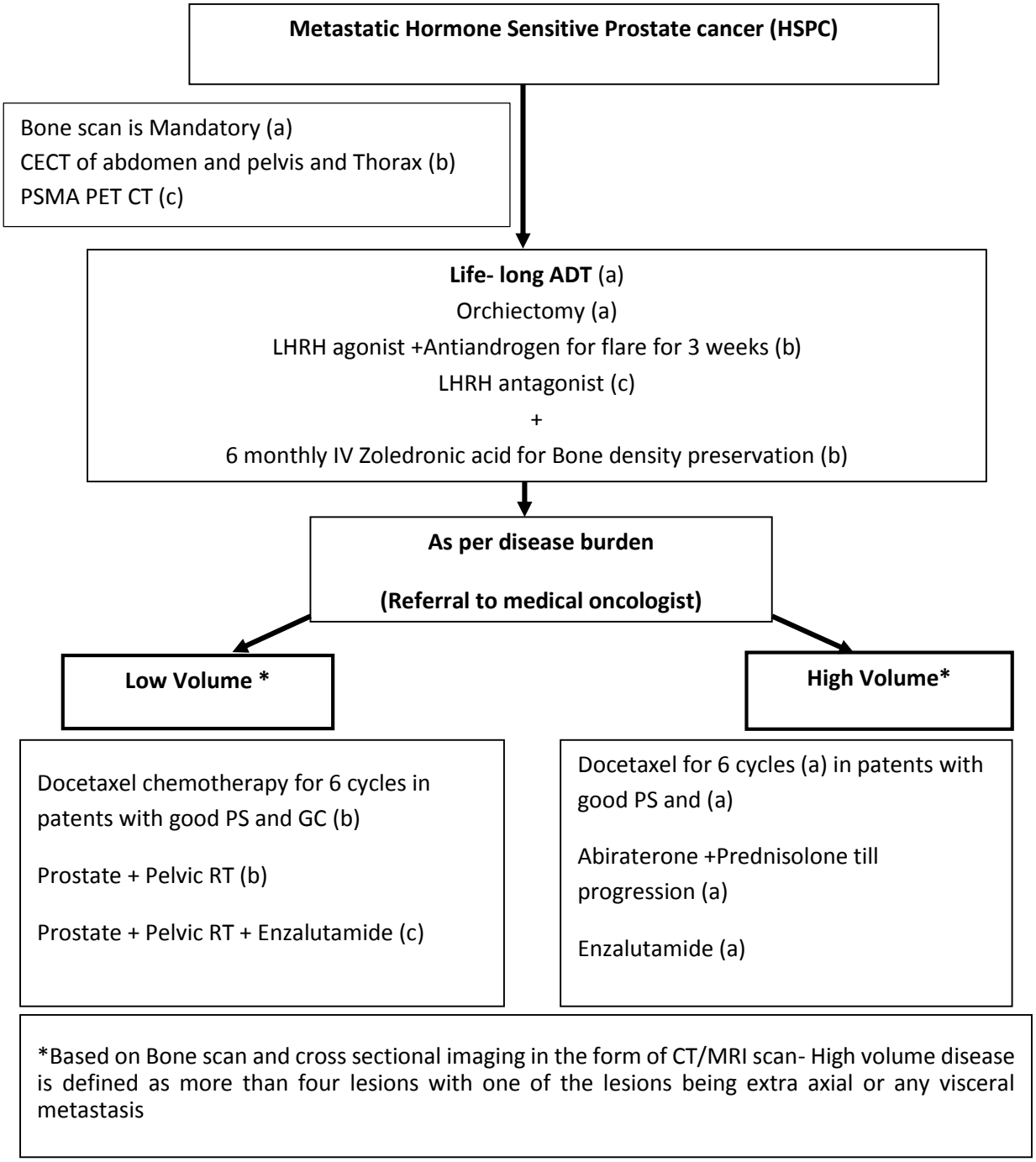
**Assessment of nodal risk using Roach formula: N+=2/3*PSA+(GS-6) X10

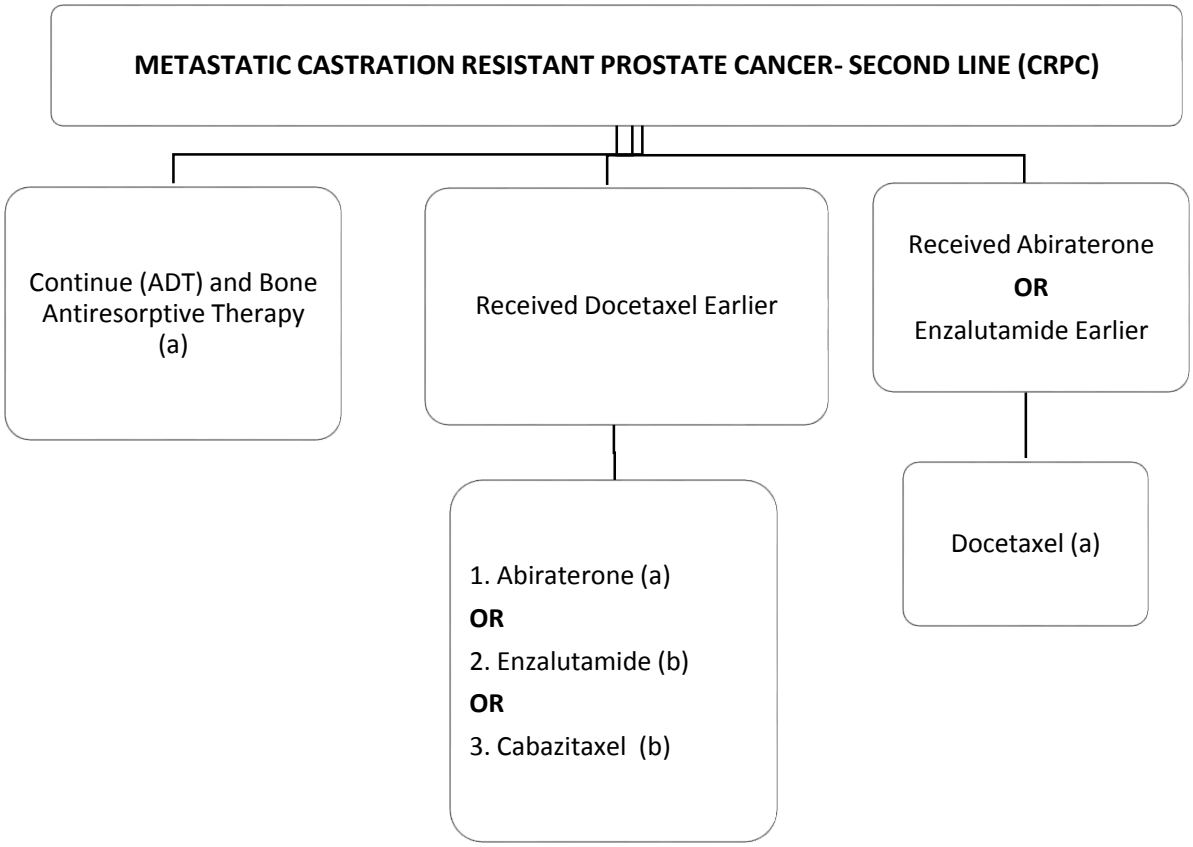
*** In patients not fit and not willing for radical treatment

**** Neoadjuvant ADT is not recommended before radical prostatectomy (a)

**** Adjuvant RT after RP: If Capsule invasion or cut margins positive on final HPR (Ref.: 14,15) or PSA persistence post radical prostatectomy (b)
Early Salvage RT: Radiotherapy in post-surgery setting with three consecutive raises of PSA with PSA 0.2-0.5 ng/ml (b)
In staging of post primary treatment recurrence disease PSMA PET is the investigation of choice (b)
Post-operative RT to Prostate bed: 60-66 Gy with 3D CRT / IMRT

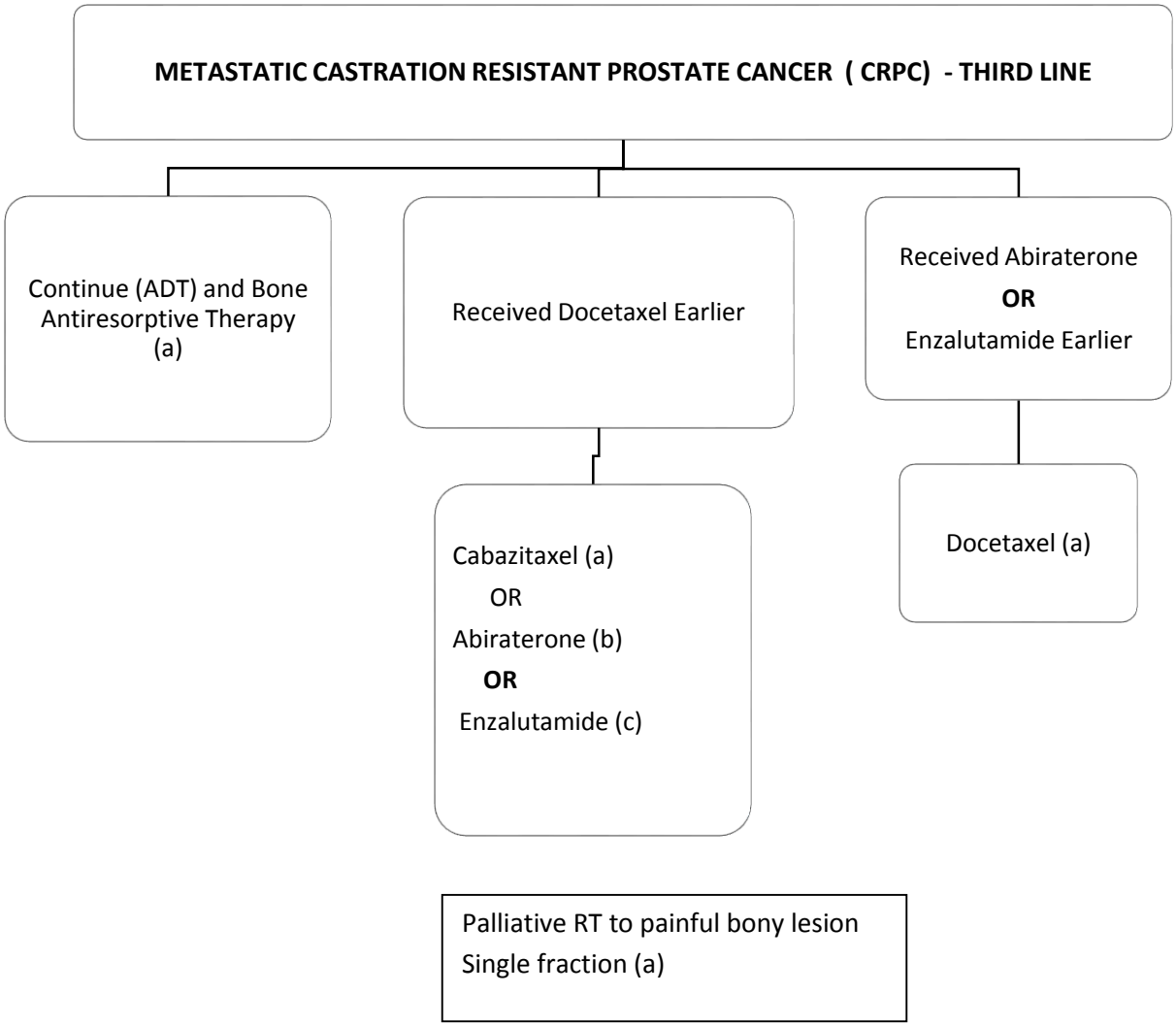
RT: Radiation therapy
► Prostate only fields include Prostate + SV with margins
► Prostate + pelvic fields include Prostate + SV with margins and pelvic nodal regions

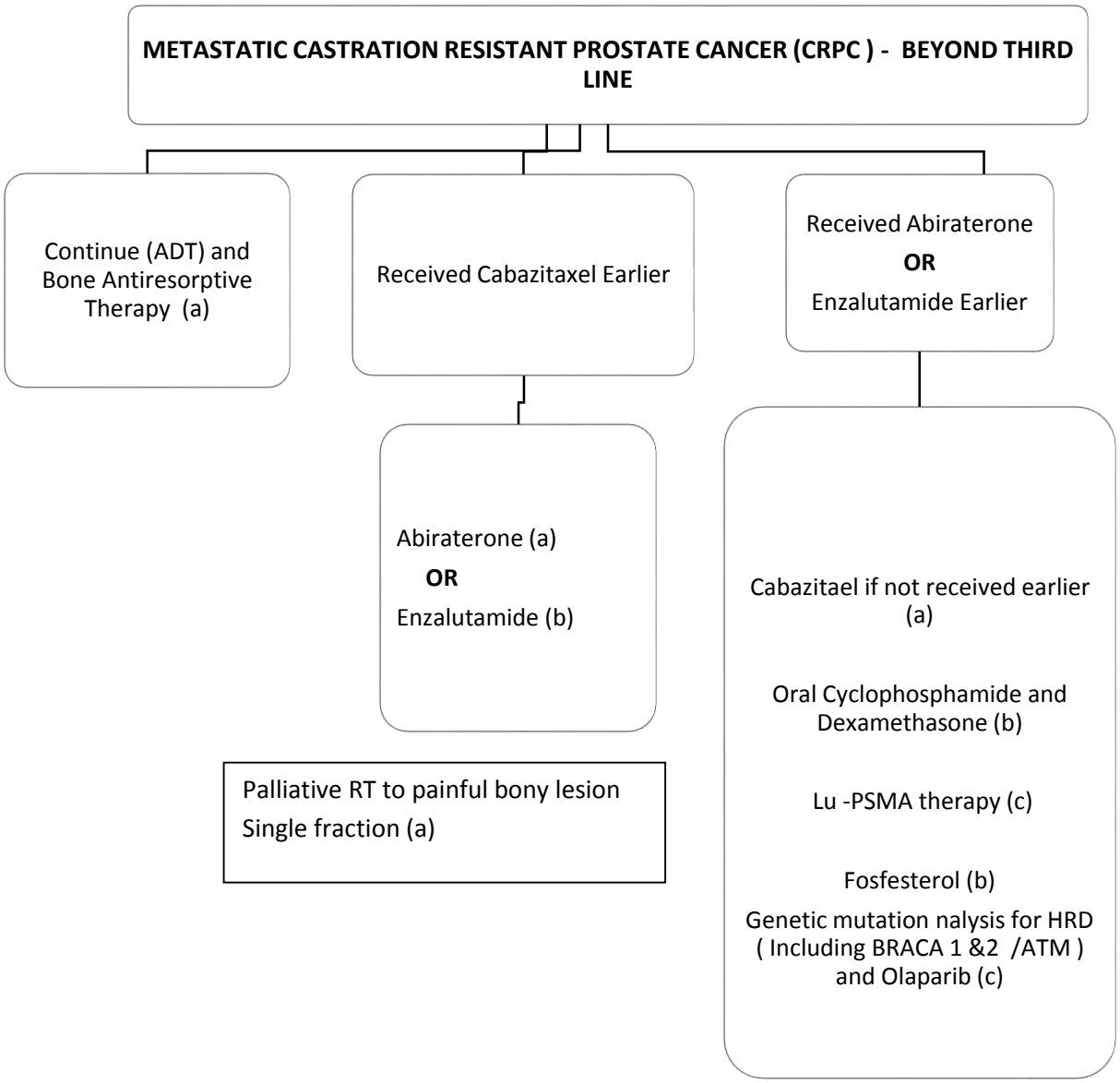

Metastatic Hormone Sensitive Prostate cancer (HSPC)
Bone scan is Mandatory (a)
CECT of abdomen and pelvis and Thorax (b)
PSMA PET CT (c)
Life- long ADT (a)
Orchiectomy (a)
LHRH agonist +Antiandrogen for flare for 3 weeks (b)
LHRH antagonist (c)
+
6 monthly IV Zoledronic acid for Bone density preservation (b)
As per disease burden
(Referral to medical oncologist)
Low Volume *
High Volume*
Docetaxel chemotherapy for 6 cycles in patents with good PS and GC (b)
Prostate + Pelvic RT (b)
Prostate + Pelvic RT + Enzalutamide (c)
Docetaxel for 6 cycles (a) in patents with good PS and (a)
Abiraterone +Prednisolone till progression (a)
Enzalutamide (a)
*Based on Bone scan and cross sectional imaging in the form of CT/MRI scan- High volume disease is defined as more than four lesions with one of the lesions being extra axial or any visceral metastasis



Palliative RT to painful bony lesion Single fraction (a)

Bone Modifying agent (Zolendroinc Acid (a) /Denosumab (c) as renal function and dental opinion


METASTATIC CASTRATION RESISTANT PROSTATE CANCER (CRPC) - THIRD LINE
Continue (ADT) and Bone Antiresorptive Therapy (a)
Received Docetaxel Earlier
Received Abiraterone
OR
Enzalutamide Earlier
Cabazitaxel (a)
OR
Abiraterone (b)
OR
Enzalutamide (c)
Docetaxel (a)
Palliative RT to painful bony lesion
Single fraction (a)


METASTATIC CASTRATION RESISTANT PROSTATE CANCER (CRPC) - BEYOND THIRD LINE
Continue (ADT) and Bone Antiresorptive Therapy (a)
Received Cabazitaxel Earlier
Received Abiraterone
OR
Enzalutamide Earlier
Abiraterone (a)
OR
Enzalutamide (b)
Palliative RT to painful bony lesion
Single fraction (a)
Cabazitael if not received earlier (a)
Oral Cyclophosphamide and Dexamethasone (b)
Lu -PSMA therapy (c)
Fosfesterol (b)
Genetic mutation nalysis for HRD (Including BRACA 1 &2 /ATM) and Olaparib (c)

GnRH Agonist:

Leuprolide:

Leuprolide Depot 7.5 mg (monthly): 7.5 mg every month or

Leuprolide Depot 22.5 mg (3 month): 22.5 mg every 12 weeks or

Leuprolide Depot 30 mg (4 month): 30 mg every 16 weeks or

Leuprolide Depot 45 mg (6 month): 45 mg every 24 weeks

OR

Leuprolide 7.5 mg monthly or 22.5 mg every 3 months or 30 mg every 4 months or 45 mg every 6 months deep subcutaneous injection

OR

Goserelin :

3.6 mg every monthly or 10.8 mg every 3 monthly deep subcutaneous

GnRH antagonist:

Degarelix: Loading dose: 240 mg administered as two 120 mg injections

Maintenance dose: 80 mg injection every 28 days (beginning 28 days after initial loading dose)

Tab Bicalutamide 50 mg Daily for 3 weeks along with GnRH agonist

Abiraterone 1000mg orally once daily (250 mg 4 tablets or 500 mg 2 tablet)

+

Prednisolone 5mg orally once a daily for hormone sensitive prostate cancer (HSPC)

Or

Prednisolone 5mg orally twice daily for castrate resistant prostate cancer (CRPC)

Cycle Frequency: Daily until disease progression

Enzalutamide 160mg orally once daily (40 mg ,4 tablets daily) Cycle Frequency: Daily until disease progression

Docetaxel 75mg/m^2 in 250ml sodium chloride 0.9% infusion over 1 hour. Every 21 days maximum 6 cycles (IN HSPC) with or without Tab Prednisolone 10 mg mg OD

Or

Docetaxel 50 mg/m^2 in 250ml sodium chloride 0.9% infusion over 1 hour . Every 15 days

maximum 9 cycles (IN HSPC) with or without Tab Prednisolone 10 mg OD

Or

Docetaxel 75mg/m^2 in 250ml sodium chloride 0.9% infusion over 1 hour . Every 21 days (IN CRPC) with Tab Prednisolone 10 mg OD till progression or tolerance

Or

Docetaxel 50 mg/m^2 in 250ml sodium chloride 0.9% infusion over 1 hour . Every 15 days (IN CRPC) with Tab Prednisolone 10 mg OD progression or tolerance

Or

Docetaxel 30 mg/m^2 in 250ml sodium chloride 0.9% infusion over 1 hour . Every weekly (IN CRPC) with Tab Prednisolone 10 mg OD progression or tolerance

Cabazitaxel 25mg/m2 or 20 mg /m2 in 250ml sodium chloride 0.9% IV infusion over 1 hour with Tab

Prednisolone 10mg orally daily (IN CRPC)

Tab Olaparib 300 mg BD till progression

Tab Cyclophosphamide 50 mg OD day1 to day 21 cycle every 28 days to be continued till progression +

Tab Dexamethasone 0.5 mg OD to be continued till progression

Tab Fosfesterol 120 mg BD /TDS till progression

Bone modifying agent (As per renal function)

Inj Zolendroinic acid 4 mg IV every 4 weekly (In CRPC patients with bony metastasis)

Inj Zolendroinic acid 4 mg IV every 6 monthly (In HSPC patients or patients receiving ADT with higher risk of osteoporosis)

Inj Denosumab 120 mg subcutaneous every 4 weekly in CRPC with bony metastasis

Inj Denosumab 60 mg subcutaneous as a single dose, once every 6 months in androgen deprivation therapy-induced bone loss in males with prostate cancer with higher risk of osteoporosis

ANNEXURE -1. RADIOLOGY SYNOPTIC REPORTING FORMATS

RENAL MASS CT

Technique: Plain and contrast enhanced CT study of the abdomen and pelvis was performed with special attention to the urinary system. Cortico-medullary, Nephrogenic and Delayed Phases were included in contrast enhanced study.

Clinical details:

Comparison if any:

Findings:

Involved Kidney:

No. of lesions:

Lesion 1: (repeat similarly for all lesions)

Laterality: Right / Left

Morphology: Solid / Cystic / Mixed

Location: Upper pole / Interpolar region / Lower pole; Anterior / Posterior

Size:

Relation to polar lines: Crosses / Does not cross the upper/lower polar lines; if crosses, then mention less than or more than 50%

Endophytic / Exophytic: If exophytic, then mention less than or greater than 50%

Relation to collecting system: Mention if involved or distance from collecting system if uninvolved. Mention ureteric involvement if any.

Locoregional extent: Perinephric / Anterior and posterior paranephric spaces / Peritoneum / Adjacent structures (adrenal, psoas, pancreas, duodenum, vertebrae, liver, any other).

Rest of the renal parenchyma: Mention nephrogram and excretory properties. Mention presence and grade of hydronephrosis.

Vascular involvement:

Renal vein: Number / Variant course if any (eg retroaortic) / Mass effect / Involvement / Thrombosis

Renal artery: Number / Division (Prehilar or Hilar) / Mass effect / Involvement / Thrombosis /

IVC: Mass effect / Involvement / Thrombosis / Extent

Contralateral renal vein: Mass effect / Involvement / Thrombosis / Extent

Ipsilateral Ureter:

Nodes:

Retroperitoneal / Pelvic / Retrocrural / Others

Contralateral Kidney and Ureter:

Ureters:

Urinary bladder:

Adrenals:

Liver:

Peritoneum and Ascitis:

Bones:

Visualized Lung bases:

Rest of the abdominal and pelvic viscera:

Gall bladder, Pancreas, Spleen, Stomach and Bowel loops, Uterus and ovaries (in females), Prostate and seminal vesicles (in males), Abdominal wall.

Impression:

Include mass laterality, R.E.N.A.L. nephrometry score, BOSNIAK type (when relevant), vascular involvement, metastatic involvement.

Mention interval change if compared with previous study.

URINARY BLADDER CT

Technique: Plain and contrast enhanced CT study of the abdomen and pelvis was performed with special attention to the urinary system. Corticomedullary, Nephrogenic and Delayed Phases were included in contrast enhanced study.

Clinical details:

Comparison if any:

Findings:

Urinary Bladder:

No. of lesions:

Lesion 1: (repeat similarly for all lesions)

Morphology: Intraluminal (exophytic) / Intramural (endophytic). If intraluminal, mention if pedunculated or broad-based

Size:

Location: Dome / Trigone / Neck / Anterior / Posterior / Lateral walls

Ureterovesical junction involvement: If yes, mention presence and grade of hydroureteronephrosis

Extravesical extent: Perivesical space / Urethra / Ureters / Prostate and seminal vesicles (in males) / Uterus, ovaries and vagina (in females) / Rectum / Pelvic bowel loops / Any other.

Rest of the bladder walls:

Nodes:

Pelvic / Retroperitoneal / Others

Kidneys and Ureters:

Adrenals:

Liver:

Peritoneum and Ascitis:

Bones:

Visualised Lung bases:

Rest of the abdominal and pelvic viscera:

Gall bladder, Pancreas, Spleen, Stomach and Bowel loops, Uterus and ovaries (in females), Prostate and seminal vesicles (in males), Abdominal wall.

Impression:Include mass location, extravesical extension, obstructive uropathy if present, metastatic involvement.

Mention interval change if compared with previous study.

URINARY BLADDER MRI

Technique: Multiparametric MRI of the urinary bladder was performed.

Clinical details: Include recent cystoscopic appearance, biopsy findings, treatment received

Comparison if any:

Findings:

Urinary Bladder:

No. of lesions:

Lesion 1: (repeat similarly for all lesions)

Size:

Location: Dome / Trigone / Neck / Anterior / Posterior / Lateral walls

Ureterovesical junction involvement: If yes, mention presence and grade of hydroureteronephrosis

Morphology: Intraluminal (exophytic) / Intramural (endophytic). If intraluminal, mention if pedunculated or broad-based (presence of stalk on T2W images)

Inner layer on T2WI: Normal / Thickened

Muscularis integrity on T2W images: Intact / Interrupted / Extravesical extension of mass.

Muscularis integrity on DCE findings: No enhancement / Inner layer early enhancement / Muscularis early enhancement

Muscularis integrity on DWI findings: Inner layer restricted diffusivity / Muscularis restricted diffusivity

Extravesical extent: Perivesical space / Urethra / Ureters / Prostate and seminal vesicles (in males) / Uterus, ovaries and vagina (in females) / Rectum / Pelvic bowel loops / Any other.

Rest of the bladder walls:

Nodes:

Pelvic / Retroperitoneal / Others

Bones:

Impression:

Include mass location and VIRADS category for each lesion.

Mention extravesical extension and metastatic involvement.

Mention interval change if compared with previous study.

Recommendation if any: Biopsy / Follow up / Any other investigation

TESTIS MALIGNANCY CT

Technique: Plain and contrast enhanced CT study of the chest, abdomen and pelvis was performed.

Clinical details:

Comparison if any:

Findings:

Testis: Mass laterality and size

Nodes:

Retroperitoneal – discrete / conglomerate / infiltrative, necrotic / non-necrotic, calcified / non-calcified; Mention abutment or encasement of aorta / IVC / other vessels; angle of contact (<90, 90-180, >180 degrees)

Pelvic

Inguinal:

Other abdominopelvic nodes:

Mediastinal

Hilar

Supraclavicular

Axillary

Other intrathoracic nodes:

If post-surgical for follow-up: Lymphoceles / Collections

Metastatic involvement:

Liver:

Adrenals:

Lungs:

Bones:

Peritoneum and Ascitis:

Rest of the viscera: Gall bladder, Pancreas, Spleen, Kidneys, Stomach and Bowel loops, Prostate and seminal vesicles, Mediastinum, Heart and Great vessels, Trachea and airways, Thyroid, Thoraco-abdominal wall

Impression:

Include testicular mass laterality
Nodal involvement
Other metastatic involvement
Mention interval change if compared with previous study.

MRI PENIS

Technique: Contrast enhanced MRI study was performed for penis.

Clinical details:

Comparison if any:

Findings:

No. of lesions:

Lesion 1: (repeat similarly for all lesions)

Location:

Size:

Root of penis: Involved / Not involved, Distance from root of penis if not involved

Morphology:

Corpora cavernosa involvement: If present, mention location; Crura involvement: Present / Absent; Ischial tuberosity involvement: Present / Absent

Corpora spongiosa involvement: If present, mention location; Penile bulb involvement: Present / Absent; Glans involvement: Present / Absent

Urethral involvement: If present, mention distance from prostatic apex

Scrotal involvement:

Prostate involvement:

Locoregional involvement: Pubic symphysis / rectum / urinary bladder / any other

Nodes: Inguinal / Pelvic

Visualized Bones:

Any other significant finding:

Impression:

Mention lesion location and locoregional involvement.

Mention nodal disease

interval change if compared with previous study.

Recommendation if any: Biopsy / Follow up / Any other investigation

PROSTATE MRI

Technique: Multiparametric MRI study was performed for prostate.

Clinical details: DRE findings and biopsy findings

Tumor markers: PSA levels with trend

Comparison if any:

Findings:

Prostate size and volume:

Peripheral zone / Transitional zone distinction:

Transitional zone: Benign Prostatic Hyperplasia (present / absent)

Biopsy changes if any:

No. of lesions: (Describe upto 4 most prominent lesions in descending order of significance)

Lesion 1: (repeat similarly for all lesions)

Laterality:

Level: Base / Midgland / Apex

Site: Peripheral zone / Transitional zone distinction / Anterior fibromuscular stroma

Size:

T2 signal:

DWI with ADC value:

DCE: Type of enhancement and washout

Extracapsular bulge: Present / Absent

Extraprostatic extension (EPE): Present / Absent

If EPE present – Seminal vesicles / Urinary bladder / Neurovascular bundle / Rectum

PIRADS Category:

Pelvic Nodes:

Visualised Bones:

Rest of the pelvic viscera:

Impression:

Mention lesion location and PIRADS category for each lesion.
Mention extra-prostatic extension and metastatic involvement.
Mention interval change if compared with previous study.
Recommendation if any: Biopsy / Follow up / Any other investigation

ANNEXURE -2. PATHOLOGY SYNOPTIC REPORTING FORMATS

RADICAL ORCHIECTOMY SPECIMENS

PATIENT DEMOGRAPHICS

Name : **Age :** **Sex :** **Case No :**

Pathology No:

Requisition No:

Nature of specimen/procedure

Radical/ High inguinal Orchiectomy □

GROSS FEATURES:

Specimen laterality

- Right □
- Left □

Tumor focality

- Unifocal□
- Multifocal□

Tumor size

- Greatest dimension of main tumor mass: ___ cm
- Additional dimensions: ___ x ___ cm

Greatest dimensions of additional tumor nodules ___ cm (c)

MICROSCOPY

1. **Histologic subtypes (specify all subtypes present if tumour is mixed)**

Seminoma

- Classical Seminoma □

Non-seminomatous types

Embryonal carcinoma□
Yolk sac tumor, postpubertal type□
Choriocarcinoma□
Mixed germ cell tumor□

- Seminoma (specify percentage): _____%

- Embryonal carcinoma (specify percentage): _____%
- Yolk sac tumor, postpubertal type (specify percentage): _____%
- Choriocarcinoma (specify percentage): _____%
- Teratoma (specify percentage): _____%

2.Extent of tumor (Determines the pT stage)

- No evidence of primary tumor □
- Germ cell neoplasia in situ only □
- Tumor limited to testis □
- Tumor invades stroma of rete testis □
- Tumor invades hilar soft tissue □
- Tumor invades epididymis □
- Tumor invades through tunica albuginea and perforates tunica vaginalis (mesothelial layer) □
- Tumor invades spermatic cord □
- Tumor invades scrotum □

3.Spermatic Cord Margin

- Cannot be assessed□
- Uninvolved by tumor□
- Involved by tumor □

4. Lymphovascular Invasion

- Not identified □
- Present

5. **Regional Lymph Nodes(mostly retroperitoneal lymph node dissection)**

Site / station of lymph node _____

Number of lymph nodes examined ____

Number of lymph nodes Involved: _____

Size of largest metastatic deposit (centimeters): ___ cm

Size of largest lymph lode Involved (centimetres):___ cm

Extranodal extension

- Not identified □
- Present □

6. **GCNIS** – Seen or not seen
7. *Pre-Orchiectomy Serum Tumor Markers / Post-Orchiectomy Serum Tumor Markers(c)*
8. *Ancillary Studies like IHC to confirm morphology of germ cell tumor components/ _____ (c)*

PENILE CANCER RESECTIONS SPECIMENS

PATIENT DEMOGRAPHICS

Name : **Age:** **Sex:** **Case No:** **Pathology No:**

Requisition No:

MACROSCOPY

Nature of specimen/procedure

Circumcision Partial penectomy Radical penectomy

Dimensions of specimen ___x___x___cm

Tumor macroscopy

No obvious tumour visible macroscopically

Ulcerated/ Ulceroproliferative/ Solid/ Flat/ Verrucous

Size of tumor = ___x___x___ cm

Compartments involved on macroscopy

Glans Prepuce Shaft (choose a combination if more than one involved)

Urethral involvement on macroscopy Involved Not involved

Margins at macroscopy

Corporal =____ mm Urethral=___mm Skin=___mm

Microscopy

1.Histologic subtypes (specify all subtypes present, if tumour is mixed)*

Squamous carcinoma (usual type)

Basaloid squamous carcinoma

Warty/condylomatous carcinoma

Verrucous carcinoma

**p 16 immunohistochemistry is optional to suggest HPV vs Non HPV associated (c)*

2. Grade of tumor (by worst area)

Well differentiated (Grade 1)

Moderately differentiated (Grade 2)

Poorly differentiated (Grade 3)

Sarcomatoid areas present

3. Maximum tumour thickness…….mm

4.Associated PeIN(Penile intrepithelial neoplasia) Present ☐ Not identified ☐

5.Type of PeIN Undifferentiated☐ Differentiated ☐

6. Lymphovascular invasion Present ☐ Not identified ☐

7.Perineural invasion Present ☐ Not identified ☐

8. Compartment involved microscopically (tick all that apply)

Subepithelial invasion by tumour Yes☐ No☐

Invasion of corpus spongiosum Yes☐ No☐

Invasion of corpus cavernosum Yes☐ No☐

Urethral invasion Yes☐ No☐

Urethral margin (c) Involved ☐ Not involved ☐
Distance from margin……mm (when <5mm)

Corpus cavernosum Involved ☐ Not involved ☐
Distance from margin…… mm (when <5mm)

Skin cut margin Involved ☐ Not involved ☐
Distance from margin…….mm (when<5mm)

Deep margin in case of prepucial tumors ……. mm

9. PeIN at margin Yes ☐ No☐**10. Modified Inguinal lymph node dissection**

Right side inguinal nodes :

Involved ☐

Uninvolved ☐

-If involved

Total positive / Total number of nodes

- Perinodal invasion Seen ☐

Not seen ☐

Left side inguinal nodes:

Involved ☐

Uninvolved ☐

-If involved,

Total positive / Total number of nodes

- Perinodal invasion Seen ☐

Not seen ☐

Size of largest lymph node involved / Size of largest metastasis (c)

Final Impression and stage

Pathologic staging: pT … pN….

PROSTATE CANCER ON BIOPSY / TRANSURETHRAL PROSTATIC RESECTION (TURP)SPECIMENS

PATIENT DEMOGRAPHICS

Name : **Age:** **Sex:** **Case No:**

Pathology No: **Requisition No:**

NATURE OF SPECIMEN/PROCEDURE

Needle biopsy □

Transurethral Prostatic Resection (TURP)□

GROSS FEATURES:

Needle biopsy: Number of site specific labelled containers:

Number of cores in each labelled container:

Dimensions of biopsy specimen (core)---------- cm in length.

Transurethral Prostatic Resection (TURP): Weight in grams

MICROSCOPY

1. **Histologic subtypes (specify all subtypes present if tumour is mixed)**

Acinar adenocarcinoma □

Ductal adenocarcinoma □

Other, specify

2. Histologic Grade Group and Gleason Score

Grade group 1 (Gleason Score 3+3=6)□

Grade group 2 (Gleason Score 3+4=7)□

Grade group 3 (Gleason Score 4+3=7)□

Grade group 4 (Gleason Score 4+4=8; 3+5=8: 5+3=8)□

Grade group 5 (Gleason Score 4+5=9: 5+4=9 ; 5+5=10) □

- Percentage of Pattern 4 in Gleason Score 7(3+4)

3. Intraductal Carcinoma (IDC)

Present □

Cannot be determined□

4. Tumour Quantitation

For cores:

- Number of positive cores:

- Total number of cores:
- Estimated percentage of prostatic tissue involved by tumor in each core: ____%

For TURP Specimens

Estimated percentage of prostatic tissue involved by tumor: ____%

- *Number of positive chips: ____ (c)*
- *Total number of chips*: ____ (c)

5. Periprostatic Fat Invasion/Seminal Vesicle/Ejaculatory Duct Invasion (report only if identified in specimen)

- Not identified
- Present

6. Lymphovascular Invasion

- Not identified
- Present

7. Perineural Invasion

- Not identified
- Present

Ancillary Studies + Specify: IHC (c)

For basal markers p63 , HMWCK and AMACR

RADICAL CYSTOPROSTATECTOMY SPECIMENS

PATIENT DEMOGRAPHICS

Name: **Age:** **Sex:** **Case No:**

Pathology No: **Requisition No:**

NATURE OF SPECIMEN/PROCEDURE (POST CHEMOTHERAPY / TREATMENT NAIIVE)

Radical cystoprostatectomy □ T

MACROSCOPY

Size of specimen including size of seminal vesicle, prostate and vas (c)

Tumour location……

Number of tumours…….

Or no obvious tumour visible macroscopically □ (Post chemotherapy effect)

Other tissues/organs included……..

Invasion into perivesical tissue (as assessed macroscopically) i.e. pT3b:

Yes □ No □

Resection margins (Ureter/ Urethra) Not involved □ Involved□ Sampled in FS □

Regional lymph nodes present: (Obturator, iliac)

Right

Left

Common Iliac

MICROSCOPY

1. Histological subtype

   Urothelial carcinoma □

   Squamous carcinoma □

   Adenocarcinoma □

   Small cell carcinoma □

   Other, Specify Variants of urothelial carcinoma viz. micropapillary, plasmacytoid etc need to reported in %

2. Grade of tumour

   Low grade □

   High grade □

3. Lamina propria invasion

   Present □

   Absent □

4. Detrusor muscle invasion

   Present □

   Absent □

5. Perivesical spread

   Present □

   Absent □

6. Peritoneal involvement

   Present □

   Absent □

7. Urothelial carcinoma in situ

   Present □

   Absent □

8. Lymphovascular space invasion

Present □

Absent □

9. Cut margins Ureter (Right and left) and Urethra---Involved / Uninvolved by tumor /CIS

10.Lymph nodes status (Obturator, iliac)

Total number of lymph nodes examined ……..

Number of positive lymph nodes……

Size of largest focus …….. mm (c)

Extranodal extension Not identified □ Present □

11. Status of other organs removed

Prostate Involvement Present□ Absent□

(If incidental adenocarcinoma prostate seen, report it as in radical prostatectomy)

Seminal Vesicle involvement Present□ Absent □

IMPRESSION

Histologic type

pTNM classification: pT…… pN……..pM (c)………

PROSTATE CANCER ON RADICAL PROSTATECTOMY SPECIMENS

PATIENT DEMOGRAPHICS

Name : **Age :** **Sex :** **Case No :**

Pathology No: **Requisition No:**

Nature of specimen/procedure

Radical prostatectomy ☐

Gross features :

- *Weight: ___ g (c)*
- Size (centimeters): ___ x ___ x ___ cm
- Size of seminal vesicles and vas deferens

Microscopy

1.Histologic subtypes (specify all subtypes present if tumour is mixed)
Acinar adenocarcinoma ☐

Ductal adenocarcinoma ☐

Other, specify

2. Histologic Grade Group and Gleason Score

Primary Gleason Pattern

- Pattern 1 ☐
- Pattern 2 ☐
- Pattern 3 ☐
- Pattern 4 ☐
- Pattern 5 ☐

Secondary Gleason Pattern

- Pattern 1 ☐
- Pattern 2 ☐
- Pattern 3 ☐
- Pattern 4 ☐
- Pattern 5 ☐

Tertiary Gleason Pattern (Minor grade component)

- Pattern 3 ☐
- Pattern 4 ☐
- Pattern 5 ☐
- Not applicable ☐

Total Gleason Score _____

Grade Group

- Grade group 1 □
- Grade group 2 □
- Grade group 3 □
- Grade group 4 □
- Grade group 5 □

3.Percentage of Gleason Patterns 4 and 5 (applicable to Gleason score > or = 7) (c)

Percentage of pattern 4: ____%

Percentage of pattern 5: ____%

NOT REQUIRED 4. Tumour Quantitation

Estimated approx. percentage of prostate involved by tumor: ____%

5. **Extra prostatic Extension (EPE)**
   - Not identified □
   - Present, focal □
   - Present, nonfocal □

   Location of Extraprostatic Extension - Lateral, Apex, Base

6. **Urinary Bladder Neck Invasion**
   - Not identified □
   - Present □

7. **Seminal Vesicle Invasion**
   - Not identified □
   - Present □

8. **Margins**
   Cannot be assessed□
   Uninvolved by invasive carcinoma □
   Involved by invasive carcinoma□
   - Limited (<3 mm)□
   - Non-limited (≥3 mm)□

Linear length of positive margin(s) (millimeters): _____ mm (c)
Focality (unifocal / multifocal): Gleason score at positive margin:Margin Positivity in Area of Extraprostatic Extension (EPE) (c)

9. **Lymphovascular Invasion**
   - Not identified □
   - Present □

10. Perineural Invasion

- Not identified □
- Present □

11. Regional Lymph Nodes

Site / station of lymph node _____

Number of lymph nodes examined ____

Number of lymph nodes Involved: _____

Size of largest metastatic deposit (centimetres): ___ cm (c)

Size of largest lymph lode Involved (centimetres): ___ cm (c)

Extranodal extension

- Not identified □
- Present □
- Cannot be determined□

12. Path staging pT pN (AJCC 8th edition)

13. Ancillary Studies + Specify: _____ (c)

RENAL CANCER ON RADICAL NEPHRECTOMY SPECIMENS

PATIENT DEMOGRAPHICS

Name: **Age :** **Sex :** **Case No :**

Pathology No: **Requisition No:**

Nature of specimen/procedure

Specimen laterality

Left ☐ Right ☐

Operative procedure

Radical nephrectomy ☐ Nephron sparing surgery ☐

Macroscopy

Specimen size ___ x ___x ___

Tumour focality

Unifocal ☐ Multifocal ☐ (Specify number of tumours ……)

Maximum tumour dimension ……

Gross Necrosis Absent ☐ Present ☐

Perinephric extension Absent ☐ Present ☐

Gerota's fascia involvement Absent☐ Present ☐

Pelvicalyceal system involvement Absent ☐ Present ☐

Renal sinus involvement Absent ☐ Present ☐

Renal vein thrombus Absent ☐ Present ☐

Adrenal gland if seen, involvement Absent ☐ Present ☐

Hilar Lymph node involvement Absent ☐ Present ☐

IVC thrombus Absent ☐ Present ☐

MICROSCOPY

1.Histological tumour type:

Clear cell renal cell carcinoma ☐

Papillary renal cell carcinoma ☐

Type 1 ☐ Type 2 ☐

Oncocytoma ☐

Chromophobe renal cell carcinoma ☐

Collecting duct carcinoma ☐

Other ☐ (specify) as per *WHO Classification of Tumours of the Urinary System and Male Genital Organs, Fourth edition (2016) classification of renal cell tumours and the **ISUP Vancouver classification of renal neoplasia

2. WHO/ISUP tumour grade

G1 ☐ G2 ☐ G3 ☐ G4 ☐

3. **Sarcomatoid morphology**

Not identified ☐ Present ☐ (if present % area)

4. **Rhabdoid morphology**

Not identified ☐ Present ☐

5. **Tumour necrosis**

Not identified ☐ Present ☐ (if present %)

6. Microscopic extent of invasion

a) Perinephric fat invasion

Not identified ☐ Present ☐

b) Invasion beyond Gerota's fascia

Not identified ☐ Present ☐

c) Renal sinus invasion

Not identified ☐ Present ☐

d)Tumour present in major veins microscopically

Not identified ☐ Present ☐

e) Lymphovascular invasion

Not identified ☐ Present ☐

f) Tumour in the pelvicalyceal system

Not identified ☐ Present ☐

g) Tumour in adrenal gland (if present)

Not involved ☐ Present, contiguous extension ☐ Present, metastasis ☐

7)Lymph nodes status

Total number of lymph nodes examined ……..

Number of positive lymph nodes…….

Size of largest focus …….. mm (c)

Extra nodal extension Not identified ☐ Present ☐

8. **Resection margins**

Renal vein cut margin ☐

Renal artery cut margin ☐

Ureteric cut margin ☐

Parenchymal cut margin (in case of nephron sparing surgery) ☐

9.Co-existing pathology in non-neoplastic kidney

IMPRESSION

Histologic type

Tumour stage : pT….. pN….. pM….. (M1 only, if applicable)

*World Health Organization WHO

**International Society of Urological Pathology ISUP

TRANSURETHRAL RESECTION OF URINARY BLADDER/ URETERIC RESECTIONS SPECIMENS

Patient demographics
Name :
Age:
Sex:
Case No:
Pathology No:
Requisition No:

Procedure – TURBT/TUR biopsy/ Transurethral resection of ureteric tumour

Site of the specimen
Ureter ☐
Bladder ☐

Gross Macroscopy
Single tissue bit ☐
Multiple Tissue bits aggregating to ___x___x___ cm ☐

Tissue submitted
Entirely ☐
Partly ☐

Microscopy

1. Histological subtype
   - Urothelial carcinoma ☐
   - Squamous carcinoma ☐
   - Adenocarcinoma ☐
   - Small cell carcinoma ☐
   - Variant of Urothelial carcinoma viz. micropapillary, plasmacytoid etc needs to reported in %
   - Other, specify
2. Grade of tumour
   - PUNLMP ☐
   - Low grade ☐
   - High grade ☐
3. Lamina propria invasion
   - Present ☐
   - Absent ☐
4. Detrusor muscle/Muscularis propria
   - Included ☐
   - Not included ☐
   - Indeterminate ☐

5. If Muscle included, then invasion
   Present □
   Absent □
6. Report Urothelial carcinoma in situ, if present
7. Report lymphovascular space invasion, if present

Impression
Grade and type of tumor

T stage (AJCC 8th edition) =pT……..