UCCH Universitäres Cancer Center Hamburg
UCCSH Universitäres Cancer Center Schleswig-Holstein

UCCH / UCCSH Pathway

Guideline
Germ Cell Cancer

Version Jun/2023

Pathway: Germ Cell Cancer

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Version 04, June/2023

according to TNM classification 8th edition (UICC)

Germ cell cancer board members

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Update	Mar/2018, May/2020, June/2023
Next planned review	May/2025

Legend of Colours

= Therapeutic procedure

= Clinical or diagnostical condition

= Diagnostic procedure

= Clinical trial

= Supportive measure

= Referral

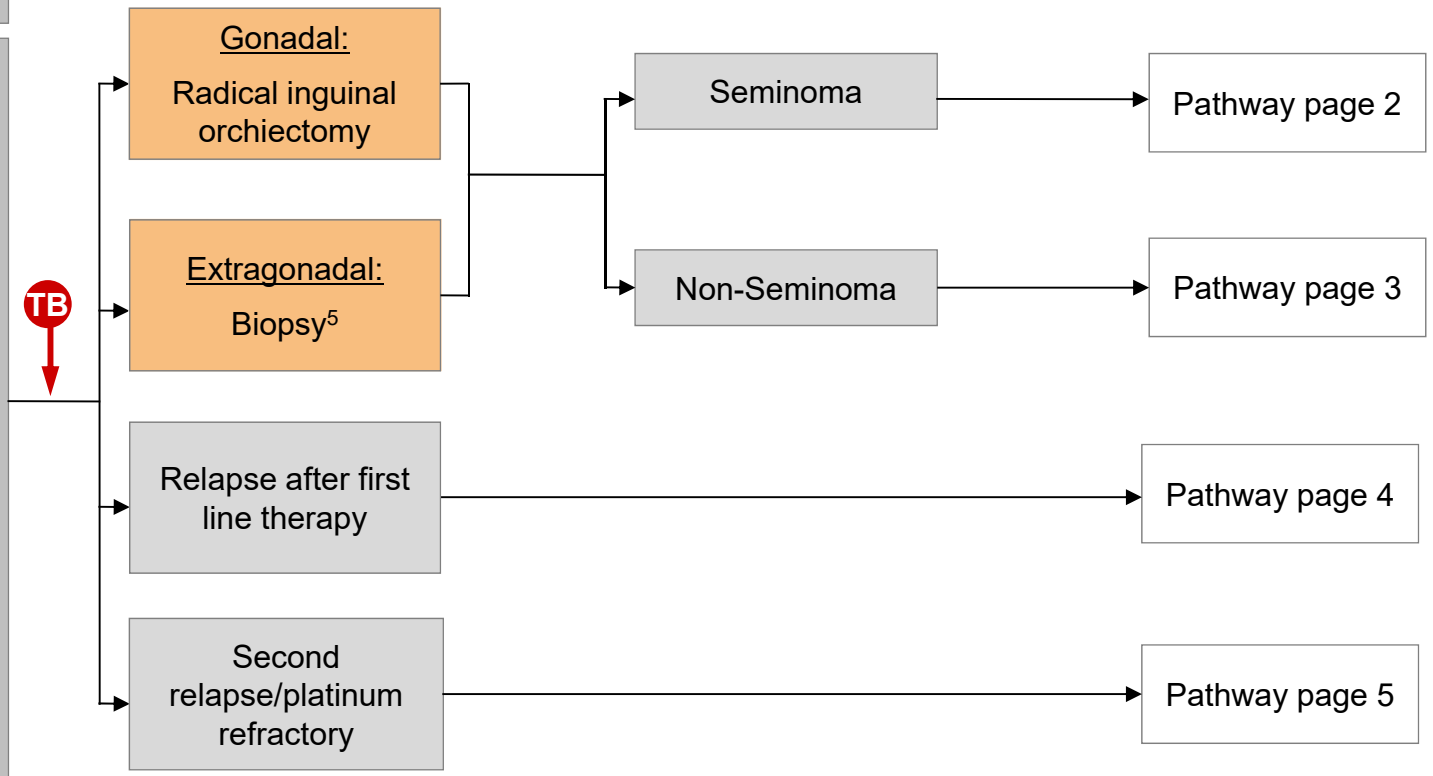
= Tumorboard (including post tumorboard interaction with patient that follows the principles of shared decision-making)

Pathway: Germ Cell Cancer

Version Jun/2023
2.03.01 Anlage 13 UCCH*
ID: 524183 UCCSH*

Workup

- Baseline:
  - History and physical exam
  - Lab exam (including AFP, ß-HCG and LDH)[1]
  - Testicular ultrasound (> 7.5 MHz probe)
  - CT thorax, abdomen, pelvis
  - Detailed histopathological report
  - Post-orchiectomy staging and risk assessment according to AJCC/UICC and IGCCCG classification[2]
  - Offer sperm cryopreservation prior any treatment
- Variable:
  - MRI brain[3]
  - Bone scan
  - Consider biopsy of contralateral testis[4]
- Supportive:
  - Offer contact to psychooncology



GGCC Gonadal germ cell cancer, EGCC Extragonadal germ cell cancer

[1] Serum levels have to be determined before and after orchiectomy and are retested before the start of each new chemotherapy cycle

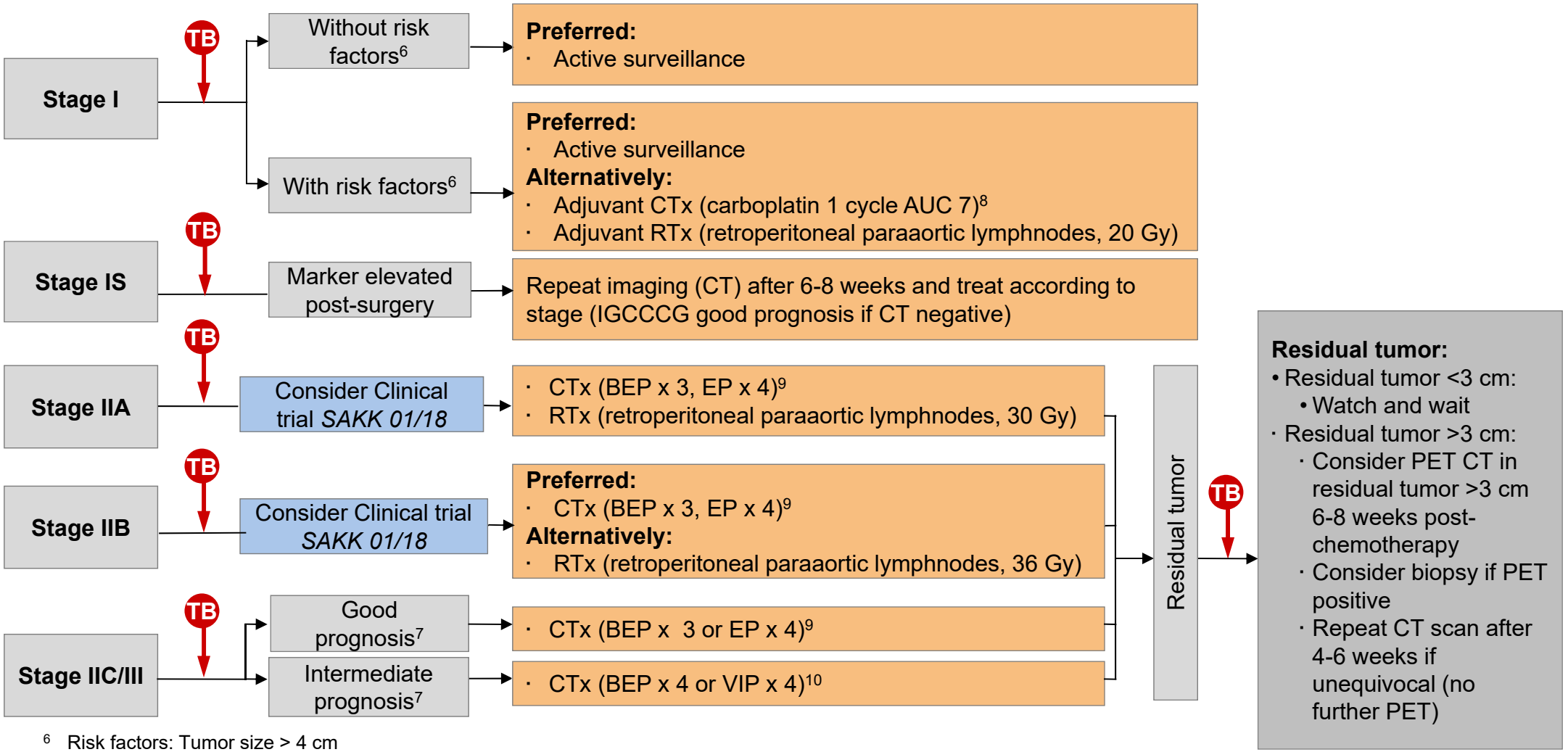
[2] IGCCCG classification: International Germ Cell Cancer Collaborative Group. International germ cell consensus classification: a prognostic factor based staging system for metastatic germ cell cancers. J. Clin. Oncol. 1997; 15: 594-603

[3] In patients with visceral metastasis and/or neurological symptoms, in poor prognosis patients (IGCCCG) or very high β-HCG values

[4] IGCCCG: Especially in cryptorcid testis, testicular volume <12 ml, age < 30years; EGCC: Routine bilateral testicular biopsy is not recommended.

[5] Biopsy of extragonadal tumor is mandatory unless the patient is very sick or requires immediate chemotherapy and has unequivocally high tumor markers

Pathway page 2: Seminoma



6 Risk factors: Tumor size > 4 cm

7 According to IGCCCG

8 Dosage calculation: Calvert's formula:(GFR+25) x AUC. Calculate GFR according to Cockroft-Gault formula. Absolute carboplatin dose is not capped.

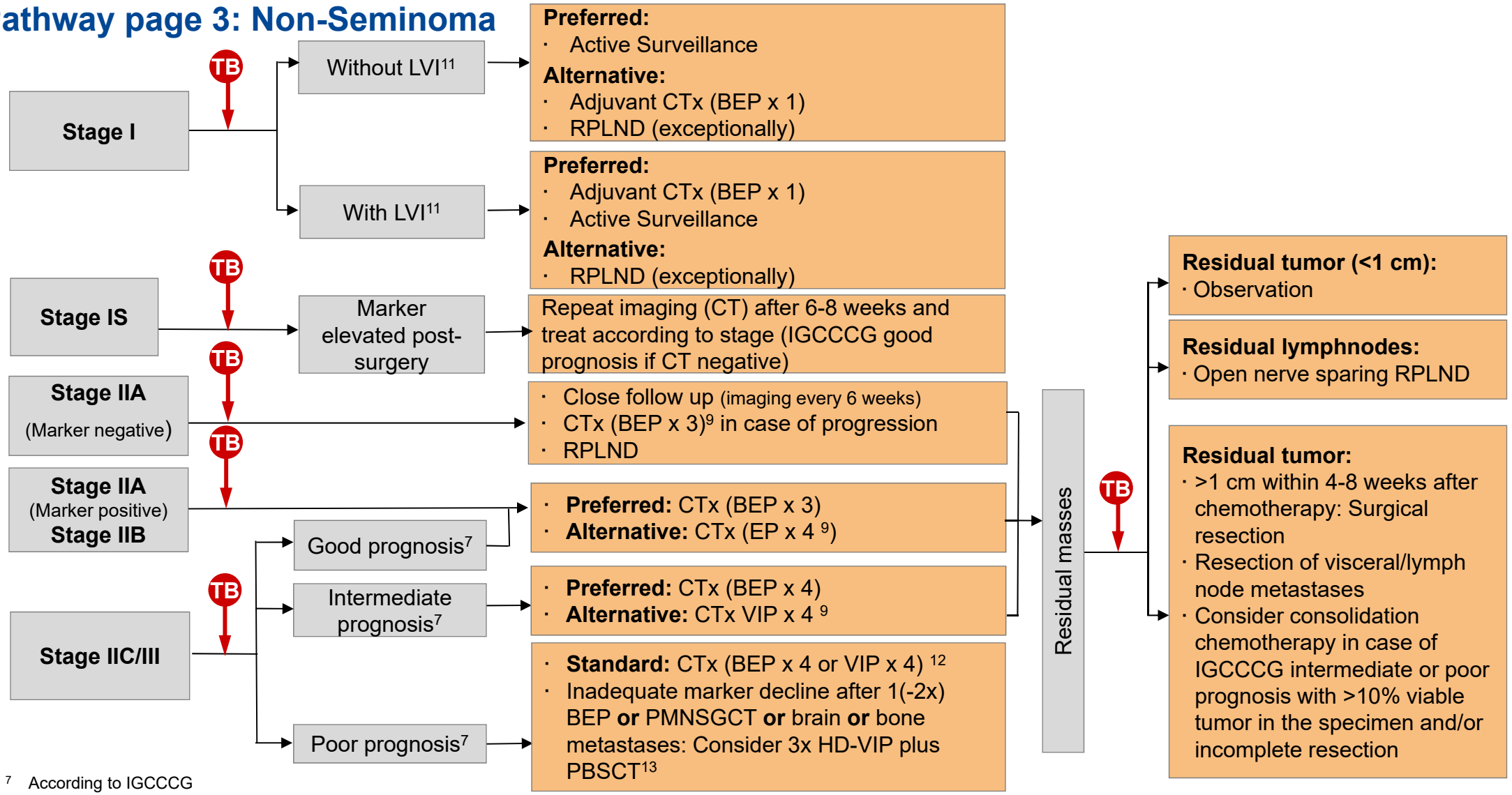
9 BEP represents the standard therapy. If there are contraindications against bleomycin (e.g. reduction of lung capacity) four cycles of EP are used

10 BEP represents the standard therapy. If there are contraindications against bleomycin (e.g. reduction of lung capacity) four cycles of VIP + GCSF are used

CTx chemotherapy; RTx radiotherapy

Pathway: Germ Cell Cancer

Pathway page 3: Non-Seminoma



[7] According to IGCCCG

[9] BEP represents the standard therapy. If there are contraindications against bleomycin (e.g. reduction of lung capacity) four cycles of EP are used

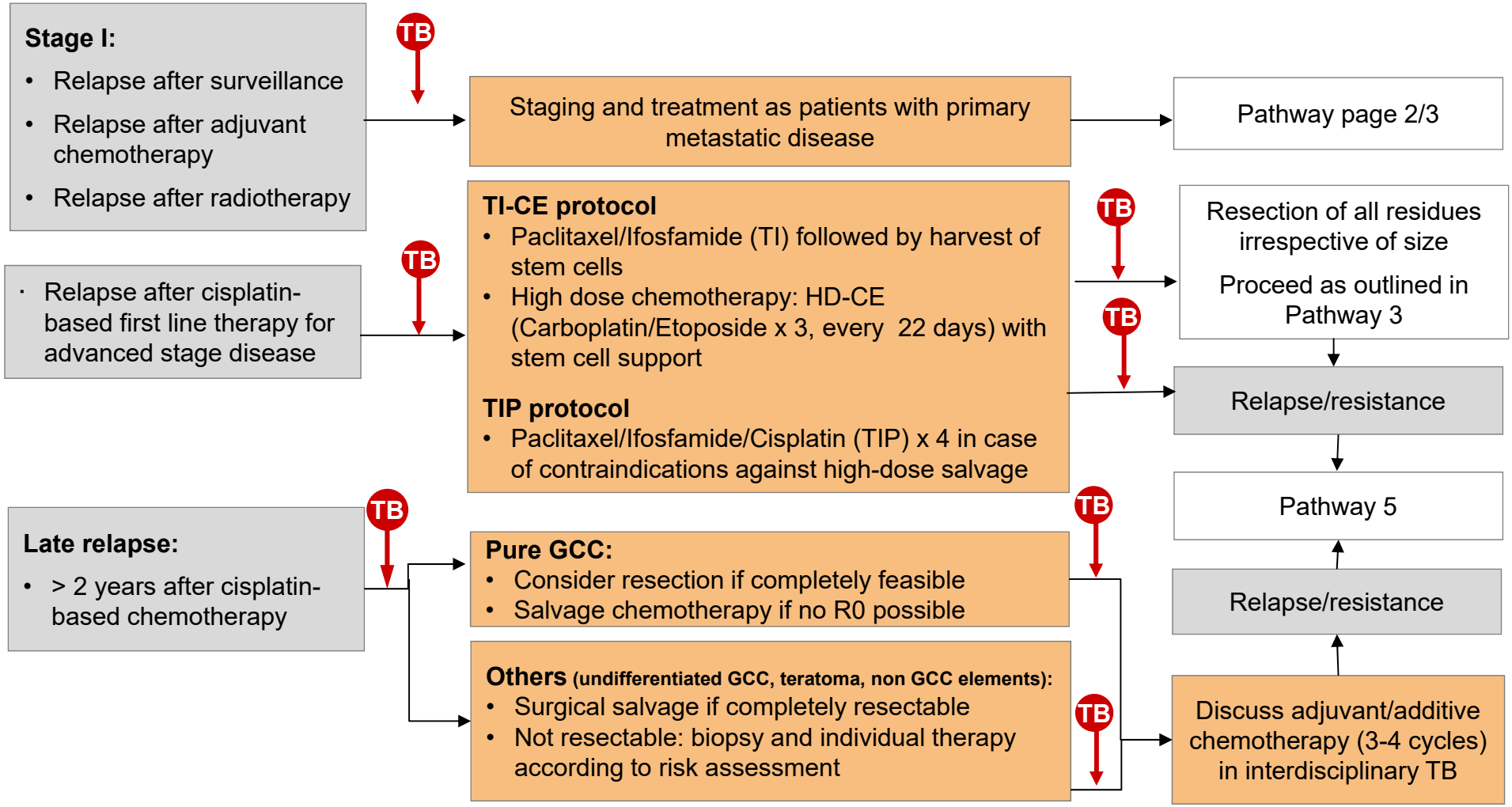
[11] LVI: Lympho-vascular invasion

[12] If contraindications against bleomycin or awaited major thoracic surgery, use ifosfamide instead (4x VIP)

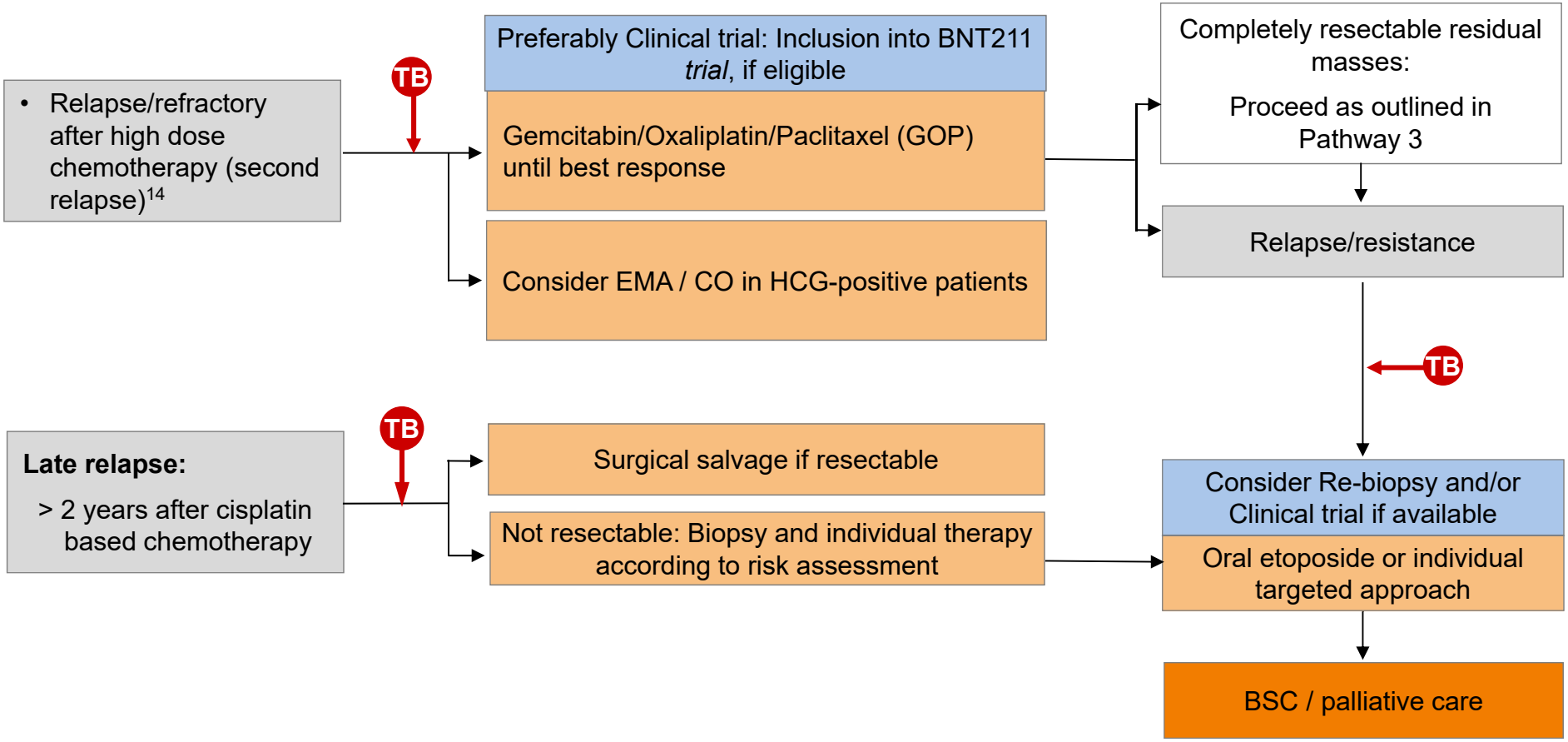
[13] In patients with either primary mediastinal non-seminoma (PMNSGCT) or CNS metastases (any metastatic site): 1x VIP plus stem cell harvest followed by 3x HD-VIP regardless of marker decline.as preferred approach

CTx chemotherapy; RTx radiotherapy; LVI lymphovascular invasion; RPLND retroperitoneal lymph node dissection

Pathway page 4: Relapse after stage 1/ after first line chemotherapy



Pathway page 5: Salvage therapy after second relapse/ platinum refractory disease



[14]If relapse occurs after two conventional dosed cisplatin based regimens (i.e. after BEP and TIP) chemotherapy (HD-CE) is preferred

BSC best supportive care

Page 6: Post-treatment surveillance for patients without local retroperitoneal therapy[15]

Year	1	2	3	4	5	After year 6
Clinical examination, tumor markers	Every 3 months	Every 3 months	Every 6 months	Every 6 months	Every 6 months	Once per year
Abdominal ultrasound	(3. + 9. month)	(15. + 18. month)	(30. month)	(42. + 48. month)	-	-
Chest x-ray[16]	(6. + 12. month)	(24. month)	(36. month)	(48. month)	(60. month)	-
CT / MRI abdomen	6. + 12. month	24. Month	36. month	-	60. month	-

[15] Seminoma/ non-seminoma stage I after adjuvant chemotherapy, or advanced seminoma/ non-seminoma in complete remission after chemotherapy; (only apply in poor prognosis patients or no complete remission)

[16] Seminoma/non-seminoma stage III with thoracic metastatic spread apply CT scan of the thorax at months 6, 12, 24, 36 and 60

Page 7: Seminoma stage I[17]

Year	1	2	3	4	5	After year 6
Clinical examination	Every 6 months	Every 6 months	Every 6 months	Every 12 months	Every 12 months	Once per year
Abdominal ultrasound	-	-	30. month	48. month	60. month	-
Chest x-ray	-	-	-	-	-	-
CT / MRI abdomen	6. + 12. month	18. + 24. month	36. month	-	60. month	-

[17]Applies to all seminomas stage I, e.g. with (Carboplatin mono or radiotherapy) or without adjuvant therapy (active surveillance)

Page 8: Non-Seminoma stage I: Active surveillance[18]

Year	1	2	3	4	5	After year 6
Clinical examination, tumor markers	Every 3 months	Every 3 months	Every 6 months	Every 6 months	Every 6 months	Once per year
Abdominal ultrasound	0	24. month	36. month	48. Month	60. month	-
Chest x-ray	Every 6 months	Every 6 months	36. month if LVI+	-	60. Month if LVI+	-
CT / MRI abdomen	4. + 12. month	24. month if LVI+	36. month if LVI+	-	60. month if LVI+	-

[18] Non-seminoma without histological evidence of lympho-vascular invasion (LVI) = low risk; with LVI = high