Oncology Clinical Pathways
Lung Cancer

January 2024 – V1.2024

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Lung Cancer – Presumptive Conditions

VA automatically presumes that certain disabilities were caused by military service. This is because of the unique circumstances of a specific Veteran's military service. If a presumed condition is diagnosed in a Veteran within a certain group, they can be awarded disability compensation.

Vietnam Veterans – Agent Orange Exposure or Specified Locations

- Respiratory cancers

Atomic Veterans Exposed to Ionizing Radiation

- Lung cancer
- Bronchioloalveolar carcinoma

Gulf War and Post 9/11 Veterans

If the patient served any amount of time in Afghanistan, Djibouti, Syria, or Uzbekistan during the Persian Gulf War, from Sept. 19, 2001, to the present or the Southwest Asia theater of operations from Aug. 2, 1990, to the present, specific conditions include:

- Adenosquamous carcinoma of the lung
- Large cell carcinoma of the lung
- Salivary gland-type tumors of the lung
- Sarcomatoid carcinoma of the lung
- Typical and atypical carcinoid of the lung

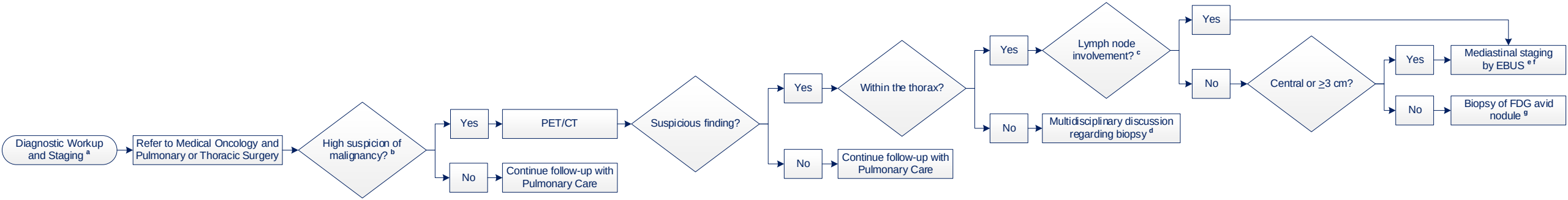
If the patient served on or after Sept. 11, 2001, in Afghanistan, Djibouti, Egypt, Jordan, Lebanon, Syria, Uzbekistan, or Yemen or if the patient served in the *Southwest Asia theater of operations, or Somalia, on or after Aug. 2, 1990, specific conditions include:

- Respiratory cancer of any type

* The Southwest Asia theater of operations refers to Iraq, Kuwait, Saudi Arabia, the neutral zone between Iraq and Saudi Arabia, Bahrain, Qatar, the United Arab Emirates, Oman, the Gulf of Aden, the Gulf of Oman, the Persian Gulf, the Arabian Sea, the Red Sea, and the airspace above these locations.

For more information, please visit U.S. Department of Veterans Affairs - Presumptive Disability Benefits (va.gov)

Lung Cancer – Diagnostic Workup and Staging



Clinical trial(s) always considered on pathway.

[a] **Diagnostic Workup and Staging** for pulmonary nodule evaluation, nodule with a high probability of cancer, nodule already diagnosed with lung cancer, or abnormal thoracic findings with concerns of cancer

[b] **High Suspicion of Malignancy** includes but is not limited to growth, radiographic properties, or large size

[c] **Lymph Node Involvement** includes any thoracic lymph node pathologic enlargement or FDG avidity

[d] **Molecular Testing** adequacy of tumor tissue should be considered in selection of the biopsy site and the amount of tissue; pursue the least invasive/risk biopsy when appropriate

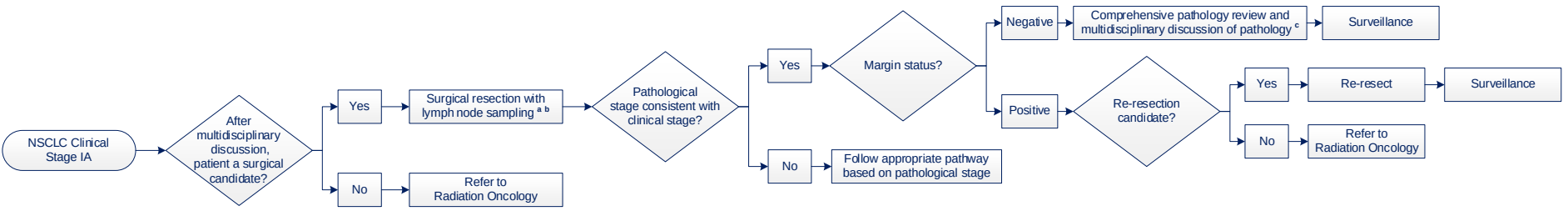
[e] **Mediastinal Staging** includes EBUS examination of all paratracheal and hilar stations with sampling of any nodes > 0.5 cm; EUS or mediastinoscopy may be an alternative staging modality based upon the location of the concerning lymph node(s)

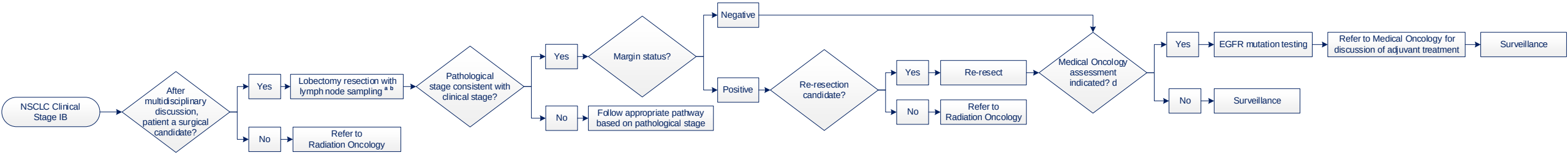
[f] **Imaging** brain MRIs are indicated for Stage II and above

[g] **FDG Avid Nodules** can be evaluated by percutaneous biopsy, surgical biopsy, or navigational bronchoscopy; multidisciplinary discussion can assist in the care plan

EBUS Endobronchial Ultrasound
EUS Endoscopic Ultrasound
FDG Fluorodeoxyglucose

Lung Cancer – NSCLC Clinical Stage IA and IB





Clinical trial(s) always considered on pathway.

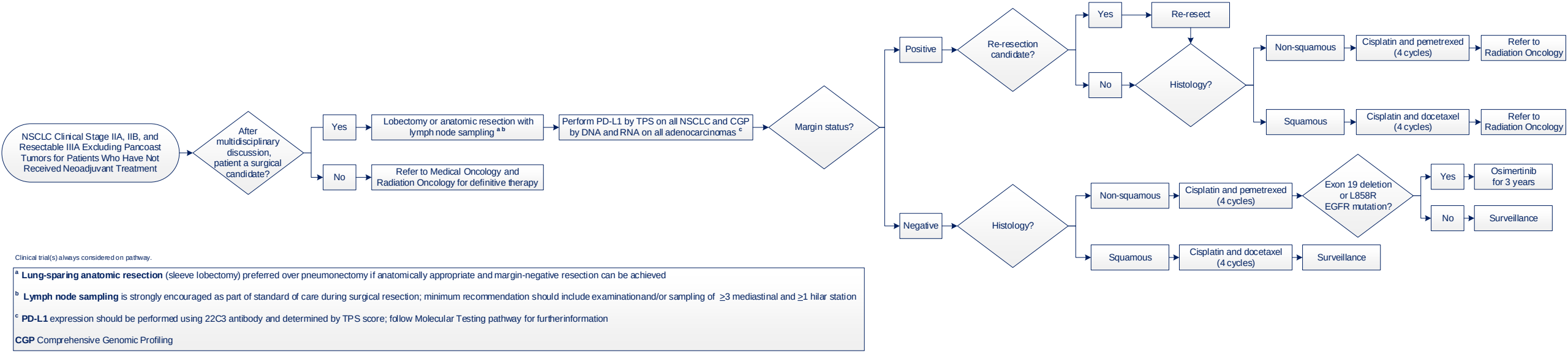
[a] **Surgical Resection** includes lobectomy as preferred resection but sublobar can be considered as clinically indicated; consider sublobar resection for <2cm, peripheral, confirmed negative 10, 4, 7 nodes

[b] **Lymph node sampling** is strongly encouraged as part of standard of care during surgical resection; minimum recommendation should include examination and/or sampling of ≥3 mediastinal and ≥1 hilar station

[c] **Comprehensive Pathology Review for High Risk Features** includes poorly differentiated tumors, vascular invasion, wedge resection, visceral pleural involvement, or lymph known status unknown; if ≥1 of these features are present, consider assessment by Medical Oncology

[d] **Indications for Medical Oncology Assessment** include presence of high risk pathological features that might suggest the role of adjuvant chemotherapy or EGFR mutantationthat might suggest the role of adjuvant osimertinib

Lung Cancer – NSCLC Clinical Stage IIA, IIB, and Resectable IIIA Excluding Pancoast Tumors for Patients Who Have Not Received Neoadjuvant Treatment



Clinical trial(s) always considered on pathway.

[a] **Lung-sparing anatomic resection** (sleeve lobectomy) preferred over pneumonectomy if anatomically appropriate and margin-negative resection can be achieved

[b] **Lymph node sampling** is strongly encouraged as part of standard of care during surgical resection; minimum recommendation should include examination and/or sampling of ≥3 mediastinal and ≥1 hilar station

[c] **PD-L1** expression should be performed using 22C3 antibody and determined by TPS score; follow Molecular Testing pathway for further information

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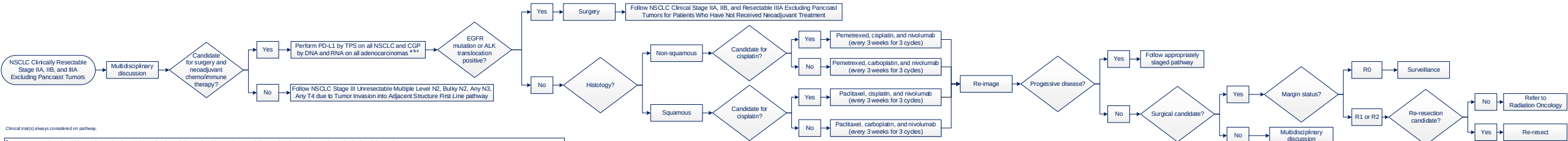
Lung Cancer – NSCLC Clinically Resectable Stage IIA, IIB, and IIIA Excluding Pancoast Tumors



Clinical trial(s) always considered on pathway.

[a] **PD-L1** expression should be performed using 22C3 antibody and determined by TPS score; follow Molecular Testing pathway for further information

[b] **PD-L1** subgroup analysis did not show statistical improvement in event free survival for patients PD-L1 <1%; greatest benefit for neoadjuvant chemotherapy with immunotherapy was noted in Stage III patients

[c] **CGP** is indicated because patients with known EGFR mutations or ALK translocations were excluded from CheckMate 816 study establishing the role of neoadjuvant chemotherapy with immunotherapy

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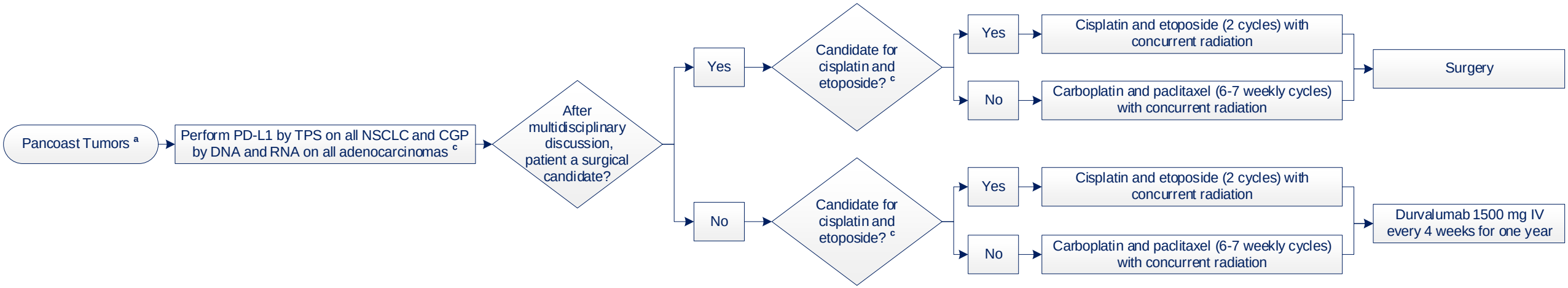
Lung Cancer – Pancoast Tumors



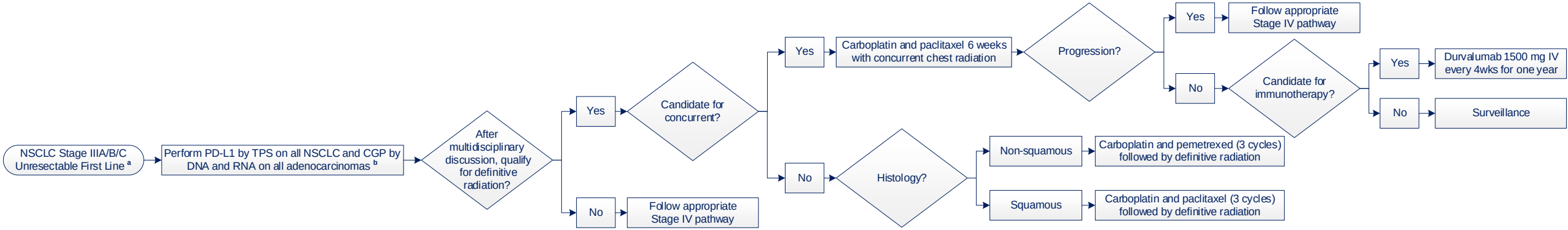
Clinical trial(s) always considered on pathway.

[a] **Pancoast Tumors** clinical diagnosis that includes any of these stages: T3N0, T4N0, and T4N1 are generally considered resectable and T4N2 is considered unresectable

[b] **PD-L1** expression should be performed using 22C3 antibody and determined by TPS score; follow Molecular Testing pathway for further information

[c] **Candidate for cisplatin and etoposide** contraindications include abnormal renal function, ECOG 2, or abnormal heart function

Lung Cancer – NSCLC Stage IIIA/B/C Unresectable First Line



Clinical trial(s) always considered on pathway.

[a] **NSCLC Stage IIIA/B/C Unresectable** includes multiple level N2, bulky N2, any N3, any T4 due to tumor invasion into adjacent structure or poor surgical candidates due to prohibitive risk

[b] **PD-L1** expression should be performed using 22C3 antibody and determined by TPS score; follow Molecular Testing pathway for furtherinformation; CGP is indicated because the role of consolidation durvalumab is unclear in EGFR mutant or ALK translocation positive patients

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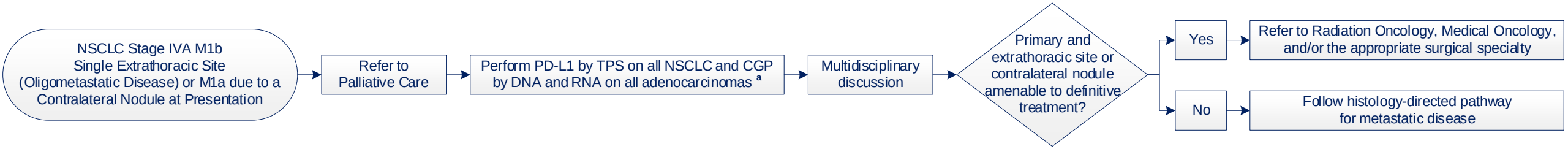
Lung Cancer – NSCLC Stage IVA M1b Single Extrathoracic Site or M1a Due To A Contralateral Nodule at Presentation



Clinical trial(s) always considered on pathway.

[a] **PD-L1** expression should be performed using 22C3 antibody and determined by TPS score; follow Molecular Testing pathway for further information

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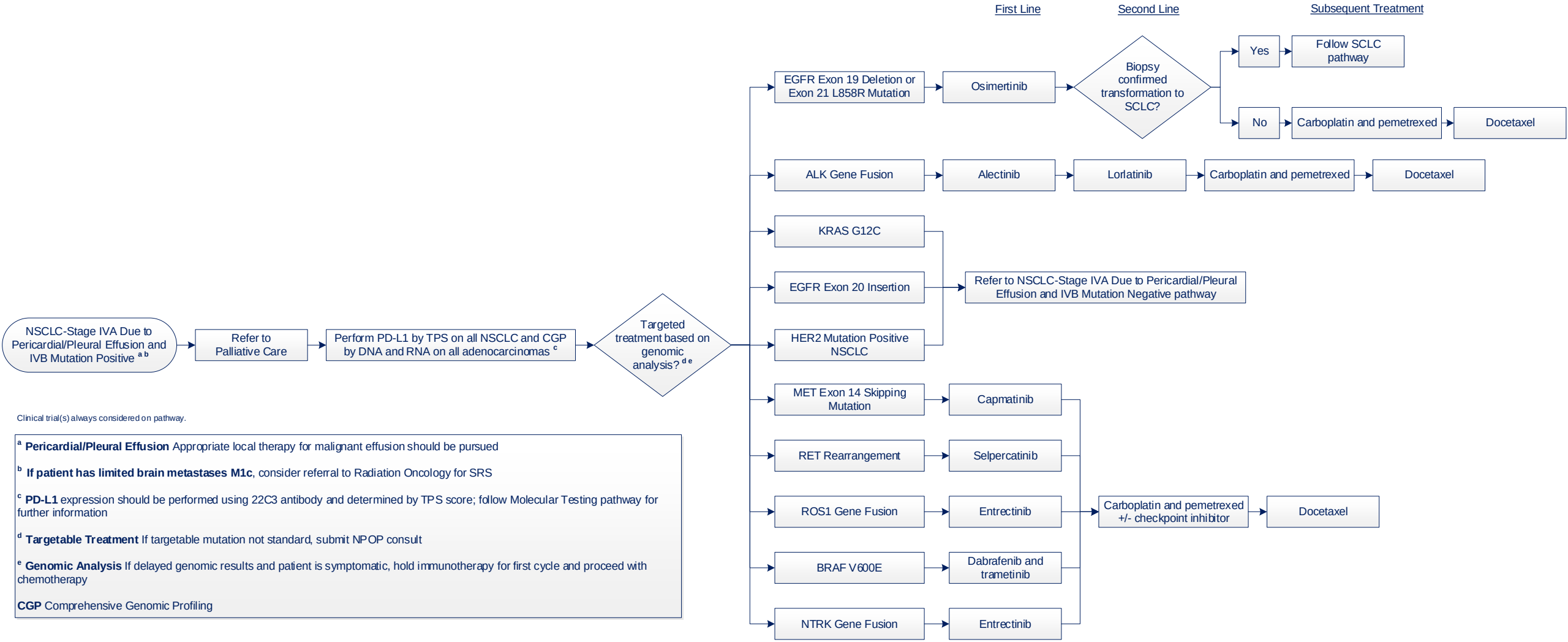
Lung Cancer – NSCLC Stage IVA Due to Pericardial/Pleural Effusion and IVB Mutation Positive



Clinical trial(s) always considered on pathway.

[a] **Pericardial/Pleural Effusion** Appropriate local therapy for malignant effusion should be pursued

[b] **If patient has limited brain metastases M1c**, consider referral to Radiation Oncology for SRS

[c] **PD-L1** expression should be performed using 22C3 antibody and determined by TPS score; follow Molecular Testing pathway for further information

[d] **Targetable Treatment** If targetable mutation not standard, submit NPOP consult

[e] **Genomic Analysis** If delayed genomic results and patient is symptomatic, hold immunotherapy for first cycle and proceed with chemotherapy

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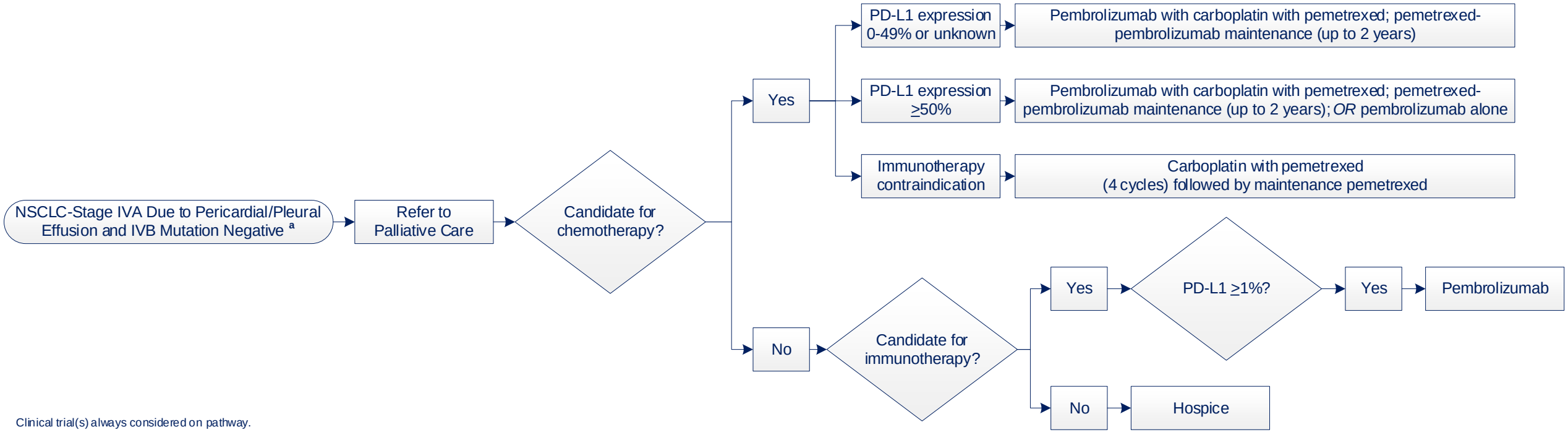
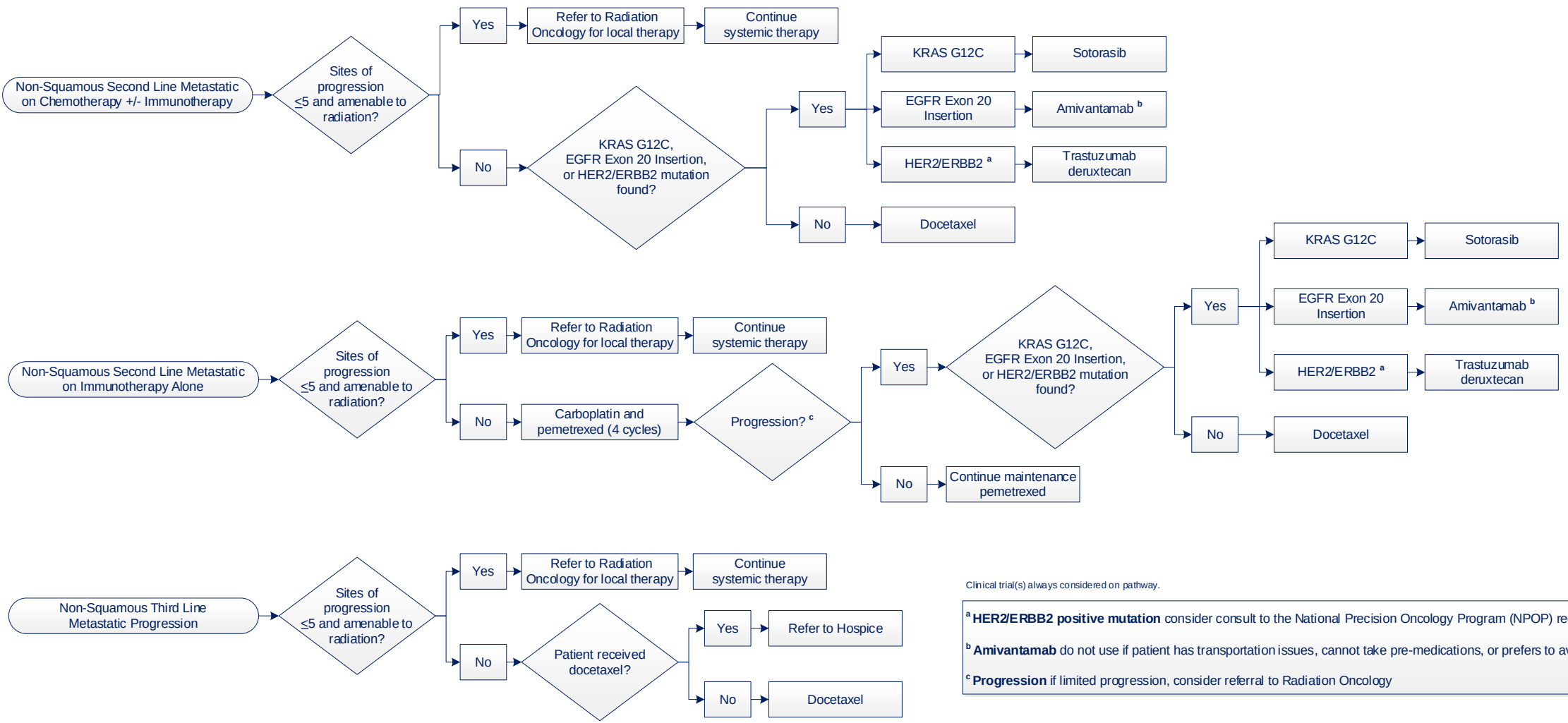
Lung Cancer – NSCLC Stage IVA Due to Pericardial/Pleural Effusion and IVB Mutation Negative



Clinical trial(s) always considered on pathway.

[a] **Pericardial/Pleural Effusion** appropriate local therapy for malignant effusion should be pursued; pathway also applicable for first line treatment of KRAS G12C, EGFR Exon 20 insertion, and HER2 mutation positive NSCLC

Lung Cancer – Non-Squamous Second and Third Lines Metastatic



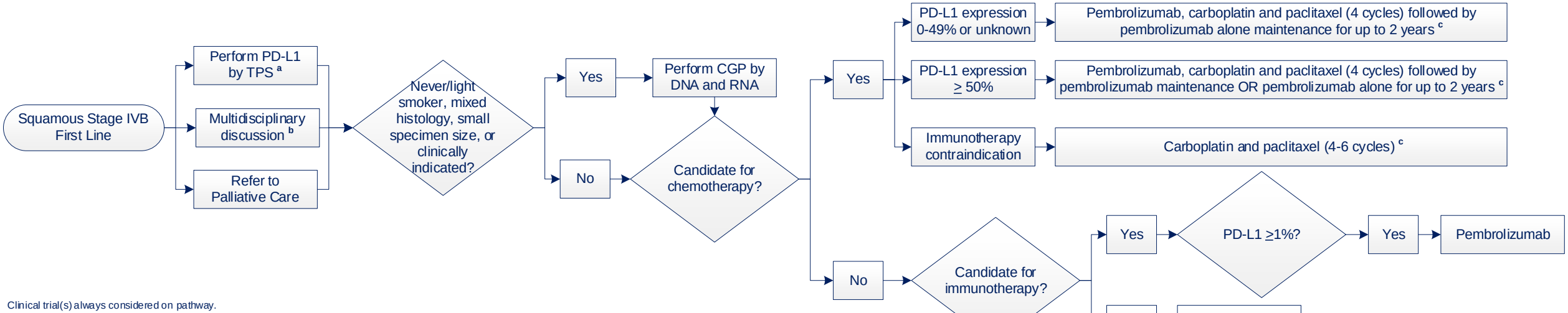
Clinical trial(s) always considered on pathway.

[a] **HER2/ERBB2 positive mutation** consider consult to the National Precision Oncology Program (NPOP) regarding treatment

[b] **Amivantamab** do not use if patient has transportation issues, cannot take pre-medications, or prefers to avoid prolonged exposure in facility

[c] **Progression** if limited progression, consider referral to Radiation Oncology

Lung Cancer – Squamous Stage IVB First Line



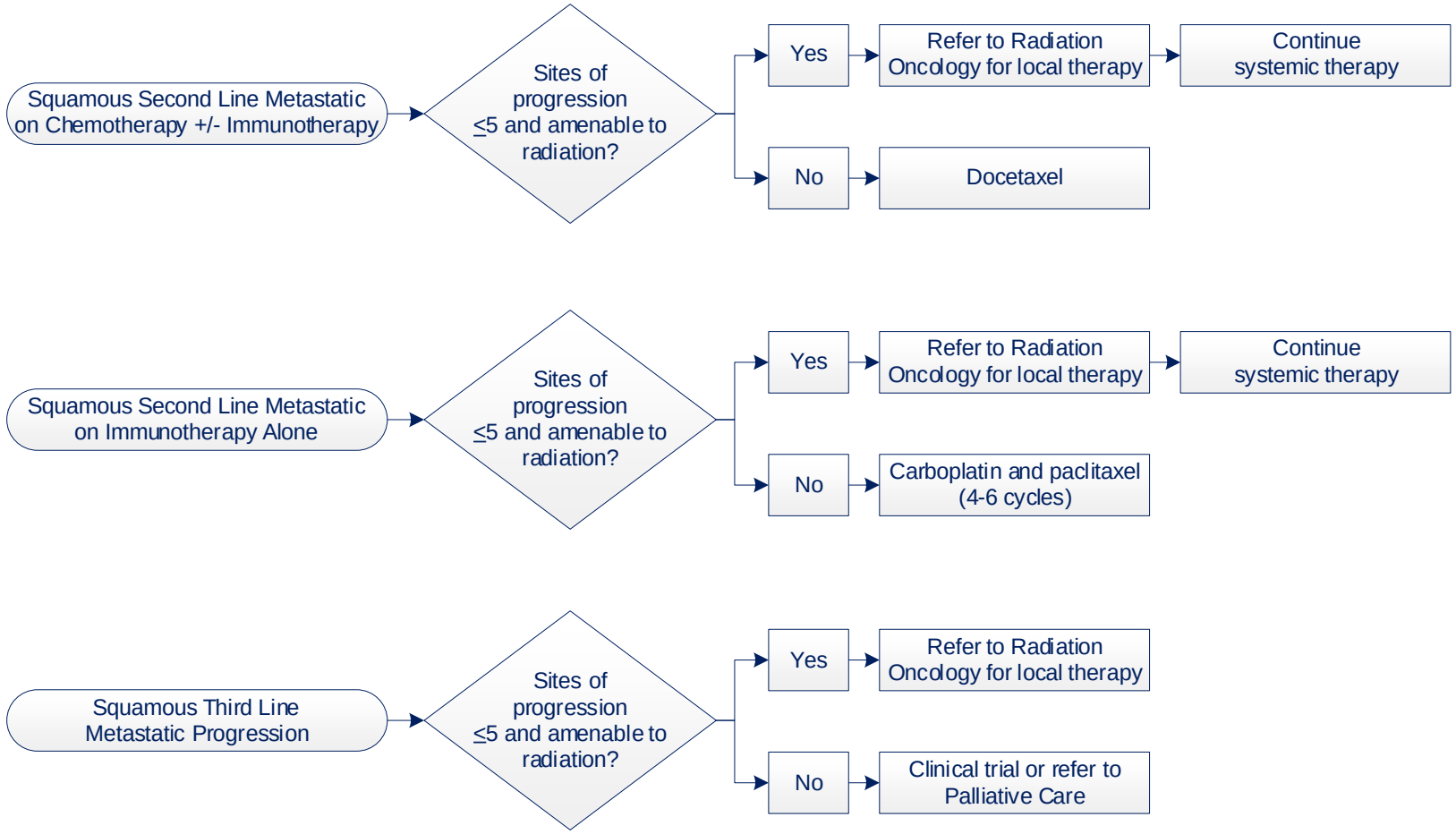
Clinical trial(s) always considered on pathway.

[a] **PD-L1** expression should be performed using 22C3 antibody and determined by TPS score; follow Molecular Testing pathway for further information

[b] **If patient is symptomatic** refer to Radiation Oncology

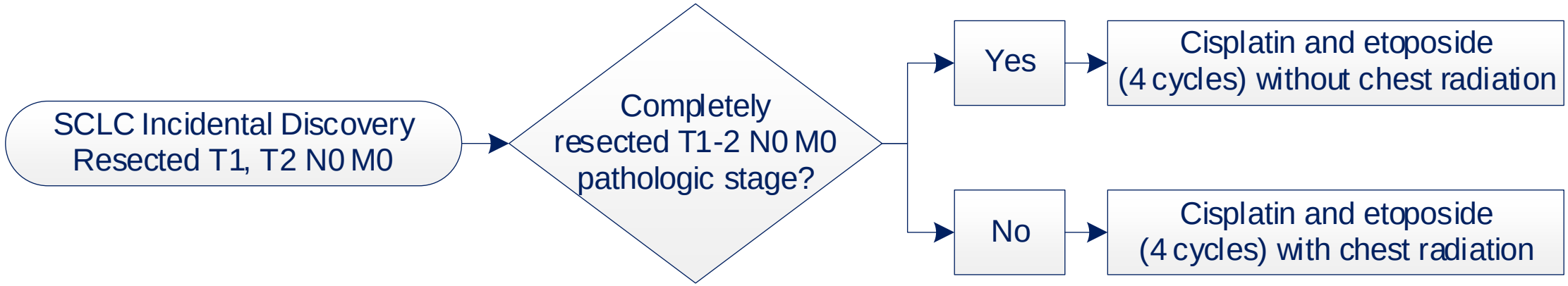
[c] **If limited progression**, consider referral to Radiation Oncology and continuation of first-line systemic therapy

Lung Cancer – Squamous Second and Third Lines Metastatic



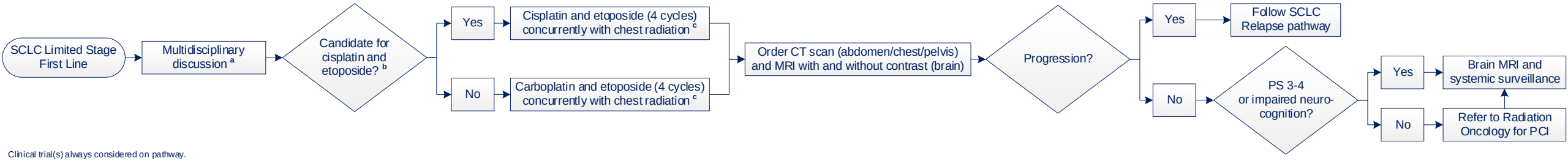
Clinical trial(s) always considered on pathway.

Lung Cancer – SCLC Incidental Discovery Resected T1, T2 N0 M0



Clinical trial(s) always considered on pathway.

Lung Cancer – SCLC Limited Stage First Line



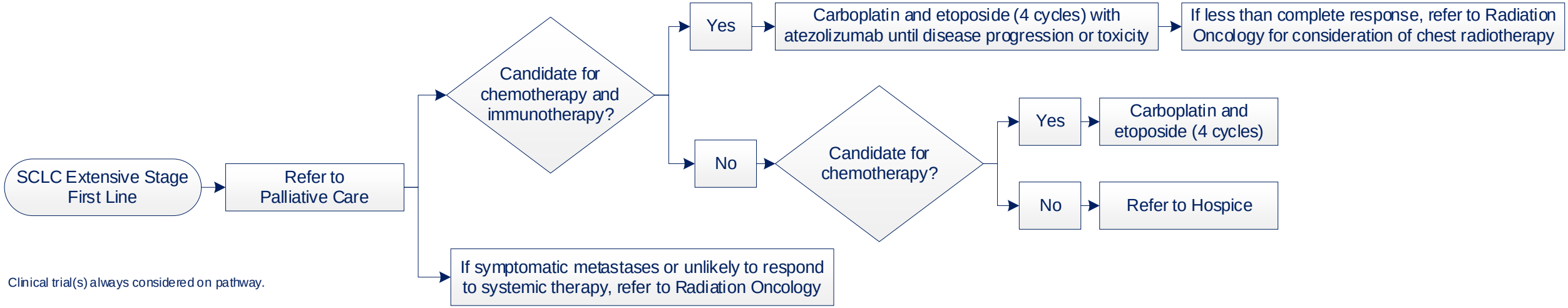
Clinical trial(s) always considered on pathway.

[a] **In the rare case of T1-2 N0 M0**, surgery can be considered followed by adjuvant chemotherapy

[b] **Candidate for cisplatin and etoposide** contraindications include abnormal renal function, ECOG 2, or abnormal heart function

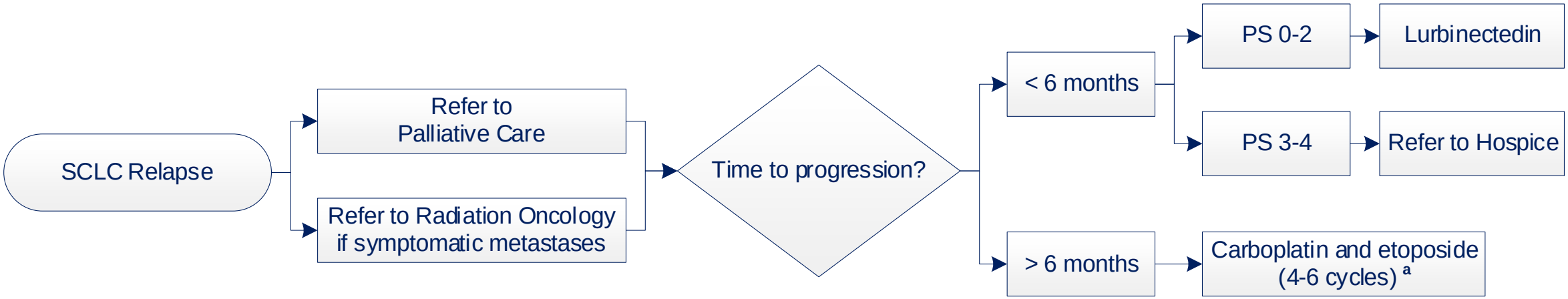
[c] **Initiate radiation** as early as possible, within the first or second cycle of chemotherapy

Lung Cancer – SCLC Extensive Stage First Line



Clinical trial(s) always considered on pathway.

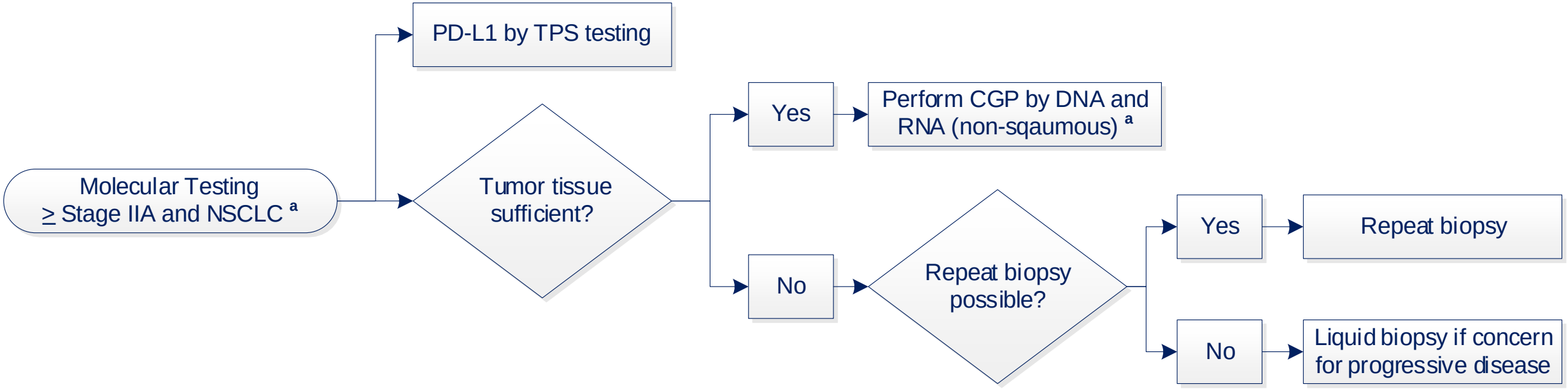
Lung Cancer – SCLC Relapse



Clinical trial(s) always considered on pathway.

[a] **If patient is progressing** and did not receive immunotherapy upfront, patient can receive carboplatin, etoposide, and atezolizumab

Lung Cancer – Molecular Testing



[a] **Molecular Testing** is not routinely recommended for SCLC or SCC

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Molecular Testing Table

Eligibility	Test Category	Test Type	Recommended Vendors	NPOP Coverage	Specimen Type
Stage IIA and Higher NSCLC	IHC	PD-L1 expression by IHC using 22C3 antibody	Tempus Foundation Medicine Local Vendor	Yes Yes No	Tumor Tissue
Stage IIA and Higher NSCLC Non-Squamous	Somatic NGS*	CGP using both DNA and RNA based methodology	Tempus Foundation Medicine	Yes Yes	Tumor Tissue, Blood
Stage IV Squamous Never/Light Smoker, Mixed Histology, or Small Specimen Size	Somatic NGS*	CGP using both DNA and RNA based methodology	Tempus Foundation Medicine	Yes Yes	Tumor Tissue, Blood
* Somatic NGS testing should include testing for EGFR, ALK, ROS1, RET, MET, BRAF, KRAS, NTRK1, NTRK2, NTRK3, and HER2					

Lung Cancer – Surveillance for Surgically Treated NSCLC Stage IA/IB, IIA/IIB, or IIIA

Surveillance for Surgically Treated NSCLC Stage IA/IB, IIA/IIB, or IIIA [a]

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 5+
H&P [b]	Every 6 months			Annually		
CT Chest [c]	Every 6 months			Annually		Annual low dose CT [d]

[a] **Surveillance** once treatment is completed; routine brain imaging is not recommended

[b] **H&P** to include smoking cessation

[c] **CT of Chest** initial baseline scan within 3 months of definitive treatment; more frequent scanning may be required

[d] **Annual Low Dose CT** more frequent scanning intervals may be appropriate in some patients, to include SBRT patients; for years 3-5+, low-dose CT scans may be used to screen for a second primary malignancy

Lung Cancer – Surveillance for NSCLC Stage III Curative Intent with Definitive Chemoradiation

Surveillance for NSCLC Stage III Curative Intent with Definitive Chemoradiation [a]

	Year 1 [d]	Year 2	Year 3	Year 4	Year 5	Year 5+
H&P [b]	Every 3 months	Every 4 months	Every 6 months			
CT Chest [c]	Every 3 months	Every 4 months	Every 6 months			Annual low dose CT [e]

[a] **Surveillance** once treatment is completed; routine brain imaging is not recommended

[b] **H&P** to include smoking cessation

[c] **CT of Chest** initial baseline scan within 3 months of definitive treatment; more frequent scanning may be required

[d] **Year 1** not intended to provide guidance for imaging consolidation immunotherapy

[e] **Annual Low Dose CT** more frequent scanning intervals may be appropriate in some patients, to include SBRT patients; for years 3-5+, low-dose CT scans may be used to screen for a second primary malignancy

Questions?

Contact VHAOncologyPathways@va.gov