

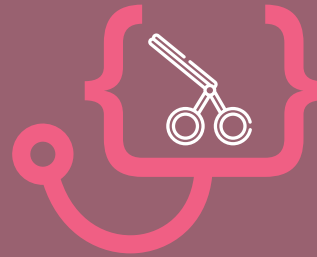


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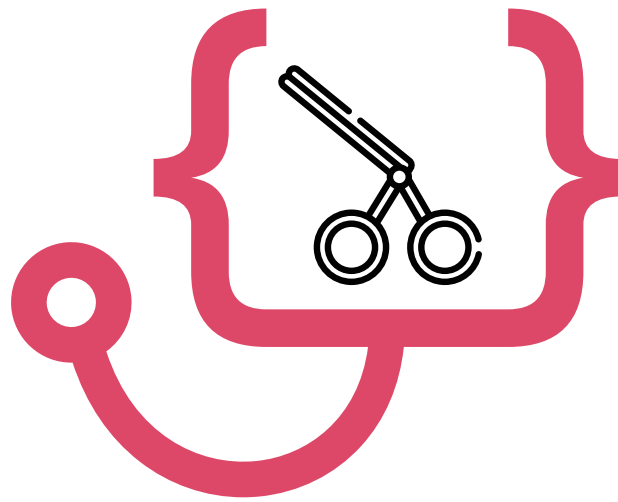


2022 Edition, Vol.III

STANDARD TREATMENT WORKFLOWS *of India*

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STANDARD
TREATMENT
WORKFLOWS
of India



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Suggested Citation: Standard Treatment Workflows of India, 2022, Edition, Vol. 3, New Delhi, Indian Council of Medical Research, Department of Health Research, Ministry of Health and Family Welfare, Government of India.

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- INTRODUCTION
- SPECIALITIES COVERED IN THIS EDITION

- **Oncology**

- Breast Cancer

- Lung Cancer

- Oral and Lip Cancer



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INTRODUCTION

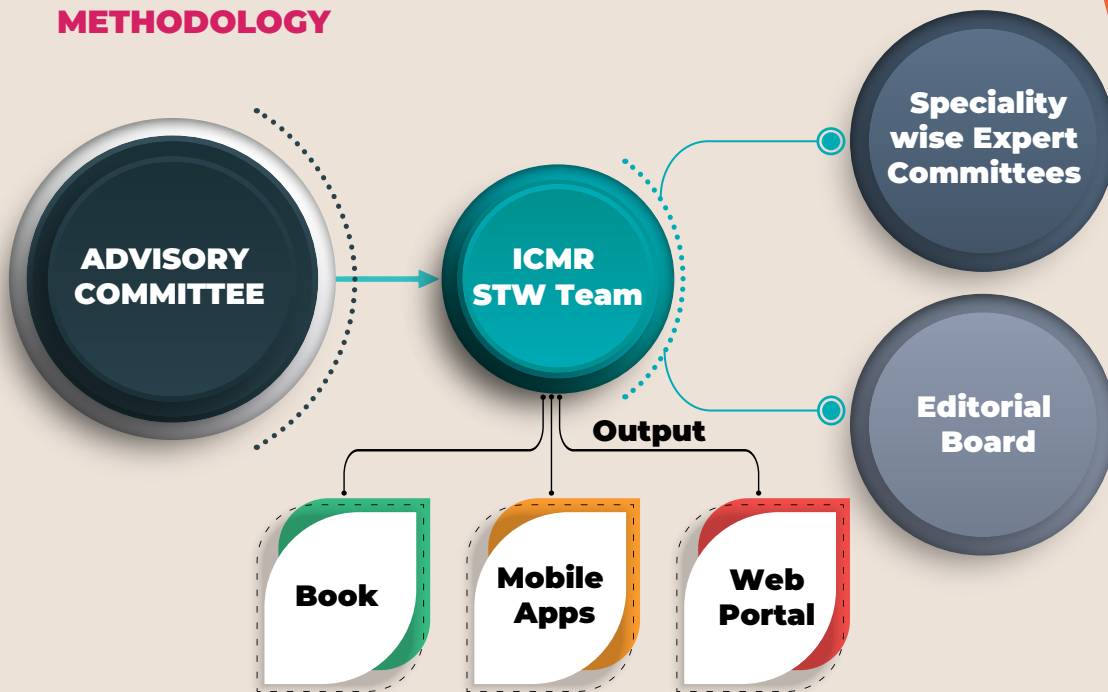
GOAL

To empower the primary, secondary and tertiary health care physicians/surgeons towards achieving the overall goal of Universal Health Coverage with disease management protocols and pre-defined referral mechanisms by decoding complex guidelines.

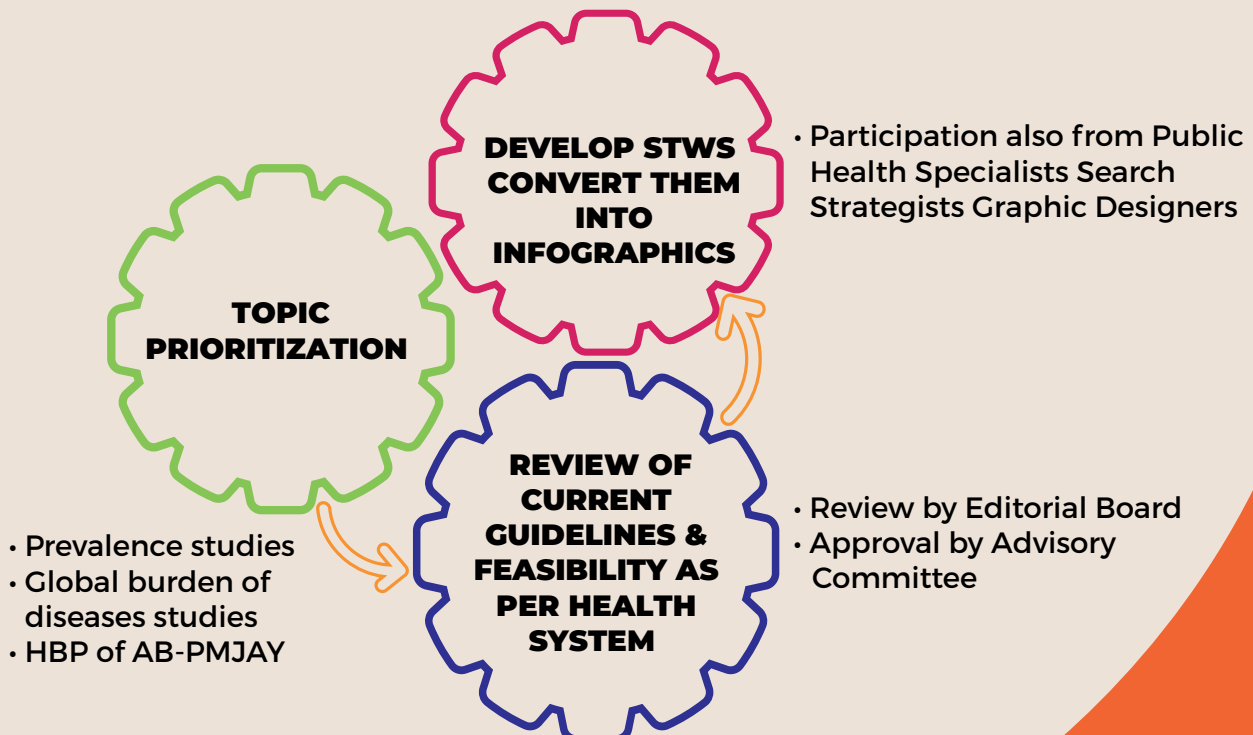
OBJECTIVES

To formulate treatment algorithms for common and serious medical & surgical conditions for both outdoor & indoor patient management at primary, secondary and tertiary levels of India's healthcare system that are scientific, robust and locally contextual.

METHODOLOGY



PROCESS OVERVIEW





ONCOLOGY

Standard Treatment Workflow (STW) for BREAST CANCER

ICD-10-C 50

Evaluation and management by multidisciplinary team (MDT) of oncology experts

SYMPTOMS

- A. Asymmetry of breast or nipple areola or axilla
- B. Breast lump, bulge, blood vessels prominent
- C. Colour change of skin or nipple areola
- D. Deformed breast / nipple areola (nipple retraction), dimpling of skin, Discharge from nipple, Direct spread-skin (satellite nodule, ulcer, skin oedema), chest wall Distant spread - headache, jaundice, dyspnoea, bone pains, ascites

SIGNS

- A Breast changes**
- Asymmetry in shape/size of breast or nipple areola complex
 - Breast lump
 - Nipple retraction/ulcer
 - Change in skin - puckering, dimpling, thickening, ulcer, redness, edema & satellite nodules
 - Fixity to underlying muscles or chest wall
- B Lymph node**
- lymph node(s) in axilla or supra-clavicular fossa
- C Systemic changes**
- Enlarged liver, ascites, bony tenderness, dyspnoea, pleural effusion

WORK UP OF A PATIENT WITH SUSPECTED BREAST CANCER- TRIPLE ASSESSMENT

CLINICAL BREAST EXAMINATION

IMAGING

- Bilateral mammogram: for women >30 years
 - Ultrasound: breast and axilla
 - MRI breast in selected cases
- STAGING- T1, T2 N0 N1**
- Upto Stage 2A no metastatic work up
 Stage 2B upwards
- Chest radiograph
 - Ultrasound whole abdomen
 - Bone scan
 - CECT chest and abdomen
 - PET-CT (optional)

PATHOLOGY

- Core needle biopsy (preferred) for type, grade, ER, PR, HER2/neu, Ki-67
- FISH test if HER-2/neu on IHC-2+/ equivocal

DO NOT

- Ignore any lump or changes in breast & nipple areola complex
- Perform excision biopsy for diagnosis
- Perform FNAC or core needle biopsy before imaging.

MULTIDISCIPLINARY CARE

MANAGEMENT OF BREAST CANCER

Triple assessment (CBE, USG breast and axilla, mammography and core biopsy)

EARLY BREAST CANCER

T1, T2, N0, N1, M0

- Surgery followed by adjuvant therapy
- Metastatic work-up usually not indicated

For breast

Surgery

Primary systemic therapy

Surgery

Discuss adjuvant therapy in MDT

For axilla (clinico-radiological assessment)

Node -ve

Node +ve

SLNB/axillary sampling

-ve

+ve

No ALND

ALND

ADJUVANT THERAPY (AT)

Chemotherapy

- Consider for all patients with pT > 1 cm or node positive disease based on ER/PR/HER2/Ki-67

Radiotherapy

- After breast conservation surgery
- After mastectomy with node-positive disease or pathological T3/T4

Targeted therapy

- All HER-2/neu positive (3+) or FISH HER-2 amplified patients should receive trastuzumab for 12 months
- Shorter schedules: 9 weeks to 6 months acceptable in some patients

Hormone therapy

- All ER and/or PR positive cases
- For premenopausal women tamoxifen and for post menopausal women tamoxifen or aromatase inhibitors are appropriate
- Minimum for 5 years, if high risk of recurrence like node positive, consider for up to 10 years
- If AT is used zoledronic acid or other bisphosphonates can be added

ADVANCED BREAST CANCER

T3, T4, any N Any T, N2, N3

Metastatic work up: Chest X-ray, ultrasound abdomen, bone scan

OR

CECT thorax abdomen, bone scan OR PET-CECT whole body

No metastasis

Locally Advanced Breast Cancer

Intent of treatment: curative

Neoadjuvant systemic therapy

Discuss extent of surgery
 MRM or Breast conservation surgery

Adjuvant systemic treatment therapy +RT surgery

methotrexate, etc.

- Sequential single agents preferred over combinations when possible

Hormonal therapy

- Consider - tamoxifen, aromatase inhibitors, fulvestrant, megestrol acetate, CDK 4/6 inhibitors, everolimus
- Ovarian suppression indicated in premenopausal MBC patients, which can be surgical (bilateral oophorectomy) or radiotherapeutic (ovarian radiation) or medical (GnRH analogues)

HER2 targeted therapy

- Consider - trastuzumab, lapatinib, pertuzumab, add trastuzumab-emtansine

Bone targeted therapy

- All patients with bone metastases should receive a bone modifying agent (e.g zoledronic acid) 4-12 weekly

Role of surgery

- It is indicated only for palliation of local tumour symptoms bleeding, fungation, etc
- Insert intercostal drainage tube for malignant pleural effusion and chemical pleurodesis with talcum powder or bleomycin

Role of radiotherapy

- Most effective method for pain relief in bone metastasis
- Is routinely used for brain metastasis: Hemostatic RT used for bleeding ulcer

Pain control and palliative care

Yes metastasis

Metastatic Breast Cancer

Intent of treatment: palliative care

Consider hormone therapy
 chemotherapy
 targeted therapy
 as clinically indicated

Treatment of metastatic breast cancer

Chemotherapy

- Consider - Anthracyclines, taxanes, platinum, capecitabine, cyclophosphamide,

ABBREVIATIONS

ALND: Axillary lymph node dissection

CECT: Contrast-enhanced computed tomography

ER/PR: Estrogen receptor/Progesterone receptor

FISH: Fluorescence in situ hybridization

HER2: Human epidermal growth factor receptor 2

IHC: Immunohistochemistry

MBC: Metastatic breast cancer

PET-CT: Positron emission tomography-computed tomography scan

RT: Radiotherapy

SLNB: Sentinel lymph node biopsy

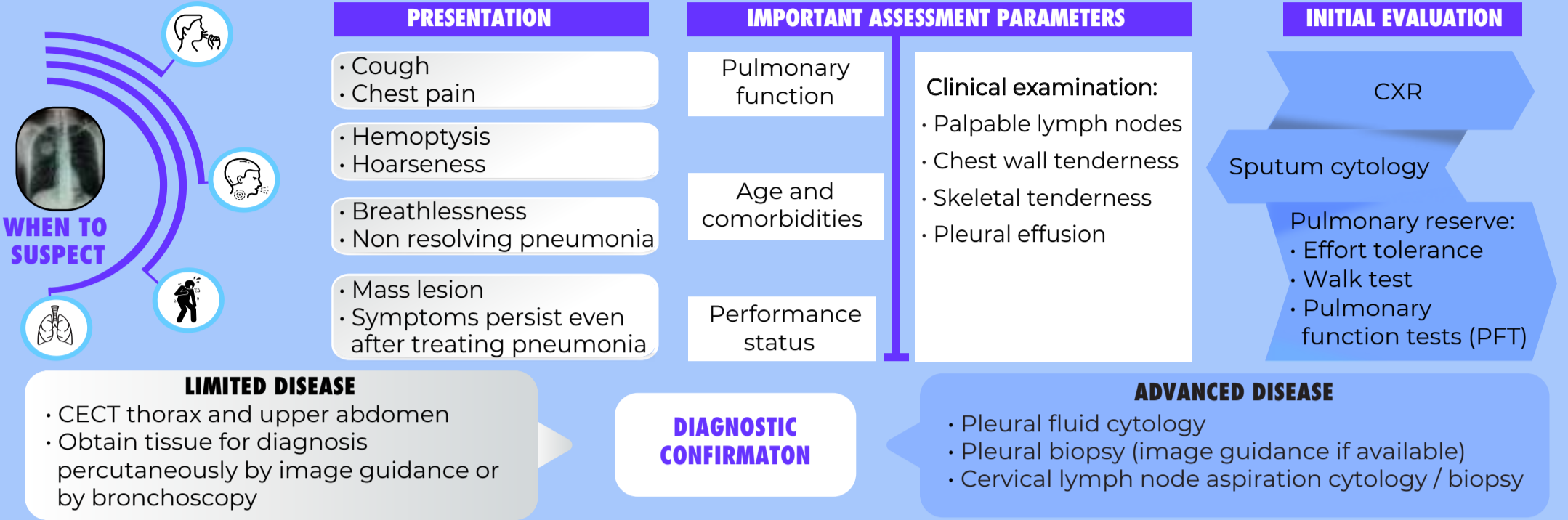
ENHANCE AWARENESS AND EARLY DETECTION OF BREAST CANCER BY SCREENING AS PER NATIONAL PROGRAMME

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Standard Treatment Workflow (STW) LUNG CANCER ICD-10-C34.90

Evaluation and management by multidisciplinary team (MDT) of oncology experts



All lung shadows are not tuberculosis ! Obtain diagnostic investigations before starting empirical ATT !

PATHOLOGY ASSESSMENT

- Biopsy/ cell block/ smear
- Histopathology**
adenocarcinoma, squamous carcinoma, poorly differentiated carcinoma, small cell carcinoma
- Immunohistochemistry**
TTF 1, p40, synaptophysin/ chromogranin
- Preserve tissue for molecular analysis**
Molecular tests for adenocarcinoma: EGFR, ALK, ROS-1

SMALL CELL LUNG CARCINOMA

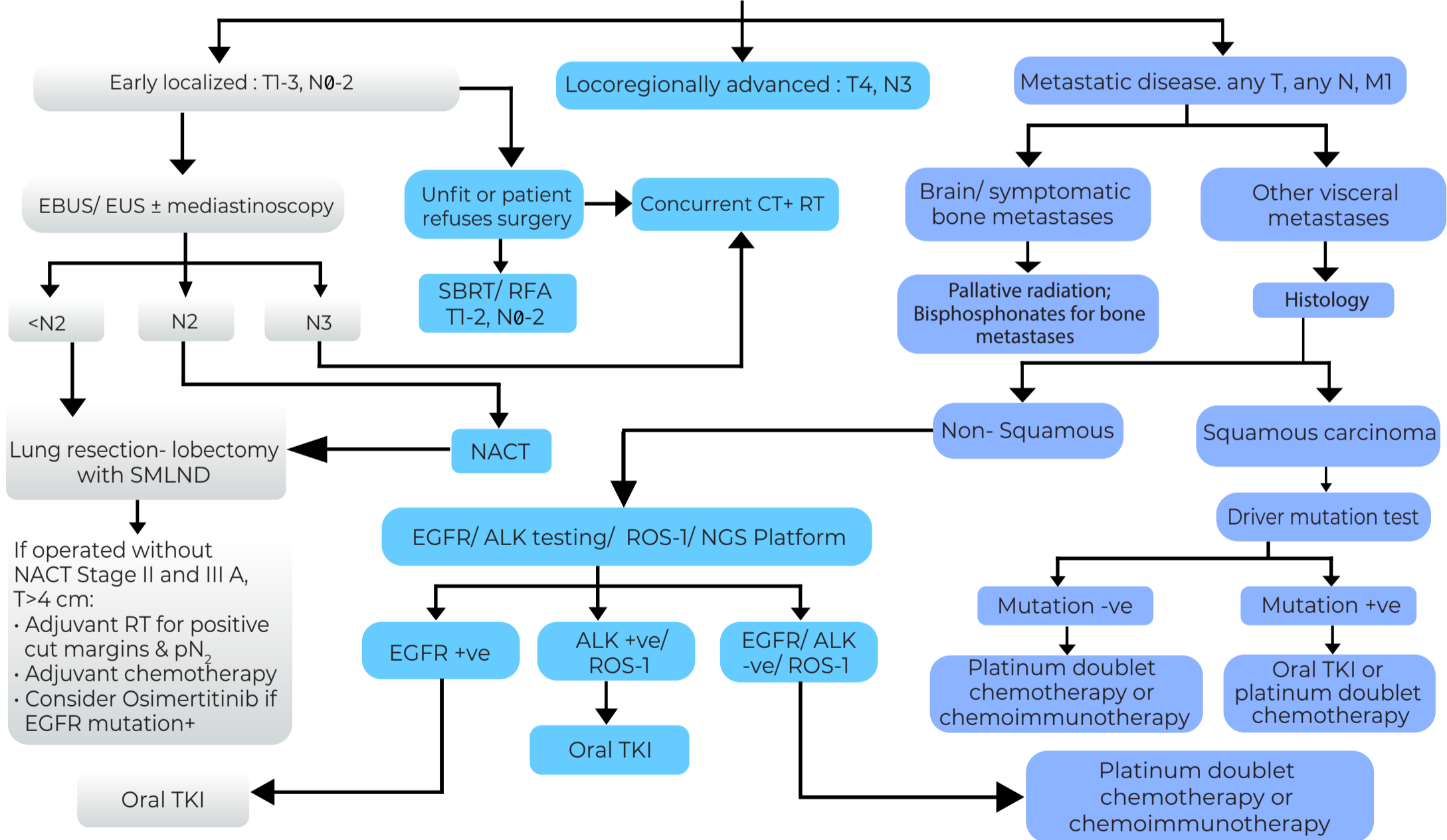
- Do CECT thorax and abdomen**
- Non metastatic disease** T1-4, N0-3, M0
 - Metastatic work up: PET CT & MRI brain
 - Consider surgery for T1-2, N0
 - Concurrent CT + RT
- Metastatic disease** Any T, any N, M1
 - Prophylactic cranial irradiation
 - Symptomatic & supportive care
 - Palliative chemotherapy carboplatin + etoposide

NON SMALL CELL LUNG CARCINOMA

- Do CECT thorax and abdomen**
- Non metastatic disease:** T1-4, N0-3
 - Metastatic work up: PET CT and MRI brain
- Metastatic disease:** Any T, any N, M1
 - Symptomatic & supportive care
 - Refer to oncology centre
 - Palliative chemotherapy (platinum doublet in fit patients, single agent chemotherapy for PS 2)
 - Oral TKI if target mutation detected
 - Immunotherapy may be an option in some patients

MANAGEMENT OF NSCLC

METASTATIC WORKUP* PET-CT SCAN AND MRI BRAIN



AVAILABLE TREATMENT OPTIONS

- Chemotherapy doublet:
 - Carboplatin or cisplatin with pemetrexed or paclitaxel or gemcitabine or etoposide
- EGFR mutation positive: gefitinib, afatinib, osimertinib, erlotinib, dacomitinib
- Immune checkpoint inhibitors: nivolumab, atezolizumab, pembrolizumab, ipilimumab

PALLIATIVE CARE

- Radiotherapy
- Pain management
 - Opioids: morphine, tramadol, oxycodone
 - Paracetamol, nonsteroidal anti-inflammatory drugs
- Cough suppressants
- Treatment of chronic obstructive pulmonary disease
- Treatment of anemia, anorexia, electrolyte abnormalities

ABBREVIATIONS

ALK: Anaplastic lymphoma kinase	EBUS: Endobronchial ultrasound	PFT: Pulmonary function test	SMLND: Systematic lymph node dissection
ATT: Anti tubercular therapy	EGFR: Epidermal growth factor receptor	pN2: Pathological node	T, N, M: Tumour (T), Nodes (N), and Metastases (M)
CECT: Contrast-enhanced computed tomography	NACT: Neoadjuvant chemotherapy	RFA: Radiofrequency ablation	TKI: Tyrosine kinase inhibitors
COPD: Chronic obstructive pulmonary disease	NGS: Next generation sequencing	ROS: Ros proto-oncogene 1	
CT: Computed tomography	NSCLC: Non-small cell lung cancer	RT: Radiotherapy	
CXR: Chest X Ray	PET CT: Positron emission tomography	SBRT: Stereotactic body radiotherapy	

KEEP A HIGH THRESHOLD FOR INVASIVE PROCEDURES.

Standard Treatment Workflow (STW)

LIP AND ORAL CANCER

ICD-10-C 06.9

- Tobacco
- Alcohol
- Areca nut
- Sharp tooth
- Ill-fitting dentures



Non healing ulcer/sore in the mouth especially in a tobacco chewer or smoker

Neck mass

Difficulty in opening mouth

Difficulty in protrusion of tongue

Pain referred to ear

Oral premalignant disorders (OPMD): leukoplakia/erythroplakia/sub mucous fibrosis, lichen planus

Screening can detect OPMD and invasive cancer early and improve outcome. Treatment of oral cancer is ideally delivered by a multidisciplinary team(MDT)

EVALUATION

- Clinical examination, +/- examination under anaesthesia (EUA), assess pain, nutritional status, & oro-dental hygiene
- USG neck / CT scan head & neck
- Evaluate upper aerodigestive tract for second primary
- Biopsy from primary site, FNAC from neck node
- CBC, LFT, RFT, blood sugar, chest X-ray, ECG
- Tobacco cessation for patient and care givers
- Pure tone audiometry (PTA)
- Speech and swallowing assessment
- Define clinical and radiological staging, goals of treatment

TREATMENT

T1 T2, N0 CANCER

OPTIONS WITH CURATIVE INTENT

Initial surgery **preferred** (wide excision with 1 cm margins & supra-omohyoid neck dissection (Level I – III) with reconstruction

OR

Radical radiation therapy

T3 T4A, N0 N1 N2

OPTIONS WITH CURATIVE INTENT

Initial surgery: wide excision with 1 cm margins + comprehensive neck dissection and reconstruction

OR

Chemoradiation

OR

Neo-adjuvant CT followed by surgery

T4B N3 (TONGUE AND BUCCAL CANCERS WITH SKULL BASE / INTERNAL CAROTID ARTERY INVOLVEMENT)

AIM OF TREATMENT IS PALLIATION

- Palliative chemotherapy
- RT
- Immunotherapy
- Best supportive care

INDICATIONS FOR ADJUVANT RT

Close margin, positive node(s), or presence of any two of following: LVI, PNI, high grade

INDICATIONS FOR ADJUVANT CT-RT:

Metastatic nodes with extracapsular extension, involved margins

THE DRUG OF CHOICE FOR CONCURRENT CHEMOTHERAPY IS CISPLATIN

Adjuvant radiation

The minimum post-operative radiation dose is 60 Gy/ 6 weeks/ 30# or equivalent to the primary and nodal areas using conventional treatment planning, 3DCRT or IMRT

Radical radiation

66-70 Gy is delivered using conventional planning / 3DCRT/IMRT through a telecobalt machine or a LINAC at 1.8 to 2 Gy per fraction over 7-8 weeks (or a biologically equivalent dose) with adequate margins all around the lesion and including level I, II and III nodes



Large SCC lower Lip



Intraoperative image following tumor excision



Postoperative results following reconstruction

FOLLOW UP

Follow up: 3 monthly for the first 3 years, 6 monthly for years 4 & 5 and annually thereafter with clinical examination at every visit, evaluation of symptoms as they present and endoscopy of the upper aerodigestive tract annually

To identify recurrences and second primary cancers

Treatment of common side effects - xerostomia, speech and swallowing issues, nutrition and physical rehabilitation, dental care should be looked after by the members of multidisciplinary team

Emphasize tobacco cessation for patients

- › Set a quit date, tell your family
- › Remove tobacco / cigarettes from your home, car, and work
- Tobacco withdrawal symptoms:
 - › Trouble sleeping
 - › Feeling irritable, anxious, or restless
 - › Getting frustrated or angry
 - › Having trouble thinking clearly
- Counsellor's help is available to deal with the cravings and triggers
- Can combine nicotine replacement with or ± bupropion

ABBREVIATIONS

CBC: Complete blood count

CT: Chemotherapy

EUA: Examination under anaesthesia

FNAC: Fine needle aspiration cytology

IMRT: Intensity-modulated radiation therapy

LFT: Liver function tests

LVI: Lymphovascular invasion

MDT: Multidisciplinary team

OPMD: Oculopharyngeal muscular dystrophy

PNI: Perineural invasion

PTA: Pure tone audiometry

RFT: Renal function tests

RT: Radiotherapy

USG: Ultrasound sonography test

PREVENT ORAL CANCER BY TOBACCO CONTROL

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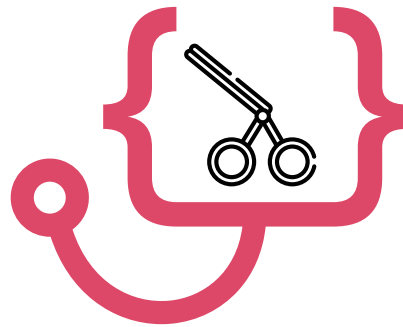
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