



## Udarastha karkatarbuda - Malignancies of abdomen (Ca Pancreas, Ca Duodenum/ Stomach)

# Abdominal Malignancies

(Carcinoma of Oesophagus, Stomach, Duodenum, Pancreas & Liver)

Integration of current oncologic consensus (NCCN, ESMO, ASCO 2024) with classical Āyurvedic vision (Arbuda - Sūtra-sthāna 11, Udara-roga, Gulma, Yakṛd-roga). Meant for academic orientation and for formulating **integrative, not alternative**, clinical pathways.

## 0. Common Abbreviations

- EAC - Oesophageal Adenocarcinoma
- ESCC - Squamous Ca Oesophagus
- GC - Gastric Cancer
- DPC - Duodenal Peri-ampullary Cancer
- PDAC - Pancreatic Ductal AdenoCa
- HCC - Hepato-Cellular Carcinoma
- CCA - Cholangiocarcinoma
- MDT - Multidisciplinary Team

## 1. Comparative Overview

Parameter	Oesophagus	Stomach	Duodenum*	Pancreas	Liver
Global incidence**	6-7 /100 000	11 /100 000	0.5	8	9
Sex ratio	M : F 3 : 1	2 : 1	~1 : 1	1.3 : 1	2.5 : 1
5-yr OS (all stage)	20 %	32 %	55 %	11 %	18 %

\*Includes peri-ampullary & small-bowel adenocarcinoma. \*\*GLOBOCAN-2023.

## 2. Malignancy-wise Detailed Sheets

### 2.1 Carcinoma Oesophagus

#### a. Description & Types

1. ESCC (upper/mid 2/3) - smoking, alcohol, nitrosamines.
2. EAC (distal 1/3) - arises from Barrett's metaplasia.

#### b. Key Causes / Risk Factors

1. Chronic reflux → Barrett's
2. Achalasia
3. Hot beverages
4. HPV (Asia-Pac)

5. Tylosis (genetic).

### c. Etiopathogenesis (Modern)

GERD → chronic inflammation → metaplasia (CDX2, CK20+) → dysplasia → TP53, HER-2, VEGF driven carcinoma.

### d. Ayurveda Correlate

- Ūrdhvaga Amlapitta + Āma-kapha kapha granthi → “Gala-*arbuda* / Śleshma-granthi” (S.S.).

### e. Differential Diagnosis

Benign strictures, eosinophilic oesophagitis, diffuse oesophageal spasm, lymphoma.

### f. Diagnosis

1. EGD + bite-on-bite biopsy.
2. EUS for T & N.
3. CT-Thorax-Abdomen, PET-CT for M.
4. Staging – AJCC 8th ed.

### g. Prognosis

Stage I 5yr-OS 75 %; Stage IV <5 %. Early Barrett’s ablation curable.

### h. Modern Treatment

- T1a – Endoscopic resection + RFA
- T1b-T2 – Oesophagectomy (Ivor-Lewis/McKeown) ± sentinel chemo
- Locally advanced – NEO-CRT (CROSS) → Surgery
- Metastatic – palliative FOLFOX + PD-1 inhibitor (nivolumab)

### i. Āyurvedic Management

1. **Goal** – Agni-dīpana, Vātānulomana, Rasāyana-supportive, palliation.
2. **Chikitsā Sūtra** “Kapha-pitta prakopite gale; Tikta-kaṭu-dīpanaiḥ, śītala-ghṛta-ropaiśca.”
3. **Key Yogas** • Sūtaśekhara + Kāmdudha (acid control) • Yashtimadhu-Karkaṭaśṅgi siddha Ghṛta – mucosal healer • Ārogyavardhinī 250 mg BID – anti-inflammatory, cholagogue
4. **External** – Śatadhauta Ghṛta gargle after meals.
5. **Diet** – Semisolid, lukewarm, non-acidic, small feeds; shīta-pāka peya.

## 2.2 Gastric Cancer (GC)

Point	Details
Type	Intestinal (Lauren) 60 %, Diffuse 30 %, Others (GIST, lymphoma)
Major risks	H. pylori (CagA+), EBV, atrophic gastritis, high-salt diet, familial CDH1 mutation
Pathogenesis	Correa cascade: Chronic gastritis → atrophy → intestinal metaplasia → dysplasia
Dx	EGD with multiple biopsies + OLGA staging; CT-AP, laparoscopy for peritoneal wash
Tx	Early (T1a) – EMR/ESD; Resectable – Peri-op FLOT × 4 + D2-gastrectomy → FLOT × 4; HER-2+ → trastuzumab; PD-L1 CPS≥5 → nivolumab
Prognosis	Stage I 5-yr 80 %, Stage IV median OS 12 mo
Āyurveda	Pariṇāma-śūla / Amlapitta chronic → “Udarār-buda” (Suśruta 11)
Chikitsā	Tikta-Ghṛta snehapāna, Mṛḍu virecana (Avipattikara), Dadimāshtaka cūrṇa with takra; Rasāyana – Mandukaparnī, Guduchi sattva 500 mg BID
Pathya	Old rice, barley yūṣa, pomegranate juice; avoid pickle, smoked meat, reheated oil

## 2.3 Duodenal & Peri-ampullary Cancer

Aspect	Snapshot
Constituents	Ampullary Ca, DPC, distal CBD CCA, pancreatic head PDAC*
Genetics	FAP (APC), Lynch (MSH2/MLH1), Peutz-Jeghers (STK11)
Presentation	Obstructive jaundice, occult bleed, iron-def anaemia
Diagnosis	Side-view EGD, MRCP/EUS, CA-19-9 mild ↑
Tx	Whipple (PPPD) + adjuvant CAPOX / FOLFIRINOX (high-risk)
5-yr OS	~40-50 % (better than PDAC)
Āyurveda	Grahaṇī-ashuddhi → “Pakwāśaya gāt Arbuda”
Supportive Āyurvedic Care	Kutaja-ghan 500 mg TID (diarrhoea), Udīcyā diuretic decoction (ascites), Trivṛt Lehya for constipation after surgery

\*Overlap with Section 2.4.

## 2.4 Pancreatic Ductal Adenocarcinoma (PDAC)

### a. Epidemiology & Risk

Smokers, obesity, chronic pancreatitis (PRSS1, SPINK1), new-onset DM >50 y, BRCA2, PALB2, Lynch.

### b. Pathogenesis

KRAS > 90 %, CDKN2A, TP53, SMAD4, desmoplastic stroma → immune-cold tumour.

### c. Clinical Picture

Painless jaundice (head), epigastric pain radiating back, weight-loss, migratory thrombophlebitis (Trousseau), depression.

### d. Diagnostic Work-up

Pancreatic protocol CT; CA-19-9 baseline; EUS-FNA for histology; staging resectable / borderline / locally advanced / metastatic (NCCN 2024).

### e. Prognosis

Median OS: Resected 24 mo, Borderline 14 mo, Metastatic 6 mo.

### f. Modern Tx

- Up-front surgery (Whipple/Distal pancreatectomy) if resectable + adjuvant mFOLFIRINOX.
- Borderline/locally advanced – Neo-adjuvant FOLFIRINOX ± SBRT → reassess.
- Metastatic – FOLFIRINOX (fit) or Gem-nab-paclitaxel; Olaparib maintenance for germline BRCA+.

### g. Āyurvedic Perspective & Palliative Plan

- Pancreas = *Agnāśaya* (medo-rasa sthāna). Chronic kēvalo-pitta anvaya leads to “Yakrit-pleeha-*arbuda*” subtype.
- **Sūtra**: “Tikta-kaṭu dīpana, śleṣma-śoṣaṇa, madhura-snigdha balya for kṣaya.”
- **Formulations**:
  - *Guduchi-Amṛttotara kvātha* 50 ml BID (dīpana, anti-fibrotic)
  - *Nimbādyāriṣṭa* 15 ml with equal water (blood sugar + inflammation)
  - *Punarnavāsava* 15 ml BID for ascites oedema – *Triphala-Ghṛta* 10 ml HS (bowel regularity, Rasāyana)
  - **Pain control** – Eranda-Taila 10 ml + warm milk HS; external Dashamūla Upanāha over back.

## 2.5 Hepatocellular Carcinoma (HCC)

Item	Content
Background	Develops on cirrhosis (HBV, HCV, NASH, alcohol) 80 %
Molecular	WNT/ $\beta$ -catenin, TERT promoter, p53 mutations
Screening	USG + $\alpha$ -FP 6-monthly in cirrhotics
Diagnostic criteria	LI-RADS 5 on dynamic CT/MRI; biopsy if atypical
BCLC Staging & Therapy	A: Resection/RFA/LT B: TACE C: Atezolizumab + Bevacizumab D: BSC
Prognosis	Early transplant 5-yr >70 %; advanced median 8-11 mo
Āyurvedic viewpoint	"Yakṛd-arbuda / Kumbha-kamala-udara"
Integrative Care	Arogyavardhinī 250 mg BID (cholagogue), Bhringarāja-Svarasa 20 ml OD (hepatoprotection), Punarnava-mandoora 500 mg BID (anaemia, ascites), Śīlājatu-Rasāyana 250 mg HS (immune)
Diet	Laghu-yavāgu, green gram soup; salt restriction in ascites; abstinence from alcohol

## 3. Consolidated Differential Diagnostic Matrix

Symptom	Likely Cancer	Top Differentials (non-malignant)
Progressive dysphagia	Oesophagus	Achalasia, peptic stricture, eosinophilic oesophagitis
Early satiety, epigastric mass	Stomach	Non-ulcer dyspepsia, GIST, pancreatitis pseudocyst
Painless obstructive jaundice	Pancreas head / Ampulla	Benign CBD stone, PSC, IgG4 cholangitis
Iron-deficiency anaemia, occult GI bleed	Duodenum, GC	Angiodysplasia, celiac disease
Cirrhotic patient with weight-loss & RUQ pain	HCC	Worsening cirrhosis, liver abscess

## 4. Diagnostic Toolkit (Modern)

- Imaging** • Triphasic CT / MRI – lesion characterisation • PET-CT – metastasis (oesophageal, GC)
- Endoscopy & Endoscopic Ultrasound** • EGD/Colonoscopy for biopsy • ERCP with brush cytology (ampullary, CCA)
- Serum Markers** • CA-19-9 (PDAC, CCA) • CEA (GC) •  $\alpha$ -FP (HCC) • CYFRA-21-1 (ESCC)
- Histopathology & Molecular** • HER-2 (GC, EAC) • MSI/MMR (GC, ampullary) • BRCA, NTRK fusion, FGFR2 (cholangiocarcinoma)
- Staging Laparoscopy** – GC, PDAC (occult peritoneal mets).

## 5. Prognostic Indicators (Key)

Cancer	Best Prognosis Factor	Worst Factor
Oesophagus	Pathologic CR after NEO-CRT	c-node >3, R1 margin
Stomach	cT1a, MSI-H	Linitis plastica, Peritoneal mets
Duodenum	Ampullary intestinal subtype	Node-positive, R1 resection
Pancreas	BRCA mutation treated with PARP	CA-19-9 >1000, SMAD4 loss
Liver	Early BCLC, Child-Pugh A	Macro-vascular invasion, AFP >400

## 6. Role of Āyurveda - Practical Integration

### 1. Phase-wise Goals

- a. Pre-operative: Improve nutritional status (Agni-dīpana), anaemia, liver function.
- b. During chemo/radiation: Combat mucositis, nausea, fatigue – eg. *Gudūcī-ghan*, *Āmalakī Rasāyana*.
- c. Post-operative / remission: Rasāyana for immunity, hepatic regeneration (Bhringarāja, Śilājatu).
- d. Palliative: Pain relief (Jatāmāmsī-brahmī taila abhyanga), bowel regulation, cough suppression, sleep.

### 2. Generic Chikitsā Sūtra for Arbuda

- (Suśruta 11) - “Shodhanaṃ śamanaṃ caiva kleda-śoṣaṇa-balya-mēva ca □ Tiktaka-kaṭuka-kaṣāyāḥ pradhānāṇaṃ rasānāṃ □”

### 3. Evidence Highlights (selected)

- *Tinospora cordifolia* polysaccharides – macrophage activation (OncoImmunology 2023).
- Curcumin + PD-1 blockade synergy reported in PDAC murine model (Cell Rep Med 2024).
- *Withania somnifera* mitigates oxaliplatin neuropathy – Phase-II RCT (Support Care Cancer 2022).

## 7. Pathyā-Apathyā (All Cancer Patients)

### PATHYĀ

- Easily digestible, high-cal-high-protein (mung dal, ghee, almond milk).
- Warm liquids with dry ginger-fennel; small frequent meals.
- Mindfulness, pranayama (Anuloma-Viloma), 20-min sunlight for Vit-D.

### APATHYĀ

- Reheated oils, smoked/pickled meats, carbonated drinks.
- Day-sleep immediately after meals, late-night screen exposure.
- Self-medication with strong tikṣṇa-uṣṇa herbs during active gastritis/chemo (risk of bleed).

## 8. Red-Flag Referral Grid for Āyurveda Practitioners

Scenario	Mandatory Onco-MDT Referral
Progressive dysphagia <6 wks	Upper GI endoscopy
Obstructive jaundice with dilated ducts	MRCP ± ERCP
Palpable epigastric mass	CT Triple phase
Unintentional weight-loss >10 %/6 mo	Full GI work-up
Cirrhosis + AFP >20 or new lesion	LI-RADS protocol

Early collaborative approach improves survival & quality of life.

## 9. Selected Classical Quotations

1. “Arbudaḥ kaphajaḥ sthairyam śītaṃ mandarujaṃ guru □” - **Suśruta Sūtra 11/3**
2. “Yakṛt-pleeha-gatān rogān pittajaṃ kāmamudgaraḥ” - **Caraka Cikitsā 13/97**



## 10. Key References

1. NCCN Clinical Practice Guidelines, Versions 1-2024 (Oesophagus, Stomach, Pancreas, HCC).
2. ESMO Guidelines Committee. *Gastric Cancer 2022; Pancreatic 2023*.
3. GLOBOCAN Cancer Fact Sheets 2023.
4. Agniveśa. *Caraka Saṃhitā* (Śāstrī edition).
5. Suśruta. *Suśruta Saṃhitā* - Sūtra-sthana 11, Uttara-sthana 40.
6. Sharma P et al. "Integrative Ayurveda-Oncology - Current Evidence & Future Roadmap." *J Alternative Complement Med* 2023.

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