

Oncology :-

Factor of neoplasm :-

Gene mutation :- APC - colorectal melanin MEN type I

RET MEN 2 , BRCA 1, 2, breast ovarian

Environmental :- Smoking ; alcohol ; UV exposure

Viral Inf :- HPV → cervical , HIV → Kaposi Sarcoma , HBV → HCC

Diet imbalance

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Screening :- medical investigation

Criteria :-

Disease must be :- Recognize at early stage

Rx at early stage is more effective

Warrant screening

Test must be :- sensitive and specific

safe

Inexpensive

Programme must be :-

diagnostic facility for +ve Test

availability of quality Rx

screening should be repeated

Benefits must outweigh the physical and

Psychological harms

Signature: _____

Date:

Rx of Malignant Tumor :-

- ① Surgery
- ② Chemotherapy
- ③ Radiotherapy
- ④ Hormonal Therapy
- ⑤ Immunotherapy
- ⑥ Gene Therapy

CHEMOTHERAPY :-

anti cancer Drugs

alkylating Agents → cyclophosphamide

antimetabolite → methotrexate

S-Fluorouracil

Cytotoxic Antibiotics → Bleomycin

mitomycin

Microtubules Inhibitors → Vinblastin

Vincristine

Hormone → Tamoxifen

Fulvestrant

Complication

Nausea Vomiting

Blood myelosuppression → severe neutropenia

Hair Alopecia (hair loss) regrow one week

GIT GIT → mouth ulcer, Diarrhea, Constipation

CNS CNS → Peripheral neuropathy, Tinnitus, hearing loss (Cisplatin)

bladder Bladder Toxicity → cyclophosphamide

muscle myopathy → (Paclitaxel) myalgia, arthralgia

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Cardiotherapy → doxorubicin
 Nephrotoxicity → (Methotrexate) diuresis - renal damage
 pulm. fibrosis → (Bleomycin)
 hepatic
 infertility

chemo as adjuvant therapy

Primary surgical excision for primary tumor
 chance of recurrence of 20-60% tumor

chemo as Neoadjuvant therapy :- To shrink tumor

when tumor locally advanced and surgically not excised
 to prevent the metastasis of tumor
 aim of reducing tumor, shrink size of tumor
 use (chemo, hormone, immune) use
 Adriamycin → osteosarcoma

Principals of combine therapy

- ⊙ use effective agents
- ⊙ Use agent e- diffrent MOA
- ⊙ use agents with non overlapping toxicities
- ⊙ spatial cooperation

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RADIO Therapy

Four Rs

Repair

Redistribution

Re oxygenation

Re population

Radio sensitivity:

Indication :-

Very sensitive

Less

Seminoma Squamous cell carcinoma Bladder CA

Lymphoma ^{stem} Brain Tumor

Cherlocarcinoma Esophageal CA

Ewing Sarcoma

Sq-cell carcinoma

Methods

External beam Radiotherapy

Brachy Therapy

Intra operative

3D-conformal Radial Therapy 3D CRT

Intensity modulated radiation Therapy (IMRT)

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Complication	
acute	Late
Anorexia, malaise	skin Loss of sweat, erythema
Nausea, esophagitis	Bone Necrosis, growth Retard
Alopecia	Gonads infertility, amenorrhea
	Eye Cataract
	CNS Paraplegia, hemiplegia
	GIT Mucositis, fistula
	Lungs fibrosis, pneumonitis
	Kidney nephritis
	Mouth ulceration

Immunotherapy

Interferon → CML, Kaposi sarcoma

Interleukin-2 → activate T-lymphocytes → melanoma

monoclonal antibodies → Trastuzumab

Brachy Radiotherapy

Merit:- specific, sensitive, ↑ accuracy, minimal loss

Demerit:- limited disease treat, ↑ high Radiation

Site Prostate + Breast Tumor

Iodine 131 used in Rx of follicular + papillary CA

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Team of surgery:-

- ① Surgeon of oncology , ② Plastic surgeon
- ③ Radiologist , ④ Pathologist ⑤ speech therapist .
- ⑥ Prosthetist . ⑦ , psychiatrist ⑧ Nursing care
- ⑨ Social worker

Advantages:-

Team member educate each other

Disadvantages

Time consuming

Decision is made in absence of pt

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