INTRODUCTION

There is no term in the entire lexicon of medicine that strikes more terror than the word 'CANCER', and with considerable justification. Deaths due to cancer stand second place after heart disease in developed and developing countries. In the discussion that follows, some of the causes of this fear will be explored as well as sources of the reasons why graduated optimism is now justified for future.

Neoplasia literally means "new growth", and the mass of cells composing the new growth is a neoplasm. The term new growth does not adequately define a neoplasm. A much more meaningful definition is "A neoplasm is an abnormal mass of tissue, the growth of which exceeds, and is un-coordinated with that of normal tissues and persists in the same excessive manner after cessation of the stimuli which evokes the change" (Willis, R.A. 1952). To this characterization we might add that the abnormal mass is purposeless, preys on the host, and is virutally autonomous. It preys on host in so far as the growth of the neoplastic tissues competes with normal cells and tissues for energy supplies and nutritional substrate and thus neoplastic tissues render the host emaciated.
and have the ugly potentials of rapid growth, invasion and
destruction of contiguous structures, and dissemination through
out the body, leading to death.

For centuries a bitter duel has been fought, as mankind
has endeavoured by every available means to ward off most
threatening enemy known to life: CANCER. Despite tremendous
efforts, cancer has still not been truly checked, let alone
conquered. The basic question of the cause and course of the
malignant disease is one on which it can be claimed, without
exaggeration, that a great many advances have been made in
recent decades. With these advances, the hope that cancer
would ultimately prove to be amendable to various forms of
therapeutic modulation i.e. surgery, radiotherapy, chemotherapy
and immunotherapy will turn to success in near future.

Recently, chemotherapy is playing increasingly important
role in management of malignant diseases (cancer) particularly
where surgery or radiotherapy cannot give complete cure.
Radiotherapy and surgery after ways of reducing the tumour
mass in specific regions of the body make it amenable to
surgical excision or high doses of radiotherapy. Neither is
applicable to the destruction of widely disseminated or cir-
culating tumour cells characteristic present in most
patients with cancer. Chemotherapy can be tried in every form
of malignant diseases either localised, disseminated or cir-
culating tumour cells.
The chemotherapy of malignant disease refers to the use of cyto-toxic drugs. Cytotoxic drugs are general cellular poisons which have a deteriorating/deleterious effect, to a greater or lesser degree on normal cells and a variety of tumours. Because these are potentially lethal, cancer chemotherapy is largely a compromise between toxic and therapeutic effects. While instituting chemotherapy we need to consider seriously the relative differential sensitivity of normal versus cancerous tissue. So a basic goal of cancer chemotherapy is the development of agent which have "selective toxicity" against replicating tumour cells but which at the same time spare replicating host tissues. Such as ideal drug has not yet been found, and only the hormones and asparaginase and, to a lesser extent, mitotane (O, P, DDD: lysodern and streptozocin) approach this goal. Although these drugs have important side effects, their toxicity is not primarily directed against normal replicating cells.

The histologic diagnosis and extent of the disease frequently define the goal of therapy as either curative or palliative with or without likelihood for prolongation of survival and frequently determine the most appropriate treatment, surgery, radiotherapy, chemotherapy or combination of these.

Thus the therapeutic objective should be based upon
what can be accomplished by each mode of therapy. For example, the following disseminated cancers are curable by chemotherapy: most post-gestional chorio-carcinomas, many Wilms, tumours and seminomas, some child-hood acute lymphoblastic leukaemias, adult and childhood lymphomas and some, testicular carcinomas in young men. For other neoplasms, chemotherapy may effort significant palliation and prolongation of life, even in advanced stages of breast, ovarian, endometrial, prostate, thyroid and cat cell cancers and for acute leukaemia, lymphomas, myeloma and macroglobulinemia. Some patients with colon or gastric carcinomas, sarcomas, and head and neck tumours may be relieved of symptoms by chemotherapy, but survival cannot yet be prolonged. Most patients with disseminated melanomas and lung, renal and pancreatic carcinoma are not objectively benefitted by systemic chemotherapy.

The choice of drugs in a particular combination rests primarily on clinical effectiveness and is essentially empirical. Choice of drug may be determined by the dose or dose schedule required. Single drug is used alone when a disease is sensitive to only one agent or its derivatives. Combination of drugs that block multiple biosynthetic pathways are given in an attempt to obtain a synergistic effect on the tumour. Thus, combination chemotherapy refers to the concurrent, to some extent sequential, use of several
drugs in an attempt to achieve maximum therapeutic effect without increasing unduely the undesirable side effects of the over-lapping toxicities. Formerly single drug regimen was followed where results were not good, but with combination chemotherapy results are increasingly encouraging (De Vita VT Jr. et al 1975).

The cyclic administration of mechloretamine, vincristine, prednisone, and procarbazine ("MOPP") produce 81% complete remission of Hodgkin's disease in untreated stage 3 and stage 4; 76% complete remission after radiotherapy alone; 50% complete remission after prior radiotherapy and chemotherapy. 70% of complete responders were alive after 5 years, 50% were continuously free of disease during that period. Single agent therapy with these drugs is much less successful. (De Vita VT Jr. et al.; 1970).

In case of disseminated testicular cancer combination of bleomycin, vinblastine, and cis-platin accounted for 75% complete and 26% partial remissions (Einhorn LH et al; 1977).

Bone is a common site of metastatic disease of breast, prostate cancer & Hypernephroma. While frequency of bone metastasis is 1% to 2% at the time of diagnosis (Perez DJ et al; 1983, Rosing N et al; 1982).
Radiologic examination of the bones has been the standard method of investigation for years (Edelstyn GA et al; 1967; Bachmán AL et al; 1954). Only few studies have elucidated the role that clinical examination and biochemical tests may play in the diagnosis of bone metastasis (Co Wan JD et al; 1981; Krishnamurthy GT et al; 1977, Coombes RC et al; 1983; Hortobágyi GN et al, 1984).

Bone marrow, too, is one of the most common location for prostate, breast, kidney, bronchial tree, thyroid cancers metastasis. According to some authors, skeletal metastasis are always preceded by bone marrow invasion (Willes R.A.; 1952). Consequently bone marrow biopsy, is a simple & relatively non invassive procedure, might prove useful for detection of micrometasis. So we can have adequate staging technique able to identify patients with micrometastasis, which would allow us to specifically select candidates for adjuvant chemotherapy.

Better results in recent years have been due to improved methods of applying cyto-toxic drugs as well as to introduction of new drugs and combination chemotherapy. New approaches are clearly needed to overcome the cancer problems with chemotherapy. As cancer is becoming increas- singly common in Bundelkhand area and we are getting lots
of cases of malignancies in various stages, where surgery & radiotherapy have their role in combination with chemo-therapy or alone and in late stages where previous two modalities have limited role (palliative). It was decided to try chemotherapy in all these groups to assess its role as curative or for palliation use.