

WA Cancer & Palliative Care Network

Upper Gastro-intestinal Cancer Model of Care

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Government of **Western Australia**
Department of **Health**

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Introduction

Cancer is the leading cause of death in Western Australia, representing 30.6 per cent of all deaths in 2006.¹

Population ageing will significantly increase the number of new cases of cancer over the next ten years, with an estimated 10,000 more cases per annum in Western Australia by 2016.² In 2006, 660 Western Australians were diagnosed with an Upper Gastro Intestinal cancer (primary cancer of the Oesophagus, Stomach, Pancreas, Liver, Gall Bladder and Bile Ducts). 564 individuals died from these types of cancer in Western Australia in 2006.³

Cancer is a complex disease to diagnose and treat, and represents a significant burden to patients and their families, the health system, and the community at large.

Western Australia's strategic and planned approach to cancer reform includes the establishment of a Ministerial Taskforce for Cancer, and implementation of the Fighting cancer policy and Cancer Services Framework for Western Australia.⁴

Two significant directions of the Cancer Services Framework are the establishment of integrated cancer services in metropolitan and regional Western Australia, and the development of service delivery and improvement through a tumour streams model.

Since 2004, eight integrated cancer services have been established in metropolitan and regional Western Australia, based on specified geographic populations. The philosophy of an integrated cancer service is that hospitals and primary and community health services develop integrated care and defined referral pathways for the populations they serve. This requires effective collaboration between hospitals and community-based services, including general practitioners. This will promote more effective local coordination of care for cancer patients, and a more rational, evidence-based approach to cancer service planning and delivery.

The Cancer Services Framework also recommended that organ or system-specific tumour streams be adopted to support the delivery and improvement of care. The reasoning behind the tumour streams is that a consistent approach to clinical management based on evidence-based practice will reduce unacceptable variations in care across the state.

Data Collection and Audit

Data collection regarding treatment and outcomes is essential to monitor the quality and safety of care. An appropriate clinical database for upper gastro intestinal cancer treatment and outcomes should be available and adequately resourced. Treatment outcomes including morbidity and survival data should be readily available in the public domain.

Model of Care

The WA CPCN Model of Care for Cancer 2008.

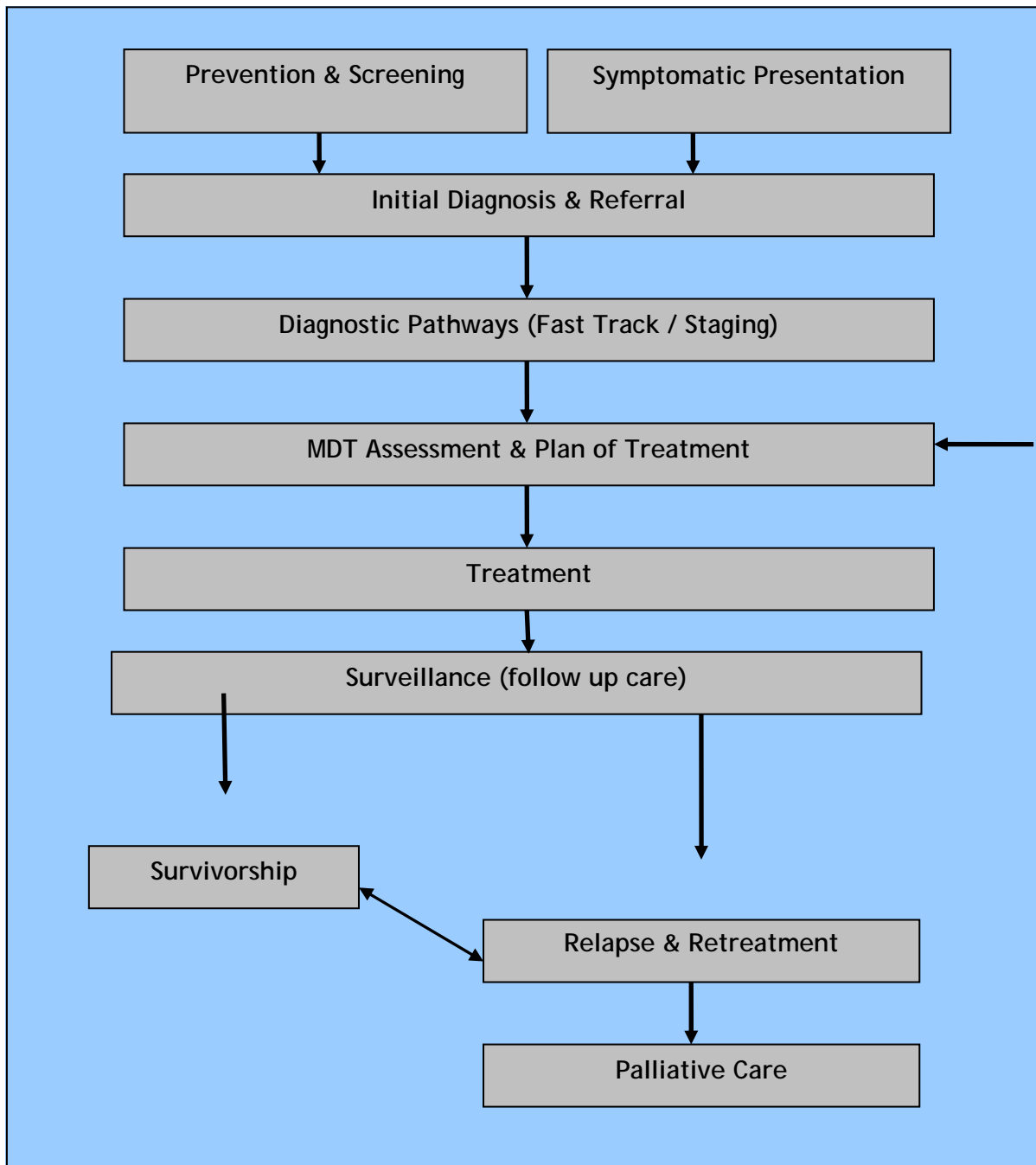
(http://www.healthnetworks.health.wa.gov.au/modelsofcare/docs/Cancer_Model_of_Care.pdf) provides the basis for this tumour site specific model of care.

This document describes how Upper Gastro Intestinal Cancer care should be delivered in WA.

The eight steps in figure 1 describe the patient centred journey that provides safe, quality, evidence based, and multidisciplinary care resulting in optimum outcomes.

Underpinning this journey is the integration of primary care, supportive care, psycho-oncology and palliative care. <http://www.healthnetworks.health.wa.gov.au/cancer/home>

Every cancer patient should have appropriate access to specialist cancer care



Screening & Prevention

Screening:

Upper Gastro Intestinal cancer is relatively uncommon and there is no demonstrated effective population based screening program. However, there are some people who are at higher risk for developing Upper GI cancers and surveillance of these individuals may be justified.

Targeted surveillance and/or screening for High Risk Individuals:

Oesophageal cancer: Achalasia, Corrosive strictures, Tylosis, Plummer-Vinson Syndrome, Barrett's oesophagus

Stomach cancer: Pernicious anaemia, previous gastric resection, new onset of dyspepsia in the over 40's

Pancreatic cancer: Family history, Hereditary pancreatitis, Ataxia-telangectasia, HNPCC, Atypical mole malignant melanoma syndrome, Chronic pancreatitis, Previous gastrectomy, UC, PSC, Choledochal cysts, Polyposis coli

Liver cancer – Chronic hepatitis B and C, Haemochromatosis, Wilson's disease, Cirrhosis

Targeted surveillance and/or screening of high risk individuals can be undertaken although the absolute benefits of such programmes have not been proven. Irrespective of the high risk group or condition, or whether living in a metro or rural location, a standardized evidence based recall surveillance or screening programme throughout the state would be the most efficient and equitable.

In regard to Barrett's oesophagus there are international guidelines⁵ that could be used in WA which detail endoscopic screening frequencies, numbers of biopsies, video measurements, treatment modalities, and pathological staging etc.^{6,7} Such endoscopies should be carried out by endoscopists certified by the Conjoint Committee for Recognition of Training in Gastrointestinal Endoscopy who are credentialed at their institutions. The reporting should be standardized and information held on a database.⁷ Reports from the pathologists should be standardized and all dysplasia or cancer findings highlighted and reported to defined individual(s) overseeing such programmes. The use of ablation therapies and operative intervention for the management of dysplasia and cancer should be discussed at a Multi Disciplinary Team (MDT) meeting and consensus decisions made. Routine use of ablation and/or funduplications should be as part of a wider trial.

As most patients only require screening every few years, it should be possible to provide this surveillance to all at-risk individuals irrespective of location. In remote areas it may be cost effective to have visiting mobile endoscopy units. Such screening visits could be combined with routine follow up strategies and new non-screening referrals to maximize efficiency. Dysplasia detected on biopsy would necessitate MDT review and treatment at a regional or metropolitan centre.

In regard to at risk individuals with hepatitis and or cirrhosis surveillance could be offered by a combination of abdominal ultrasound assessments in combination with serum AFP estimation. Assessment should be performed by an operator skilled in the assessment of patients with cirrhosis using appropriate equipment.

Patients should be aware of the implications of early diagnosis and the lack of proven survival benefit from such programmes.

Prevention:

Epidemiological factors which can be addressed.

Oesophageal cancer	Alcohol, Smoking, Reflux
Gastric cancer	Eradication of Helicobacter Pylori
Hepatocellular cancer	Hepatitis, Alcohol, Obesity
Pancreatic cancer	Smoking

The control of tobacco and alcohol use is an issue for both the state and commonwealth governments. Better education and regulation is required to have a significant impact. Increased awareness of the carcinogenic effect of obesity and the consumption of high fat and meat products should be promoted by government health promotion initiatives. The protective effect of a high intake of fruit and vegetables should also be emphasized. The control of illicit drug use and the provision of clean needles and exchange programmes are steps that could be employed to control the spread of hepatitis as well as other diseases. Improved sex education would also be of benefit. Hepatitis B vaccination programmes are of proven efficacy in reducing the development of cirrhosis associated with hepatitis.⁸ Reflux is a symptom associated with increased obesity but more education is required about the significance of long term reflux and the new onset of reflux or dyspeptic symptoms. Reduction in gastro-oesophageal acid reflux by pharmacotherapy and/or surgery and its effect on cancer risk is being investigated internationally. If shown to be effective then adoption of these strategies will require review. Helicobacter Pylori is a group 1 carcinogen and should be eradicated on detection.

Initial Diagnosis and Referral

Symptoms and signs (Oesophago-gastric cancer):

For oesophago-gastric cancers some of the cardinal symptoms are very common in the population as a whole. As such their presence is a poor predictor of pathology. General practitioner awareness of 'at risk' symptoms and 'at risk' individuals is important to facilitate early referral for assessment.

The "at risk" symptoms as defined by the UK Department of Health⁹ are as follows:

- **Dysphagia**
- **Dyspepsia** combined with one or more **alarm** symptoms or signs
 - *Weight Loss*
 - *Anaemia*
 - *Anorexia*
- **Dyspepsia of new onset** in an individual aged over 55 years or continuous since onset
- **Dyspepsia** combined with at least one of the following risk factors
 - *Family history of upper GI cancer in more than one first degree relative*
 - *Barrett's oesophagus*
 - *Pernicious anaemia*
 - *Peptic ulcer surgery over 20 years previously*
 - *Known dysplasia*
 - *Atrophic gastritis*
 - *Intestinal metaplasia*
- **Jaundice**
- **Upper abdominal mass**

Symptoms and Signs (Pancreatico-biliary cancer):

Patients with the following symptoms or signs suggestive of pancreatic cancers should be referred for evaluation:

- Obstructive jaundice
- Unexplained weight loss
- Unexplained GI bleeding or Fe deficiency anaemia from GI origin in the absence of another upper gi or colorectal cause
- Unexplained upper abdominal pain or back pain
- Unexplained steatorrhea
- Idiopathic acute pancreatitis in patients over 50 years of age
- Unexplained onset of diabetes in those over 50 years of age

Timeframe to see a specialist

Despite little evidence to support improved outcomes resulting from fast tracked referral, there may be significant psychosocial advantage to the patient and family from such an approach. The UK guidelines suggest that a specialist should see such individuals within 2 weeks of referral. The WACPCN Primary Care, Screening and Prevention collaborative are developing simplified *priority referral* forms for many cancers and their use should be encouraged.

Type of specialist

Depending on the symptoms and signs referral to a gastroenterologist, general surgeon, specialist Upper GI surgeon or physician may be appropriate. Subsequent specialist involvement will depend on the results of initial investigations.

For patients with urgent and distressing symptoms or signs, the first point of contact should be with a specialist surgeon or gastroenterologist preferably by direct communication followed by fax/letter of referral with appropriate detail of investigations already performed.

A decision on diagnostic pathways and potential fitness for surgery can be made. A streamlined system is required.

There should be one recognised point of contact in each department which eventually will be in the setting of a cancer centre. This could be a dedicated member of the team with knowledge of the system and the medical conditions being referred. Close liaison with the multidisciplinary team would be essential. This may be part of the extended role of the specialist Upper GI cancer nurse or cancer nurse coordinator (CNC) or in the case of country patients the regional CNC.

For oesophago-gastric cancer an Upper GI endoscopy is the primary investigation of choice. Primary radiology (Upper GI imaging studies) in this setting should be discouraged and open access endoscopy should be promoted.

Endoscopies should be performed by appropriately credentialed individuals preferably in dedicated Upper GI assessment centres. It is recognized that currently many endoscopies are conducted in private facilities either because of a lack of, or perceived lack of, access to the public system, or previous referral habits.

There should be a standardized referral form that can be sent to a defined location to trigger the appropriate investigation at a recognized unit by a credentialed individual within a credible timeframe, usually within 2 weeks.

The endoscopist performing the procedure should be able to digitally record the endoscopy. Photographic images should also be available and used for later discussions and comparisons. Careful standardised documentation of the lesion should be encouraged.

In cases of obstructive jaundice an ERCP should not be performed unless a pancreatic cancer has been excluded usually with a multiphase fine slice CT abdomen. Also if a pancreatic cancer is suspected then ERCP and biliary drainage should not be performed unless a patient's deteriorating condition dictates otherwise eg. Ascending cholangitis.

If a diagnosis has been made of a suspicious Upper GI lesion irrespective of its site then an urgent referral to a specialist Upper GI unit is required.

In the case of Hepato cellular cancer there are no subtle symptoms or signs, rather tumours are either detected incidentally on imaging for other conditions or are detected by targeted screening programmes. Alternatively some tumours are detected at a significantly advanced stage with jaundice, cirrhosis and weight loss. A dedicated MDT for Liver tumours (both primary and metastatic) already exists at Sir Charles Gairdner Hospital. Hepatocellular cancers detected at an advanced stage or any Hepatocellular tumour detected or suspected as a result of targeted screening should be referred to this MDT or the other tertiary hospital upper GI MDT's for prompt management decisions.

A suspicious liver lesion found incidentally or as part of a screening programme should NEVER be biopsied without prior discussion with a specialist upper GI surgeon or discussion at an upper GI MDT as potentially curable lesions may be seeded and rendered incurable by such actions.

Diagnostic Pathways

This step deals with the investigations that may be required to confirm the diagnosis of cancer and assess the extent (staging) of the cancer.

This may involve complex tests in different departments/locations and wherever possible should be coordinated to improve patient convenience and well being. Fast track, coordinated diagnostic pathways should be implemented at a system level.

At the time of the initial specialist assessment a patient may have had all necessary investigations to make a diagnosis and plan of management. More frequently further investigations may be required. The patient should not leave the first consultation without a plan. The dates for further investigations and/or treatments should also be given.

A series of tests may be assigned for that patient. These investigations may be CT, MRI, EUS, Endoscopy, ERCP, PTC, PET, or laparoscopy. Coordination of the patient journey through these investigations is critical and a nominated team member should be responsible for this important task. The Upper GI Cancer Nurse Coordinator should have a pivotal role in this process.

Priority slots should be reserved for these investigations which should be completed in a timely fashion optimally within 2 weeks. Patients with urgent symptoms such as complete dysphagia or cholangitis require fast-tracking with admission and investigation occurring in tandem. Ideally country patients will need telephone or telehealth consultations and a tentative diagnostic/treatment plan formulated and appointments booked before arriving in Perth for the specialist assessment and interventions.

Centralisation of Diagnostic and Treatment Services for Upper GI Cancers

Individuals suffering from upper GI cancers require complex investigations and difficult decisions. The relative infrequency of the conditions and the complexity of treatment require that all but the basic investigations need to occur in tertiary institutions. Currently these institutions are Fremantle Hospital, Royal Perth Hospital and Sir Charles Gairdner Hospitals in the public sector and St John of God Hospitals (Subiaco and Murdoch) in the private sector.

There is little doubt¹⁰ the best outcomes for patients suffering from upper GI cancers are obtained in high volume centres with fully trained Upper GI surgeons working in a multidisciplinary environment with access to a full range of diagnostic, intensive and supportive care facilities.

Currently there are three public hospitals managing Upper GI cancers although many gastric cancers are operated upon in more peripheral sites. Other countries have guidelines suggesting a population of 2.5 million can adequately be served by one or two institutions specialising in upper GI cancers. In the short to medium term there has to be a concentration of services at the three main public hospital sites and there should be an end to ad hoc operating of gastric cancers outside these hospitals. All Upper GI cancers should be managed as part of a specialised Upper GI unit with a MDT.¹¹

In the future, with the building of the Fiona Stanley Hospital and the service realignment of both Royal Perth and Fremantle Hospitals the management of Upper GI cancers should be concentrated at two locations namely Fiona Stanley Hospital in the South Metropolitan and Sir Charles Gairdner Hospital in the North Metropolitan areas. There may be scope to utilise both diagnostic and therapeutic facilities at appropriate, resourced and credentialed private hospitals especially if co-located, provided that all the clinicians involved are accredited and are affiliated to an Upper GI cancer service at one of the specialised cancer institutions and all cases are discussed in a MDT and included in an accredited audit process.

Some diagnostic services such as endoscopy and preliminary imaging could be offered outside the tertiary institutions, with adherence to documented protocols. It may be possible to prevent some transfers of patients from rural areas if they are obviously in the terminal stages of their disease or they are best suited for palliation only based on performance status and the results of investigations. These individuals should still be referred to the central contact point and discussed at a MDT meeting both for complete documentation and audit purposes and ensure appropriate management. To facilitate this process e-mail or faxed information should be sent to the central referral point and should include a full history and diagnostic profile as well as the performance status of the patient.

MDT Assessment and Plan of Treatment:

All patients should have access to a MDT to plan the management of their cancer. It is essential that a cancer specialist lead the MDT approach and that this be available to all patients no matter where they live. It is expected that patients in rural and remote areas will have access to this care and that this will be co-ordinated by their GP, local specialist or cancer nurse coordinator using video-conferencing or assisted travel where appropriate.

MDT Members

The multidisciplinary team comprises (in alphabetical order):

- Dietician
- Endoscopist
- General Practitioner (not necessarily present at meetings)
- Medical Oncologist
- Upper GI Cancer Nurse Coordinator and/or Specialist Upper GI Nurse
- Palliative Care representative
- Psycho-oncology representative
- Pathologist
- Radiologist
- Radiation Oncologist
- Social Worker
- Upper GI Surgeon
- Other allied health professionals, Palliative Care, Psycho-oncology may be present as appropriate

The lead role in the multidisciplinary team will be determined by the team and must take responsibility for the activity of the team.

MDT Treatment Care Plan

Treatment will be planned after all relevant investigations have been completed and reviewed. All patients with Upper GI cancer should be discussed in a MDT meeting **before** treatment is commenced, except where emergency treatment is needed. The MDT meeting must be adequately resourced to undertake the following responsibilities and should:

- Meet weekly
- The lead clinician needs to chair the meeting and guide discussions
- The specialist who makes the referral to the MDT is responsible for the patient until care is passed to another practitioner.
- Specify and document who will be the primary treating specialist
- Fully document the agreed care plan
- Use proformas when discussing patients to aid efficiency
- Quickly circulate the agreed care plan to all relevant members of the team, relevant parties and the patient
- The progression of care within the MDT should be coordinated ensuring that the patient and all care givers understand their responsibilities for delivering this care
- The GP should be informed of the planned treatment and their role in this plan
- Collaborative links need to be formed with referral centres and practitioners so that a network is created
- Have a core member of the MDT available to be present at other meetings if a

- patient's care transgresses more than one MDT
- Need to base decisions, protocols and pathways in line with best practice, including standards, guidelines, research, and currently accepted approaches to treatment

The patient and (with the patient's consent) the family should be involved in all discussions regarding treatment options. However it is not planned that the patient or any of their family members will be present at the MDT meeting.

Treatment

This step is concerned with the type of treatment that will be delivered, who will provide it and where it should be provided to ensure safe, high quality and effective care

Overview

Primary treatment of Upper GI cancers should be carried out in a small number of tertiary centres to maximize clinical experience and improve outcomes.

Surgical resection remains the mainstay of definitive curative treatment of upper gastrointestinal cancers. Appropriate staging is essential to exclude patients with unresectable or metastatic disease at presentation. Unfortunately only about 25% of patients with upper GI cancers will be suitable for potentially curative treatment. Neoadjuvant therapy should be considered in all patients where a potential survival benefit has been demonstrated.

For Hepatocellular cancers curative treatment can be by liver resection or transplantation. Other treatment modalities involving chemoembolisation, radiofrequency ablation and per cutaneous injections should also be considered but only after due consideration by a upper GI multidisciplinary team.

Surgery

Surgery should be performed in tertiary institutions that contain appropriate facilities including:

- Surgeons should possess the FRACS in general surgery or equivalent and have adequate subspecialist training and experience in Upper GI surgery that enables institutional credentialing and agreed scope of practice within this area.
- Anaesthetic services
- Intensive care/ high dependency care unit
- 24 hour medical staff availability
- 24 hour operating room access
- Diagnostic imaging
- Special investigative and operative equipment. As a minimum the following will be required: Harmonic scalpel, Ligasure, Gyrus, CUSA, Argon coagulator, Operative ultrasound probes, Laparoscopic ultrasound probes, EUS, 16 or greater slice spiral CT, MRI and PET, Endoscopes and ERCP

A full audit of all complications and mortalities and a total audit of practice should be kept and subject to regular peer review.

Whilst it is important that patients with suitably staged cancer are given the option of safe surgery, it is equally important that major resections with accompanying morbidity, economic health costs and potential treatment-related mortality are not carried out inappropriately

Radiation therapy

1. May be required for preoperative, post operative or palliative treatment.
2. Radiation therapy should be given by a radiation oncologist (FRANZCR or equivalent) with adequate training and experience that enables institutional credentialing and agreed scope of practice within this area.
3. Radiation treatment should be performed in institutions that have the

following characteristics:

Staff including nurses, radiation oncologist, radiation oncology medical physicist & radiation therapist

Facilities including:

- Dual modality LINACS
- CT planning facilities
- CT simulation
- Treatment planning system

NB: combined therapy with chemotherapy and radiation therapy needs effective coordination, especially where the facilities are not co-located.

Drug Therapy

1. Drug therapy including chemotherapy may be given prior to surgery, after surgery or in a palliative setting
2. Drug therapy may be given to those patients with locally advanced or metastatic disease
3. Drug therapy should be overseen by a Medical Oncologist (FRACP or equivalent) with adequate training and experience that enables institutional credentialing and agreed scope of practice within this area
4. Drug therapy should be given in an institution with the following characteristics:
 - 4.1 Staff including a medical oncologist, nurses with adequate training in chemotherapy administration, handling and disposal of cytotoxic waste, pharmacist with adequate training in chemotherapy medications and preparation
 - 4.2 Less complex therapies for selected patients may be given in secondary, regional or primary care settings (where no medical oncologist is locally available) by another medical practitioner or nurse chemotherapy provider with training and experience that enables credentialing and agreed scope of practice. This should be in accordance with a detailed treatment plan arising from a MDT setting, and should be under the supervision of a medical oncologist with communication and review as required.
 - 4.3 Facilities for safe administration of drug therapy include:
 - 4.3.1 Emergency care and advice after hours
 - 4.3.2 Care for neutropenic patients
 - 4.3.3 Access to haematology testing
 - 4.3.4 Cytotoxic drugs are prepared in a pharmacy with appropriate facilities, including provision and transport of such drugs from a tertiary or secondary institution
 - 4.3.5 Guidelines and protocols for the safe administration of drugs including management of extravasation
 - 4.3.6 Intensive care/high dependency unit availability

NB: Combined chemo-radiation therapy needs effective coordination, especially where the facilities are not co-located.

The current treatment of oesophago-gastric tumours involves the use of neo adjuvant therapy. The patient will have a treatment schedule planned and an operative date given. Failure to operate on this date and the possible unavailability of further operating time and/or surgeons can lead to adverse outcomes and lead to an increase patient and family stress. The majority of upper GI patients do not require ICU beds rather they require specialist monitoring and nursing care in a dedicated unit.

Surveillance (Follow-Up Care)

This step concerns the monitoring of the patient following initial treatment. The aim is the early detection of disease relapse and/or the management of symptoms arising from treatment or the disease. Surveillance also serves to assess and manage nutritional disorders, provide psychological support for patients and their carers and facilitate audit of treatment outcomes as well as providing reassurance to patients who appear to be free of disease. A clear documented plan of surveillance should be established and be available to the patient. This should avoid multiple visits to multiple specialists.

What follow up care is needed?

Overall survival outcomes for Upper GI cancer patients are poor and there are high rates of recurrent disease after primary 'curative' treatment. There is little consensus on the mode, duration or intensity of follow up for Upper GI cancer patients nor is there evidence that intensive follow up improves the rate of detection of recurrent disease. In fact there may even be a detrimental effect of planned routine appointments as delay may occur if symptoms occur *between* appointments and the patient delays presentation. Most patients however perceive regular follow up as beneficial.

Cancer nurse co-ordinators (CNC) have a major role to play in providing continuity of care between primary, secondary and community care and the development of the role could include patient follow up in nurse led clinics which will lead to fewer medically based reviews.

The CNC can also facilitate access to nutritional support and conduct audit of practice outcomes.

- Patients who are medically fit should undergo regular surveillance although the benefit is unclear
- A surveillance/follow up plan should be agreed by the patient and the coordinating MDT clinician and clearly documented in the patient record
- The surveillance plan must be communicated to the patient's general practitioner
- The surveillance plan should be individualised according to risk of recurrence and patient needs
- Clinical examination and appropriate investigations as determined by the local follow up protocol should be performed
- Spiral CT scan and Upper GI endoscopy are important investigations if recurrent disease is suspected
- The exact location of follow up will be decided in consultation with the patient, GP and treating clinician

Who should provide the follow up care:

- The MDT team in consultation with the GP will decide who should lead the follow up care
- Responsibility for follow up investigations should be agreed by the lead clinician, GP and patient and should be documented
- GPs providing follow up must be guaranteed rapid access to tertiary specialist services as required
- Patient failure to attend for follow up should be notified to the responsible clinicians
- Every effort must be made to reduce multiple visits to different treatment disciplines
- Patient specific follow up may require involvement of occupational therapists, physiotherapists, dieticians, social work, psycho-oncology support and nurses

Where should follow up be provided?

- Ideally the first planned follow up should be in a hospital clinic however patient locality and preference should be respected
- Follow up should be provided in public hospitals (tertiary and secondary), private hospitals, private specialist consulting rooms and general practitioner rooms
- Imaging studies (Spiral CT) if required can be provided by any appropriately credentialed facility using agreed protocols as long as results are conveyed to the appropriate responsible clinician
- Regional centres should be encouraged to provide coordinated follow up according to protocol, with input from the lead clinician as required, if necessary by videoconference
- The General practitioner has a key role in the coordination of follow up

Survivorship

The transition from active to post treatment care is critical to long term health. Care should be planned and coordinated. Survivors should have knowledge of their increased risk of second/ recurrent cancers or treatment related morbidities. This encourages them to actively participate in their continuing post treatment care. This approach is essential so that routine follow up visits become opportunities to promote a healthy life style, check for cancer recurrence and manage lasting effects of the cancer experience.

Long term symptom free survival is the exception rather than the rule when dealing with Upper GI cancers. All patients should have an appropriate explanation of their likely prognosis with sensitivity to their wishes in this respect and to their psychological state at that time. This explanation should occur during the treatment planning phase of care.

For the minority without signs of recurrent disease on follow up reassurance and support may be all that is required.

Re assessment of the needs of an individual as they progress along a disease trajectory needs to be a regular occurrence. These individuals often have increased levels of anxiety and have physical issues such as tiredness. There may also be difficulties arising due to later onset nutritional issues such as post surgical malabsorption, diabetes, diarrhoea and abdominal pain. Spiritual needs may also come to the fore. The Cancer nurse coordinator would be well placed to facilitate referrals to allied health, medical personnel and other individuals and institutions that provide supportive care.

Survivorship may be medically led, particularly through primary care, nurse-led or patient-led. Cancer councils across Australia are developing and evaluating approaches that are patient centred.

Relapse and Retreatment

Unfortunately, for Upper GI cancer patients, relapse will be the norm rather than the exception. The follow up regimen should detect relapse or be able to respond and confirm that relapse as soon as practical. Essentially, with the exception of resections for new Hepato-cellular Carcinoma in the liver there is no retreatment with intention to cure for any Upper GI cancer. For recurrent HCC or new HCC's the assessment is identical to primary treatment.

Palliative Care

The WA Palliative Care model defines the appropriate approach to symptom management and end of life care.

It is important that patients and their families receive optimal palliative care and early referral for assessment and advice is recommended.

It is also important to recognise that a major component of palliative care involves symptom relief and palliative treatments may require surgical, endoscopic, and/or radiological intervention as well as radiation therapy or chemotherapy.

http://www.healthnetworks.health.wa.gov.au/modelsofcare/docs/Palliative_Care_Model_of_Care.pdf

http://www.healthnetworks.health.wa.gov.au/modelsofcare/docs/Rural_Palliative_Model_of_Care.pdf

If Upper GI cancer recurs, therapeutic interventions such as endoscopic or ERCP/PTC placed stents etc are often required. Dysphagia, if present, is usually more insidious than the original presentation or patients are more attune with their warning symptoms and thus less urgency is required. However, jaundice may be rapid and early treatment is required. The placement of stents may require a combined endoscopic and radiological approach and will require experienced staff usually in a tertiary centre setting. Added to this may be the need for further palliative treatment by chemotherapy and or radiotherapy. Such treatment can and should be assessed during the same visit.

The cancer nurse coordinator could co-ordinate the investigations and the admission of these patients. Palliative care services will be actively involved in the holistic care of the patient, even if the patient is receiving active interventional medical treatment. There will be significant psychosocial issues related to a recurrence diagnosis and the co-ordinated input of many services including, social work, physiotherapy, home therapy, and psychology as well as advice from support organizations is best guided by the nurse specialist in conjunction with the treating clinician.

Recommendations

1. Treatment of Upper GI cancers should be centralised to tertiary cancer centres wherever possible, or to a limited number of specialist Upper GI tertiary units.
2. Ideally, treatment should be carried out in one North Metropolitan Cancer Centre (Sir Charles Gairdner Hospital) and one South Metropolitan Cancer Centre (the new Fiona Stanley Hospital). In the interim, contraction of locations providing this type of surgery should be encouraged, with no more than 2 or 3 tertiary centres providing this service, but it is recognised that a staged approach to this change will be required.
3. Surgical treatment of Upper GI cancers should be carried out by appropriately trained and credentialed surgeons, who maintain a full patient audit and clinical database available for peer review which should occur at regular defined intervals.
4. Radiation Oncology treatment of UGI cancers should be carried out by appropriately trained and credentialed Radiation Oncologists, who maintain a full patient audit and clinical database available for peer review which should occur at regular defined intervals.
5. Medical Oncology treatment of UGI cancers should be carried out by appropriately trained and credentialed Medical Oncologists, who maintain a full patient audit and clinical database available for peer review which should occur at regular defined intervals.
6. Any suspicious lesion or tumour in the liver should be discussed with an upper GI surgeon and/or consultant Gastroenterological specialist prior to biopsy. The practice of recommending biopsies should be actively discouraged. All radiological departments and clinicians should be made aware and frequently reminded of this.
7. All patients with Upper GI cancer MUST have their case discussed at a MDT before commencing treatment unless clinical priority dictates otherwise.
8. MDT meetings must be appropriately resourced including an MDT coordinator
9. The acquisition or development of an Upper GI clinical database and full patient audit should be a requirement of all institutions and their treating clinicians.
10. Fully documented and locally accepted evidence based protocols of care for Upper GI cancer should be developed and be available to all treating clinicians in WA
11. Treating institutions and clinicians should *adhere* to accepted evidence based protocols of care.
12. Endoscopic assessments of oesophageal-gastric cancers must be appropriately documented according to current best practice, using a proforma whenever possible
13. Streamlined referral processes from GP to specialist Upper GI centres should be developed and instituted
14. The specific needs of regional and remote patients with Upper GI cancers should be considered particularly in regard to streamlined assessment and appropriate follow up protocols.
15. Development of GP and general education programs detailing appropriate prevention, screening, referral and initial management of patients with suspected Upper GI cancers.
16. Development of appropriate facilities for patient counselling and palliative care input in busy hospital clinics; most of which currently do not have space available.
17. Development of an appropriate screening program for patients with Barrett's oesophagus

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