

Part B – Health Facility Briefing & Design
225 Oncology Unit – Medical (Chemotherapy)



iHFG

International Health Facility Guidelines

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225 Oncology Unit - Medical (Chemotherapy)

1 Introduction

Description

The treatment of cancer is complex, often involving a combination of treatment methods to be effective. The following methods may be provided, alone or in combination, as part of an individual's management plan:

- Surgical intervention
- Chemotherapy
- Radiation Therapy
- Hormone Therapy

Chemotherapy is prescribed for the treatment of diseases, especially cancers, using specific cytotoxic agents or drugs that are destructive to malignant cells and tissues. The Medical Oncology (Chemotherapy) Unit provides for the clinical treatment and management of patients undergoing Chemotherapy treatment for cancer. The function of the Unit may include:

- Chemotherapy Administration
- Administration of blood products and/or other supportive therapies
- Blood collection
- Clinical procedures and examination
- Patient and family education and support
- Clinical trial management
- Coordination of care.

Chemotherapy can be administered by various routes:

- Intravenously – through a vein or artery e.g. PICC line, Central Venous Catheter, Porta-caths
- Injection – intramuscularly or subcutaneously
- Intrathecal – into the central nervous system via the cerebrospinal fluid
- Intra-pleural – into the chest cavity
- Intraperitoneal – into the abdominal cavity
- Intra-vesical – into the bladder
- Intra-lesional/ Intra-tumoral – directly into the tumour
- Topically – either as a cream or lotion
- Orally – as a capsule.

Support services that are associated with the chemotherapy service may include:

- Physiotherapy (including lymph oedema management)
- Occupational therapy
- Dietetic / Nutrition services
- Clinical Psychology
- Social work services
- Community and outreach cancer services
- Palliative Care
- Complementary therapies (e.g. relaxation, stress management and massage)
- Wig and prosthesis services.

This document will utilise the term Chemotherapy and not Medical Oncology (Chemotherapy) throughout.

2 Planning

Operational Models

Operational models of care for a service will influence the functional planning components for the unit. Cancer service delivery is generally supported by a multidisciplinary team management approach. Chemotherapy treatment, within the multidiscipline treatment plan, is prescribed by an Oncologist and administered by nursing staff. The administration of treatments with blood products and the collection of specimens are also coordinated by nursing staff. Patient and family education may be undertaken by nurses, physicians and allied health professionals.

The role delineation of a hospital and the community service need will determine the type and range of Chemotherapy services to be provided. An endorsed Clinical Service Plan for cancer services in the local area, including planning for support services and systems, should be well documented to assist with the design, development and planning, ensuring future functionality of the unit.

Hours of Operation

The hours and days of operation will depend on the level of service being provided. Units operate on a 5 to 7 day week, with 8 – 12 hour working days.

Chemotherapy infusions administered in an outpatient facility may take from 15 minutes to 12 hours. Intensive and complex chemotherapy infusions that may take 1-4 days, often involving the sequential infusion of a variety of drugs, will require a short stay in an inpatient facility.

Service Delivery Models

This FPU is applicable to the following Operational Models

- Hospital based unit – a unit within the hospital
- Satellite Unit – on a hospital campus but not in a hospital
- Stand-alone unit – positioned in a community setting
- Integrated Cancer Care
 - Outpatients (Ambulatory Care) Unit
 - Radiotherapy/Radiation Service
 - Diagnostic Service as part of Radiotherapy Unit

Planning Models

Factors that should be taken into consideration when planning a Chemotherapy Unit include:

- The operational model chosen as part of the planning model
- Age and mix of the patient group
- Acuity of the proposed or current patient group
- Comorbidities of the patient group
- Rate of infectious diseases to be expected in the patient group.

Functional Areas

The Chemotherapy Unit may include the following Functional Areas:

- Entry / Reception including:
 - Waiting areas with amenities such as beverage making facilities, telephones, vending machines, play area for children and toilets
 - Interview room for patient/ family discussions and treatment planning
 - Storage for files, stationery, wheelchairs
- Chemotherapy Treatment Areas including:
 - Treatment chair or bed bays
 - Isolation rooms as required
 - Ensuites, Patient Toilets
 - Treatment Room
 - Cytotoxic room

- Support Areas including:
 - Bays for linen, resuscitation trolley, mobile equipment
 - Clean and Dirty Utilities
 - Cleaner's and Disposal rooms
 - IT/ Communications room
 - Staff Station
 - Store Rooms for equipment, general supplies
 - Property bay for patients
- Administration/ Office Areas with:
 - Meeting Rooms
 - Offices and workstations according to the service plan
- Staff Areas including:
 - Staff Room
 - Toilets, Shower and locker areas
- Medical Imaging (optional) including key imaging modalities required for patient treatment:
 - CT Scanning rooms with control and computer equipment
 - General X-ray with processing and reporting areas
 - MRI with control and equipment rooms, preparation and set-up room
 - Patient waiting, holding bays, change rooms and toilets

Entry /Reception

The Reception area will provide for administrative tasks, such as booking appointments and record keeping, as well as receiving and directing patients to the appropriate zone for consulting or treatment.

The waiting area should accommodate a range of patients and visitors with varied levels of ability and provide clear access to conveniently located public and patient amenities, including toilets and parenting rooms. A child play area can be incorporated into the main waiting area. Facilities for volunteers and transport staff may also be provided in this area.

Treatment Area

Patient Bed/ Chair Bays

Patient Treatment Areas should be planned to provide staff members with direct visualization of patients in treatment bays. The preferred design is to locate staff stations in the centre of the treatment spaces to allow a direct line of vision between patients and staff. Beverages and refreshments should be accessible to patients. In large Oncology Units, patient areas may be divided up into clusters of 6 – 10 chairs with small decentralized staff stations. Lounge areas may also be provided to provide patients with choices regarding where they spend their time during treatment.

Standard pressure Isolations rooms should be provided for use by patients who are infectious or require reduced contact due to compromised immune systems. Negative pressure isolation rooms may be used dependent on service plan requirements.

Consult Rooms

The Treatment area should include individual consultation rooms as well as accommodating multidisciplinary teams for patient consultation, follow-up and case review. Throughout the course of their treatment patients will be referred to other specialists and allied health personnel as required including Dietitians, Physiotherapists, Occupational Therapists and Social Workers. Interview and conference rooms may be required for patient and family education which may include computers for review of treatment programs. The Consult Rooms should be located with easy access for outpatients without treatment zones.

Treatment/ Procedure Rooms

Treatment/ Procedure rooms are recommended for catheter insertion, lumbar puncture and intrathecal chemotherapy. The rooms should have access to a dedicated lockable refrigerator for storage of intrathecal chemotherapy for short periods prior to administration.

Support Areas

Support areas include clean and dirty utilities, storage, disposal rooms, linen bays, personal protective equipment bays and handwashing facilities. Emergency support, including resuscitation equipment should be located close to centrally located staff stations to ensure rapid access in emergency situations and emergency shower and eye washing facilities should be located close to patient areas for use in case of spills of cytotoxic chemicals.

For a Stand-alone facility, support areas also include Back of House areas such as Loading Docks, Waste Compactors and Recyclables, Bulk Storage and Gas Bottle Storage (if medical gases are required).

Administration / Offices

Offices should be provided for the Clinical Director of the Unit, Radiation Oncologists, Radiation Therapy Managers, Nursing Managers, Allied Health professionals, Cancer Care Coordinators and Specialist Nurses. In a standalone facility additional offices / workstations may be required for Human Resources, Finance, Legal Services, Public Relations and Information Technology professionals. Quantities and configuration of offices is per staffing establishment.

Staff Areas

Staff Areas may be shared with adjacent Units if convenient and will consist of:

- Meeting rooms
- Staff Room
- Toilets, Shower and Lockers.

Medical Imaging

Computed tomography (CT), magnetic resonance imaging (MRI), ultrasound (US), positron emission tomography (PET) and general x-ray imaging may be used for the visualization of bone or soft-tissue during planning and review of treatment.

A stand-alone or satellite facility that does not have an efficient functional relationship with a medical imaging department may need to accommodate medical imaging facilities. CT and MRI are the most commonly used imaging facilities for treatment planning and review. The types of imaging facilities required will be determined by the service plan.

Functional Relationships

Planning should address the following key issues:

External

- Ease of access to the unit where the majority of people will arrive by car on a daily basis.
- separation of walking and stretcher/ambulance patient arrivals
- Safe access to the units storerooms for the delivery of bulk items e.g. Bulk fluids which may arrive or be stored on a palette requiring mechanical lifting, moving and storage
- Safe access for the delivery of food, clean linen, pharmacy, consumables, disposable items and the removal of bulk cytotoxic chemotherapy waste and soiled linen etc.

Internal

The internal planning of the Chemotherapy Unit should be planned by considering the units functional areas/zones.

Some of the critical relationships to be considered include:

- Staff station/s require an unobtrusive view of all patient treatment areas. The inclusion of decentralised staff stations may be considered in larger units that have multiple treatment spaces
- Providing a number of treatment spaces and/or individual cubicles in groups or clusters
- Inclusion of working spaces for visiting multidisciplinary team members.
- Location of Reception to provide a clear view of entry and exit/egress points of the Unit
- Easy access from the Waiting area to the patient treatment area for the convenient arrival and departure of patients and families

These functional relationships are represented diagrammatically below.

Functional Relationship Diagram – Oncology Unit – Medical (Chemotherapy)

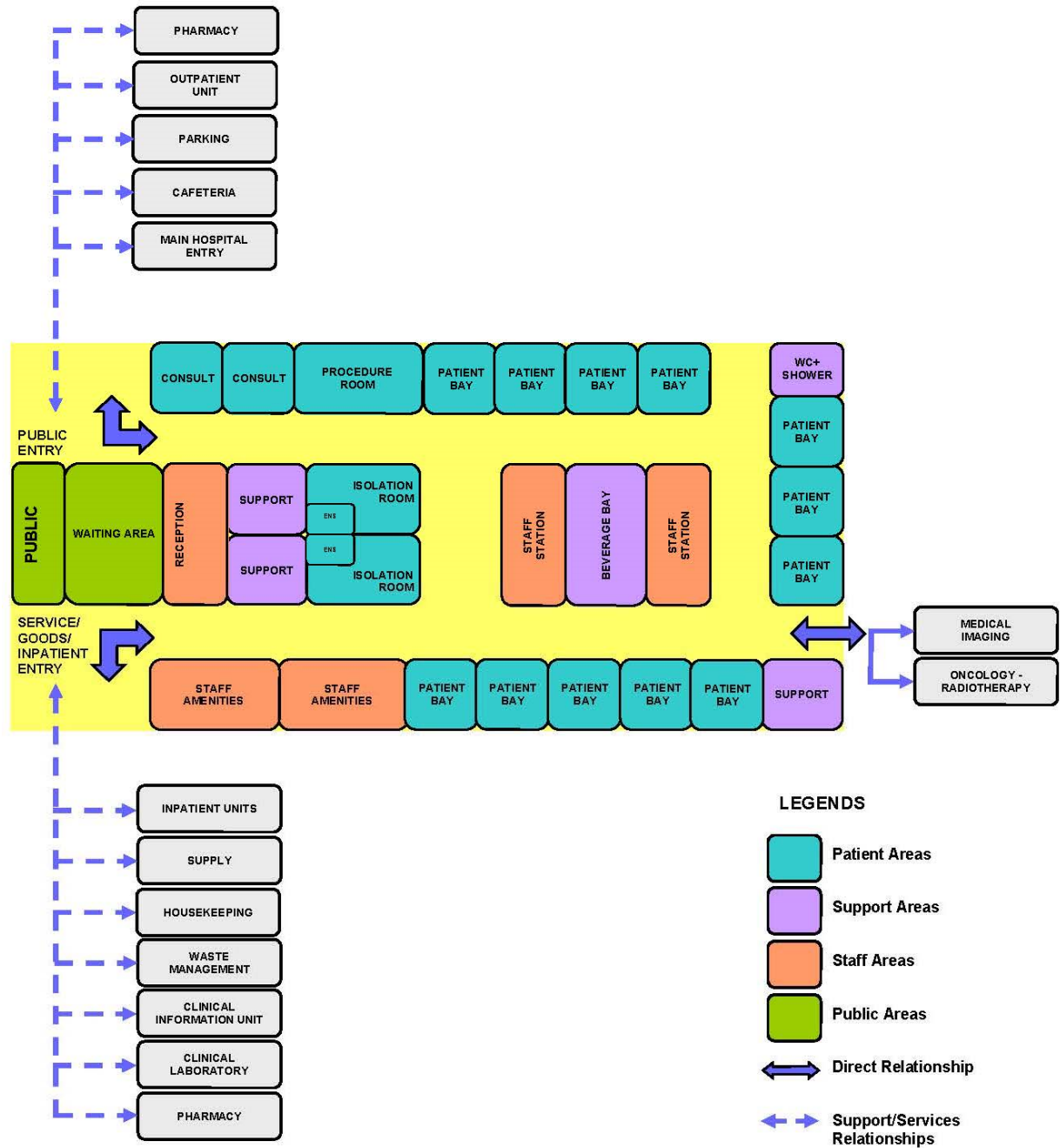


Figure 1 – Functional Relationship Diagram

The external and internal functional relationships are demonstrated in the diagram above including the following:

- Separate entry for ambulant patients and visitors
- Separate entry for patient on beds from staff corridor
- Access to key clinical units associated with patient treatment, including the Radiotherapy Unit, Medical Imaging (if not provided within the unit), Pharmacy, sterile manufacturing and clinical laboratory units, via inpatient / staff access corridor
- Access required for materials, clinical information and housekeeping via staff / service corridor
- Access to main public amenities, including parking, outpatient pharmacy, and main hospital entry (if located on a health facility campus), via the public entry corridor.

The optimum internal relationships include the following:

- Reception and Waiting at the entrance to the Unit
- Consult rooms at the entrance to the Unit
- Administration and office areas located close to Reception and at the Unit perimeter in a staff accessible area
- Patient treatment chair spaces arranged in a racetrack model with Staff Station(s) and clinical support facilities in the centre to allow clear visual access to all patient treatment bays from the Staff Stations
- Support areas located in staff areas for ease of access and to be close to the point of use.

3 Design

General

Design of the Unit should consider the following:

- Ease of access for patients and their families, who may arrive either walking, using mobility equipment, by ambulance stretcher or patient transport trolley
- Convenient access to public parking for frail patients, particularly those undergoing a scheduled period of chemotherapy on a regular basis
- Service access for delivery of large amounts of intravenous fluids to the unit on a regular basis and suitably sized storage areas to hold supplies
- Appropriate floor finishes for constant staff movement to/ from and between patients during chemotherapy treatments, such as cushioned vinyl.

Patient Treatment Areas

Patients should be situated so that healthcare providers have good visual access to ensure safety and quality care. This approach enhances staff monitoring of patient condition during treatment. The optimal design is to allow a direct line of vision between the patient and staff.

The type and number of chemotherapy spaces to be provided e.g. cubical, screened areas and isolation room numbers will be determined by the service plan, operational policies and cultural preferences of the population group using the services.

Provision for dedicated chemotherapy areas for children and young people is recommended. Where facilities are shared, patient pathways should be kept as separate as possible. Cancers that develop in children and young people are complex and differ from those that develop in adults. Early diagnosis is challenging because cancers are rare and more diverse.

Environmental Considerations

Acoustics

Acoustic privacy is required for many functions in the Unit including:

- Family/ case conference/ interview rooms
- Isolation of noisy areas such as waiting rooms from clinical areas e.g. clean and dirty utilities
- Staff discussions regarding confidential matters in meeting rooms
- Noise sources arising both within and from outside the Unit such as:
 - Sanitary Facilities
 - Equipment
 - Patients/ Clients
 - Staff Activities
 - Traffic through the unit e.g. visitors, food, linen or other trolleys

Solutions to be considered include:

- Location of the unit away from noisy hospital areas
- Use of sound isolating construction and selection of sound absorbing materials and finishes
- Planning to separate quiet areas from noisy areas
- Review of operational management and patient/client flows; this may include separate areas for patients with special needs
- Provision of television systems with headphones to reduce ambient noise levels.

Natural Light/ Lighting

Natural light and views should be available from the Unit for the benefit of staff and patients. Every effort should be made to provide a view to all treatment areas either by locating treatment bays/ cubicles/ bedrooms adjacent to a window or by locating chairs and beds to have an external view from each patient space.

High quality task lighting is essential to ensure complex medical and pharmacological tasks can be safely achieved.

Colour corrected lighting is also essential to ensure patient assessment can be conducted effectively.

Privacy

Confidentiality and privacy when requested for persons receiving treatment and the area design should be considered as a critical element during the design process. The Unit should be designed to:

- Ensure confidentiality of personal discussions and medical records;
- Provide an adequate number of rooms for discreet discussions and treatments to occur when required
- Provide suitably sized treatment spaces that permit screen curtains to be easily closed whenever required
- Appropriately locate windows and doors to enhance visual and acoustic privacy.

Interior Décor

Interior decor includes furnishings, style, colour, textures and ambience, and is influenced by perception and culture. The décor of the Unit should provide an inviting and comfortable space with a non-institutional atmosphere. Cleaning, infection control, fire safety, patient care requirements and the patients' perception of a professional environment should always be considered. Suggestions to achieve this balance include the following:

- Use of design features such as colours and artworks to distract the sight from clinical areas
- Inclusion of soft furnishings that act as a design feature such as screening, lounges in waiting areas and window treatments
- Provision of corridors at the required widths for patient access and services deliveries
- Provision of a beverage bay for people to use while waiting
- Provision of background music through a piped system or a centralised unit that can contribute to Unit ambience.

Space Standards and Components

Accessibility - External

There should be a weatherproof vehicle drop-off zone with easy access for less-mobile and wheelchair bound patients. Design should consider separate access points for ambulant patients and those arriving on stretchers or inpatient beds for patient privacy.

All patient areas should be designed for access by wheelchairs. Refer also to Part C of these Guidelines for additional information

Ergonomics

Ergonomics must be considered in the internal design of the Unit for patient and staff health and safety. Heights and depths of benches and Staff Stations in the treatment area need to allow staff to efficiently work from standing and seated positions. Consideration must be given to storage of supplies at suitable working heights including cartons of intravenous fluids in constant use. Refer also to Part C of these Guidelines for additional information

Safety and Security

A high standard of safety and security can be achieved by careful configuration of spaces and zones to include:

- Controlled access/ egress to and from the unit
- Optimal visual observation for staff to access points and patient/ visitor areas
- Use of CCTV to entry and communication systems to enable contact after normal work hours
- Colocation of similar functions for ease of staff management

Access to public areas shall be considered with care so that the safety and security of staff areas within the Unit are not compromised.

Refer also to Part C of these Guidelines.

Finishes

Internal finishes including floor, walls, joinery, and ceilings should be suitable for the function of the unit while promoting a pleasant environment for patients, family, carers, visitors and staff.

The following factors shall be considered:

- Aesthetic appearance
- Acoustic properties
- Durability
- Ease of cleaning and compliant with infection control standards
- Suitable floor finishes with respect to slip resistance and movement of equipment.

Refer also to Part C and Part D of these Guidelines for additional information.

Fixtures and Fittings

Equipment, furniture, fittings should be selected to ensure that users are not exposed to avoidable risks or injury.

A safety shower and eyewash should be provided close to patient treatment areas for cytotoxic spills.

Refer to Part C of these Guidelines and Standard Components of individual rooms for specific information related to fixtures, fittings and equipment.

Building Service Requirements

Communications & IT

It is vital to provide reliable and effective Information Technology/ Communications service for efficient operation of the Unit.

The following items should be considered during planning and will contribute to the operation of the unit:

- Electronic medical records and medical record storage systems
- Patient Administration Systems (PAS), including patient booking systems

- Electronic ordering and reporting systems e.g. prescriptions and pathology requests/ results
- Bar coding for supplies, x-rays and records
- Access to picture archiving communications systems (PACS)
- BMS alarms systems including drug fridges
- Videoconferencing, teleconferencing and telemedicine requirements
- Wireless technology requirements
- Paging, nurse call and duress alarm systems – fixed and mobile units
- Communications rooms and server requirements.

Nurse Call, Emergency Call, Duress Alarms

Nurse Call and Emergency Call facilities shall be provided in all patient areas such as bed/ chair spaces, toilets, bathrooms, consult rooms and treatment rooms for patients and staff to request urgent attention. The individual call buttons shall activate the annunciators and central module situated at or adjacent to the Staff Stations in a discreet manner.

Provision of a Duress Alarm system is required for the safety of staff members who may occasionally face threats imposed by clients/ visitors. Call buttons will be required at all Reception/ Staff Stations, Consult rooms and Treatment rooms where a staff may spend time with a client in isolation or alone. The combination of fixed and mobile duress units should be considered as part of the safety review during planning for the unit.

Heating, Ventilation, Air-conditioning (HVAC)

Air conditioning systems should be designed with consideration to provision of appropriate air exchanges and exhaust for cytotoxic chemicals. The temperature of the unit should be maintained within a comfortable range not exceeding 25 degrees Celsius for optimal operating efficiency and patient comfort. General air conditioning outlets should not be placed directly over patients on chairs, beds or trolleys.

Medical Gases

Medical gases (oxygen and suction) outlets should be provided to the following for use in patient emergencies:

- Bed spaces
- Chair spaces, may be shared between two chair spaces
- Treatment and Procedure rooms.

Infection Control

Oncology patients are at increased infection risk due to immunosuppression and frequent exposure to healthcare settings. Flooring, walls, furniture and fittings should be carefully selected to ensure effective infection control measures.

Infectious and immune-suppressed patients may occupy the same treatment space at the different times of the same day. The design of all aspects for the Unit should take into consideration the need to ensure a high level of infection control in all aspects of clinical and non-clinical practice.

Handbasins

Hand washing facilities for staff within the Unit should be readily available. Where a hand wash basin is provided, there shall also be liquid soap and disposable paper towels provided and PPE equipment.

Handbasins should be provided in single bed rooms, isolation rooms and chair bays, a minimum of 1 per 4 chair spaces, according to Infection Control guidelines.

Isolation Room/s

Isolation room(s) numbers should be reviewed as part of the Infection control risk assessment during planning of the project, relevant to the proposed service needs.

For further details relating to the Infection control refer to Part D of these Guidelines.

Chemotherapy Waste Disposal

Chemotherapy pharmaceuticals are highly toxic and designated as dangerous waste. All bulk chemotherapy waste is hazardous waste and must be disposed of at a dedicated waste facility. Chemotherapy wastes include:

- Expired drugs and aborted dosages
- All equipment used in preparing and delivering chemotherapy drugs to patients
- Contaminated personal protective equipment (PPE) and other materials.

4 Components of the Unit

The Chemotherapy Unit will contain Standard Components to comply with details described in these Guidelines. Refer to Standard Components Room Data Sheets and Room Layout Sheets.

5 Schedule of Accommodation – Oncology Unit – Medical (Chemotherapy)

Oncology – Chemotherapy (standalone unit with 12, 18, 24 & 30 spaces)

| ROOM/ SPACE | Standard Component Room Codes | RDL 2 Qty x m ² | | RDL 3 Qty x m ² | | RDL 4 Qty x m ² | | RDL 5/6 Qty x m ² | | Remarks | | | | |
|--|---------------------------------|----------------------------|---|----------------------------|----|----------------------------|----|------------------------------|---|---------|----|---|----|---|
| Entry / Reception | | 12 spaces | | 18 spaces | | 24 spaces | | 30 spaces | | | | | | |
| Airlock | AIRLE-6-I AIRLE-10-I | 1 | x | 6 | 1 | x | 6 | 1 | x | 6 | 1 | x | 10 | For standalone facilities or units with direct access from outside |
| Bay - Beverage, Open Plan | BBEV-OP-I | 1 | x | 4 | 1 | x | 4 | 1 | x | 4 | 1 | x | 4 | Optional. May be shared with a collocated unit |
| Bay - Mobile Equipment | BMEQ-4-I BMEQ-10-I | 1 | x | 4 | 1 | x | 4 | 1 | x | 4 | 1 | x | 10 | Optional. May be shared with a collocated unit |
| Bay - Public Telephone | BPH-I | | | | | | | 1 | x | 2 | 1 | x | 2 | Optional. May be shared with a collocated unit |
| Bay - Vending Machines | BVM-3-I BVM-5-I | | | | | | | 1 | x | 3 | 1 | x | 5 | Optional. May be shared with a collocated unit |
| Interview Room - Family / Large | INTF-I | 1 | x | 12 | 1 | x | 12 | 2 | x | 12 | 2 | x | 12 | For up to 8 persons. For counselling, interviews & education |
| Play Area - Paediatric | PLAP-10-I, PLAP-15-I, PLAP-20-I | 1 | x | 10 | 1 | x | 10 | 1 | x | 15 | 1 | x | 20 | Optional. Extra sound absorption may be required if located adjacent to patient treatment areas |
| Reception / Clerical | RECL-9-I RECL-12-I REC-20-I | 1 | x | 9 | 1 | x | 9 | 1 | x | 12 | 1 | x | 20 | |
| Store - Files | STFS-8-I STFS-10-I | 1 | x | 8 | 1 | x | 8 | 1 | x | 8 | 1 | x | 10 | |
| Store - Photocopy / Stationery | STPS-8-I | 1 | x | 8 | 1 | x | 8 | 1 | x | 8 | 1 | x | 8 | |
| Toilet - Public | WCPU-4-I | 2 | x | 4 | 2 | x | 4 | 2 | x | 4 | 2 | x | 4 | Separate male / female. May be shared with a collocated unit |
| Toilet - Accessible | WCAC-I | 1 | x | 6 | 1 | x | 6 | 1 | x | 6 | 1 | x | 6 | May be shared with a collocated unit |
| Waiting | WAIT-10-I WAIT-15-I WAIT-20-I | 1 | x | 10 | 1 | x | 15 | 1 | x | 15 | 1 | x | 20 | Allow 1.2m ² per person and 1.5m ² for people in wheelchairs |
| Treatment Areas | | | | | | | | | | | | | | |
| 1 Bed Room - Isolation - Standard Pressure | 1 BR-IS-N-18-I similar | 2 | x | 18 | 3 | x | 18 | 4 | x | 18 | 5 | x | 18 | May be negative pressure as required by service plan |
| Bay - Beverage, Enclosed | BBEV-ENC-I | 1 | x | 5 | 1 | x | 5 | 1 | x | 5 | 1 | x | 5 | Patient refreshments. Access to bench mounted ice dispenser. Size relevant to service provision. |
| Consult / Exam Room | CONS-I | 2 | x | 14 | 3 | x | 14 | 4 | x | 14 | 5 | x | 14 | |
| Cytotoxic Room | CYT-I | 1 | x | 8 | 1 | x | 8 | 1 | x | 8 | 1 | x | 8 | |
| En suite - Standard | ENS-ST-I | 2 | x | 5 | 3 | x | 5 | 4 | x | 5 | 5 | x | 5 | 1 per isolation room |
| Procedure Room | PROC-20-I | | | | | | | 1 | x | 20 | 1 | x | 20 | May be used for intrathecal treatments |
| Shower - Accessible | SHD-I | 1 | x | 4 | 1 | x | 4 | 2 | x | 4 | 2 | x | 4 | Patient use |
| Toilet - Patient | WCPT-I | 2 | x | 4 | 2 | x | 4 | 4 | x | 4 | 4 | x | 4 | Separate male / female |
| Toilet - Accessible | WCAC-I | 1 | x | 6 | 1 | x | 6 | 2 | x | 6 | 2 | x | 6 | Separate male / female |
| Treatment Bay - Chemotherapy | TRMT-CHE-I | 10 | x | 10 | 15 | x | 10 | 20 | x | 10 | 25 | x | 10 | See Note 1. 10m ² per chair bay or increase to 12m ² for bed bays |
| Treatment Room | TRMT-14-I similar | 1 | x | 16 | 1 | x | 16 | 1 | x | 16 | 1 | x | 16 | For lumbar puncture and venous catheter insertion procedures. Optional if procedures not part of service provision. |

| ROOM/ SPACE | Standard Component Room Codes | RDL 2 Qty x m ² | | RDL 3 Qty x m ² | | RDL 4 Qty x m ² | | RDL 5/6 Qty x m ² | | Remarks | | | | |
|-------------------------------------|-------------------------------|----------------------------|---|----------------------------|---|----------------------------|-----|------------------------------|---|-------------------------------------|---|---|-----|---|
| Support Areas | | | | | | | | | | | | | | |
| Bay - Emergency Shower | BES-I | 1 | x | 1 | 1 | x | 1 | 2 | x | 1 | 2 | x | 1 | |
| Bay - Handwashing, Type B | BHWS-B-I | 3 | x | 1 | 4 | x | 1 | 5 | x | 1 | 6 | x | 1 | 1 per 4 chairs/beds |
| Bay - Linen | BLIN-I | 1 | x | 2 | 1 | x | 2 | 2 | x | 2 | 2 | x | 2 | |
| Bay - Mobile Equipment | BMEQ-4-I | 1 | x | 4 | 1 | x | 4 | 2 | x | 4 | 2 | x | 4 | |
| Bay - Personal Protective Equipment | BPPE-I | 3 | x | 1.5 | 4 | x | 1.5 | 5 | x | 1.5 | 6 | x | 1.5 | Collocated with handwashing bays |
| Bay - Resuscitation Trolley | BRES-I | 1 | x | 1.5 | 1 | x | 1.5 | 1 | x | 1.5 | 1 | x | 1.5 | Adjacent to staff station |
| Bay - Wheelchair Park | BWC-I | 1 | x | 4 | 1 | x | 4 | 1 | x | 8 | 1 | x | 8 | May be subdivided |
| Clean Utility | CLUR-12-I CLUM-14-I similar | 1 | x | 12 | 1 | x | 12 | 1 | x | 14 | 1 | x | 14 | Increase to 20m2 if drug fridges are required to store IV fluids |
| Cleaner's Room | CLRM-5-I CLRM-5-I | 1 | x | 5 | 1 | x | 5 | 1 | x | 10 | 1 | x | 10 | Includes dry storage for cleaning consumables |
| Dirty Utility | DTUR-10-I DTUR-12-I | 1 | x | 10 | 1 | x | 10 | 1 | x | 12 | 1 | x | 12 | |
| Disposal Room | DISP-8-I | 1 | x | 8 | 1 | x | 8 | 1 | x | 8 | 1 | x | 8 | |
| IT Communications | COMM-I | 1 | x | 12 | 1 | x | 12 | 1 | x | 12 | 1 | x | 12 | Sized to meet service provision |
| Loading dock | LODK-I similar | 1 | x | 10 | 1 | x | 10 | 1 | x | 15 | 1 | x | 20 | Optional if attached to main facility |
| Property Bay | PROP-2-I | 2 | x | 2 | 3 | x | 2 | 4 | x | 2 | 5 | x | 2 | Patient property. 1 per 6 chairs/beds. May be provided as individual lockers adjacent to chairs/beds. |
| Staff Station | SSTN-5-I SSTN-10-I | 1 | x | 12 | 2 | x | 10 | 2 | x | 10 | 2 | x | 12 | May be subdivided in larger units |
| Store - Bulk | STBK-20-I similar | 1 | x | 15 | 1 | x | 20 | 1 | x | 30 | 1 | x | 30 | To be located on the perimeter of the Unit and accessible by a pallette lifter for delivery of bulk fluids and clinical stores. |
| Store - Equipment | STEQ-10-I STEQ-14-I STEQ-20-I | 1 | x | 10 | 1 | x | 10 | 1 | x | 14 | 1 | x | 20 | Sized to meet service provision |
| Store - Gas Bottle | STBD-F-I | 1 | x | 10 | 1 | x | 10 | 1 | x | 10 | 1 | x | 10 | Optional. Provide if medical gases are required to chair/bed bays |
| Store - General | STGN-8-I STGN-10-I STGN-12-I | 1 | x | 8 | 1 | x | 8 | 1 | x | 10 | 1 | x | 12 | Sized to meet service provision |
| Waste disposal | WACO-I similar | 1 | x | 15 | 1 | x | 15 | 1 | x | 20 | 1 | x | 20 | For chemotherapy cytotoxic waste |
| Waste Compactor / Recyclables | WACO-I | 1 | x | 15 | 1 | x | 15 | 1 | x | 20 | 1 | x | 20 | Satellite units may share common facilities |
| Administration / Offices | | | | | | | | | | Quantity as per Service Plan | | | | |
| Office - Single Person | OFF-S9-I | 1 | x | 9 | 1 | x | 9 | 1 | x | 9 | 1 | x | 9 | Unit / Nurse manager. Located close to patient areas |
| Office - Single Person | OFF-S9-I | 1 | x | 9 | 1 | x | 9 | 2 | x | 9 | 2 | x | 9 | Educator, Teaching Fellow, Quality Assurance manager, IT manager, etc. |
| Office - 2 Person Shared | OFF-2P-I | 1 | x | 12 | 1 | x | 12 | 1 | x | 12 | 1 | x | 12 | Clinical trials monitor, nurse coordinator, biostatistician, data manager. Provided as per service plan |
| Office - Workstation | OFF-WS-I | 1 | x | 5.5 | 1 | x | 5.5 | 1 | x | 5.5 | 1 | x | 5.5 | Nurse coordinator. Provided as per service plan |
| Office - Workstation | OFF-WS-I | 1 | x | 5.5 | 2 | x | 5.5 | 2 | x | 5.5 | 4 | x | 5.5 | Cancer care coordinators, specialist cancer nurses and palliative care nurses. Provided as per service plan |
| Office - Workstation | OFF-WS-I | 2 | x | 5.5 | 2 | x | 5.5 | 4 | x | 5.5 | 4 | x | 5.5 | For administration staff. Provided as per service plan |

| ROOM/ SPACE | Standard Component Room Codes | RDL 2 Qty x m ² | | | RDL 3 Qty x m ² | | | RDL 4 Qty x m ² | | | RDL 5/6 Qty x m ² | | | Remarks |
|-------------------------------|-------------------------------|----------------------------|---|----|----------------------------|---|----|----------------------------|---|----|------------------------------|---|----|---|
| Office - Write up (Shared) | OFF-WIS-I | 1 | x | 12 | 1 | x | 12 | 1 | x | 12 | 2 | x | 12 | Clinical reviews. Located close to patient areas. |
| Meeting Room - Medium / Large | MEET-L-15-I MEET-L-20-I | | | | 1 | x | 15 | 1 | x | 15 | 1 | x | 20 | |
| Staff Areas | | | | | | | | | | | | | | |
| Property Bay - Staff | PROP-3-I PROP-6-I | 1 | x | 3 | 2 | x | 3 | 2 | x | 3 | 1 | x | 6 | Discrete secure location, adjacent to staff room |
| Staff Room | SRM-15-I SRM-20-I SRM-30-I | 1 | x | 15 | 1 | x | 15 | 1 | x | 20 | 1 | x | 30 | |
| Shower - Staff | SHST-I | 2 | x | 3 | 2 | x | 3 | 4 | x | 3 | 4 | x | 3 | Separate male / female |
| Toilet - Staff | WCST-I | 2 | x | 3 | 2 | x | 3 | 4 | x | 3 | 4 | x | 3 | Separate male / female |
| Sub Total | | 566 | | | 699 | | | 941.5 | | | 1120 | | | |
| Circulation % | | 35 | | | 35 | | | 35 | | | 35 | | | |
| Area Total | | 764.1 | | | 943.7 | | | 1271.0 | | | 1512 | | | |

Note 1: Treatment Bays; Bay size needs to be 9 square meters with a clear width of 3 meters along the back of the bay to ensure appropriate service placement, Infusion equipment and curtain track placement; spaces of 12m² will need to be considered where more than 50% of patients are receiving chemotherapy infusions in a patient beds rather than chairs; bays should be able to accommodate beds or chairs

Also Note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
- Exact requirements for room quantities and sizes will reflect Key Planning Units identified in the Service Plan and the Operational Policies of the Unit.
- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
- Office areas are to be provided according to the Unit role delineation and number of endorsed fulltime positions in the unit.
- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

Imaging Suite (Optional. May be shared with collocated Radiation Oncology Unit)

| ROOM/ SPACE | Standard Component Room Codes | RDL 2 Qty x m ² | | | RDL 3 Qty x m ² | | | RDL 4 Qty x m ² | | | RDL 5/6 Qty x m ² | | | Remarks |
|--|-------------------------------|----------------------------|--|--|----------------------------|--|--|----------------------------|--|--|------------------------------|---|-----|---|
| Computer Tomography - CT Scanning | | | | | | | | | | | | | | |
| Change Cubicle - Accessible | CHPT-D-I | | | | | | | | | | 1 | x | 4 | |
| Computer Equipment Room | COEQ-I | | | | | | | | | | 1 | x | 8 | Size and requirements as per manufacturers specifications |
| C.T Scanning - Procedure Room | CTPR-I | | | | | | | | | | 1 | x | 45 | Size and requirements as per manufacturers specifications |
| C.T Scanning - Control Room | ANCRT-I similar | | | | | | | | | | 1 | x | 14 | |
| Preparation/ Set-Up Room (Imaging) | PREP-S-I | | | | | | | | | | 1 | x | 9 | |
| Patient Bay - Holding | PBTR-H-10-I | | | | | | | | | | 1 | x | 10 | |
| Viewing and Reporting Room | XRRR-I similar | | | | | | | | | | 1 | x | 12 | Optional. May be combined with control room |
| Waiting - Sub | WAIT-SUB-I | | | | | | | | | | 1 | x | 5.5 | Optional. Waiting may be shared between imaging rooms |
| General X-Ray | | | | | | | | | | | | | | |
| Change Cubicle - Accessible | CHPT-D-I | | | | | | | | | | 1 | x | 4 | |
| General X-Ray | GENXR-I | | | | | | | | | | 1 | x | 30 | Size and requirements as per manufacturers specifications |
| Day Light Processing | DPRO-I similar | | | | | | | | | | 1 | x | 16 | Digital processing/ printing. As required by service plan |
| Patient Bay - Holding | PBTR-H-10-I | | | | | | | | | | 1 | x | 10 | |
| Viewing and Reporting Room | XRRR-I similar | | | | | | | | | | 1 | x | 12 | Optional. May be combined with processing room |
| Waiting - Sub | WAIT-SUB-I | | | | | | | | | | 1 | x | 5.5 | Optional. Waiting may be shared between imaging rooms |
| Magnetic Resonance Imaging - MRI | | | | | | | | | | | | | | |
| Change Cubicle - Accessible | CHPT-D-I | | | | | | | | | | 1 | x | 4 | |
| Computer Equipment Room | COEQ-I | | | | | | | | | | 1 | x | 8 | Size and requirements as per manufacturers specifications |
| MRI Scanning Room | MRI-SC-42-I | | | | | | | | | | 1 | x | 42 | Size and requirements as per manufacturers specifications |
| MRI - Control Room | ANCRT-I similar | | | | | | | | | | 1 | x | 14 | |
| Preparation/ Set-Up Room (Imaging) | PREP-S-I | | | | | | | | | | 1 | x | 9 | |
| Patient Bay - Holding | PBTR-H-10-I | | | | | | | | | | 1 | x | 10 | |
| Viewing and Reporting Room | XRRR-I similar | | | | | | | | | | 1 | x | 12 | Optional. May be combined with control room |
| Waiting - Sub | WAIT-SUB-I | | | | | | | | | | 1 | x | 5.5 | Optional. Waiting may be shared between imaging rooms |
| Imaging Support | | | | | | | | | | | | | | |
| Bay - Handwashing, Type B | BHWS-B-I | | | | | | | | | | 1 | x | 1 | To patient holding bays |
| Bay - Linen | BLIN-I | | | | | | | | | | 2 | x | 2 | 1 per 2 imaging rooms |
| Bay - Personal Protective Equipment | BPPE-I | | | | | | | | | | 2 | x | 1.5 | 1 per 2 imaging rooms |
| Bay - Resuscitation Trolley | BRES-I | | | | | | | | | | 2 | x | 1.5 | 1 per 2 imaging rooms |

| ROOM/ SPACE | Standard Component Room Codes | RDL 2 Qty x m ² | | | RDL 3 Qty x m ² | | | RDL 4 Qty x m ² | | | RDL 5/6 Qty x m ² | | | Remarks |
|----------------------------|-------------------------------|----------------------------|--|--|----------------------------|--|--|----------------------------|--|--|------------------------------|---|-----|---|
| Bay - Wheelchair Park | BWC-I | | | | | | | | | | 2 | x | 4 | 1 per 2 imaging rooms |
| Clean Utility | CLUR-8-I | | | | | | | | | | 1 | x | 8 | |
| Cleaner's Room | CLRM-5-I | | | | | | | | | | 1 | x | 5 | |
| Dirty Utility | DTUR-S-I | | | | | | | | | | 1 | x | 8 | |
| Disposal Room | DISP-8-I | | | | | | | | | | 1 | x | 8 | |
| Property Bay | PROP-2-I | | | | | | | | | | 2 | x | 2 | Patient property. 1 per 2 imaging rooms |
| Shower - Patient | SHPT-I | | | | | | | | | | 2 | x | 3 | Separate male / female |
| Staff Station | SSTN-5-I | | | | | | | | | | 1 | x | 5 | To waiting / patient holding bays |
| Toilet - Patient | WCPT-I | | | | | | | | | | 2 | x | 4 | Separate male / female |
| Imaging Staff Areas | | | | | | | | | | | | | | |
| Office - Single Person | OFFIS9-I | | | | | | | | | | 2 | x | 9 | Radiologist, Radiographer |
| Office - Workstation | OFF-WS-I | | | | | | | | | | 4 | x | 5.5 | Quantity dependent on service plan |
| Property Bay - Staff | PROP-3-I | | | | | | | | | | 1 | x | 3 | |
| Staff Room | SRM-15-I | | | | | | | | | | 1 | x | 15 | |
| Shower - Staff | SHST-I | | | | | | | | | | 2 | x | 3 | Separate male / female |
| Toilet - Staff | WCST-I | | | | | | | | | | 2 | x | 3 | Separate male / female |
| Sub Total | | | | | | | | | | | 430.5 | | | |
| Circulation % | | | | | | | | | | | 40 | | | |
| Total Areas | | | | | | | | | | | 602.7 | | | |
| Grand Total | | | | | | | | | | | 2114.7 | | | including Optional Imaging Suite |

Note 1: Treatment Bays; Bay size needs to be 9 square meters with a clear width of 3 meters along the back of the bay to ensure appropriate service placement, Infusion equipment and curtain track placement; spaces of 12m² will need to be considered where more than 50% of patients are receiving chemotherapy infusions in a patient beds rather than chairs; bays should be able to accommodate beds or chairs

Also Note the following:

- Areas noted in Schedules of Accommodation take precedence over all other areas noted in the FPU.
- Rooms indicated in the schedule reflect the typical arrangement according to the Role Delineation.
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- Room sizes indicated should be viewed as a minimum requirement; variations are acceptable to reflect the needs of individual Unit.
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- Staff and support rooms may be shared between Functional Planning Units dependant on location and accessibility to each unit and may provide scope to reduce duplication of facilities.

6 Future Trends

Planning and design should consider the following developments in cancer care:

- Survival of cancer continues to improve due to improved screening, diagnostic methods and treatment options leads to increased long-term care demands.
- Leukaemia, lymphoma, germ cell tumours and early stage solid tumours once incurable have become curable malignancies and there is an increasing trend towards combination therapies involving surgery, chemotherapy and radiotherapy
- Targeted therapies, aimed at specific pathways blocking tumour cells leading to fewer side effects and complications
- Research and development into active chemotherapy combinations leading to new treatment options
- Developing international trends for cancer services to be concentrated in centres that treat high volumes of patients and offer a full range of cancer services including surgery, oncology, radiotherapy, and specialised nursing and allied health services.

7 Further Reading

- American Cancer Society. <http://www.cancer.org/index>
- Australasian Health Facility Guidelines, Part B Health Facility Briefing and Planning, Rev 5, 2016; refer to website www.healthfacilitydesign.com.au
- Cancer Council Australia, (2012). Understanding Chemotherapy: A guide for people with cancer, their families and friends. Sydney, Australia: Cancer Council Australia.
- Department of Health (UK) HSC 2008/001 'Updated national guidance on the safe administration of intrathecal chemotherapy' (2008) refer to: http://webarchive.nationalarchives.gov.uk/20130107105354/http://www.dh.gov.uk/prod_consum_dh/groups/dh_digitalassets/documents/digitalasset/dh_086844.pdf
- Department of Ecology, State of Washington, US: 'Pharmaceutical Waste'. <http://www.ecy.wa.gov/programs/hwtr/pharmaceuticals/pages/chemotherapy.html#RCRA>
- Guidelines for Design and Construction of Health Care Facilities; The Facility Guidelines Institute, 2014 Edition refer to website www.fgiguidelines.org
- Health Building Note 02-01: Cancer treatment facilities. (2013). 1st ed. [pdf] London, UK: Department of Health. Available at: http://www.dhsspsni.gov.uk/hbn_02-01_cancer_treatment_facilities_final.pdf
- NICE National Institute for Health and Care Excellence, UK 'Cancer Services for Children and Young People' (2014) <https://www.nice.org.uk/guidance/qs55>
- State of Victoria, Department of Health, (2014). A guide to chemotherapy day unit redesign measures for improvement. Melbourne, Australia: State of Victoria, Department of Health.



The International Health Facility Guidelines recommends the use of HFBS “Health Facility Briefing System” to edit all room data sheet information for your project.

HFBS provides edit access to all iHFG standard rooms, and departments, and more than 100 custom report templates.

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