COVID-19 Cancer Guidelines
Statewide Cancer Clinical Network

General Principles

This is a guideline only – individual clinical need must still be considered in discussions at prioritisation meetings.

It is recommended that prioritization meetings include involvement of a senior haematologist, medical oncologist, radiation oncologist, nursing, pharmacy and administration staff to prioritise patients clinically for active treatment to assist in managing resources within the cancer service. Where indicated radiation therapy and allied health clinicians could be included.

Oral therapies should be considered if available as an alternative to intravenous therapies for the conditions listed – below principles refer to consideration of intravenous therapies in a variety of tumour types. Where possible oral treatments should be community supplied with telehealth / telephone follow up for duration of pandemic.

Be aware that General Practice services are likely to be restricted which may limit the patient's ability to source prescriptions in the community – e.g. analgesics, supportive therapies to be used with oral anticancer agents.

Patients with conditions not recommended for prioritisation may still be offered therapy with oral alternatives and / or continued on therapies (including radiation therapy) with interrupted / delayed / longer cycle lengths.

<u>Regional Patients</u>
Limit travel between home facility and tertiary centre where possible. Options to consider:

- High risk patients remain close to the tertiary centre for care during this period
- Support decision making for lower risk patients via telehealth/telephone consults.
- Modify treatments that can be given regionally.

<u>Support for COVID impacted services</u>
Develop a plan to support cancer services significantly affected by COVID 19. Support could be telehealth consults/patient review, tele-chemotherapy or in major instances consideration of redeploying staff from cancer services to provide urgent care.

Systemic Treatment Prioritization

A - Prioritisation by treatment intent

1. Curative therapy – chemotherapy / immunotherapy alone, chemo-radiotherapy
2. Adjuvant therapy
3. Non-curative therapy

NB: neoadjuvant chemotherapy should not be routinely substituted for appropriate curative surgery.

B – Consider degree of potential benefit of therapy

1. Curative therapy – estimated percentage for chance of cure
2. Adjuvant therapy – absolute survival benefit
3. Non curative therapy – considering that “non-curative” therapy may still be associated with significant prolongation of survival in many cancer types.

C – Consider potential addition risk of COVID infection and mortality with systemic therapy *versus* benefits of therapy, especially in relation to:

1. Patient age >60-70yrs – consider utilising geriatric assessment tools in this patient age group to objectively identify those at significantly greater risk of treatment related morbidity and/or mortality (toxicity nomogram): https://www.evidence.com/models/show/520; geriatric assessment “G8”: https://www.siog.org/files/public/g8_english_0.pdf)
2. Comorbidities – especially those with cardio-vascular disease and associated risk factors
3. Performance status ECOG ≥2
4. Severity of immunosuppression

D – For patients currently on intravenous / subcutaneous therapy, consider treatment breaks

E – Consider broad use of Granulocyte colony-stimulating factor (G-CSF) to limit nadir and duration of neutropenia whenever possible

Suggested Tiered Responses

Tier	Staff	Supportive care	Chemotherapy	Radiation Therapy	Transplantation	COVID risk vs Treatment Benefits
1	Minimal staffing impact	No change	No change	No change	No change	No change
2	<80% normal staff available	Limit non-essential treatments	Use oral regimens as alternative to IV therapy	Defer external beam RT for hormone responsive tumours Defer adjuvant radioactive iodine Hypo-fractionate therapy whenever possible (e.g. breast RT)	Cease low priority autologous and allogeneic transplants, as per BMTSANZ position statement	Consider age, co-morbidities and PS prior to commencing any new treatment pathways
3	<50% normal staff available	Cease non-essential treatments	Cease non-curative therapies with minimal survival benefit, especially those with high risk of complications	Cease SCLC PCI Cease BD fractionation in H&N and small cell lung cancer Defer RT for low grade brain tumors	Cease intermediate priority autologous and allogeneic transplants, as per BMTSANZ position statement	Consider age, co-morbidities and PS prior to commencing all new *and* established treatment pathways
4	<25% normal staff available		Cease all adjuvant therapies	Cease brachytherapy	Cease high priority autologous and allogeneic transplants, as per BMTSANZ position statement	
5	<10% normal staff available		Cease all therapies	Cease all therapies		

Suggested Haematology Guidelines re: treatment prioritization

1	AML – limit offering of induction therapies to elderly patients (excluding acute promyelocytic leukaemia), based on additional risk of COVID *versus* benefit of treatment as detailed above
2	MDS – restrict commencing AZA to ≥high risk IPSS / IPSS-R scores
3	Myelofibrosis – restrict commencing new therapies to patients with ≥high risk Dynamic International Prognostic Scoring System (DIPSS / DIPSS-plus scores)
4	ALL – limit offering of induction therapies to elderly patients based on additional risk of COVID *versus* benefit of treatment as detailed above
5	Aggressive (large cell) lymphoproliferative diseases (LPD - including Hodgkin's lymphoma) – limit offering of induction therapies to elderly patients based on additional risk of COVID *versus* benefit of treatment, as detailed above
6	Indolent (small cell) low grade LPDs – restrict commencing induction therapies to patients with symptomatic advanced stage disease including ≥high risk IPI / FLIPI scores
7	Chronic Lymphocytic Leukaemia (CLL) – restrict commencing therapy to patients with Binet C / RAI III / IV disease, and / or those with LDT ≤3mths (staging of disease)
8	Myeloma – restrict commencing therapy to those patients with CRAB symptoms (acronym for common symptoms, C = Calcium, R = Renal Failure, A = Anaemia, B = Bone Lesions) only
9	Aplastic anaemia
10	Stem cell transplantation – see summary table above

Suggested Medical Oncology Guidelines re: treatment prioritization

1. **Germ cell tumours – testis / ovarian / other**
   - Curative therapy
   - Both first and second line therapies

2. **Small blue cell tumour**
   - Paediatric tumours in adult population – first line curative therapy
   - Small cell lung cancer
     - Curative – chemo-radiotherapy (CRT)
     - Non-curative
       - First line only
       - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above

3. **Breast cancer – consider oral options / S/C Traztuzumab**
   - Curative
     - Limit adjuvant therapy in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
   - Non-curative
     - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
     - PS 0/1 only
     - Consider duration of maintenance IV systemic therapy

4. **Colorectal cancer**
   - Neoadjuvant therapy for curable rectal cancer – short course radiotherapy
   - Curative – Adjuvant therapy – Stage 3 only
     - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
     - Consider oral therapy
     - Consider 3 months of therapy
   - Non-curative
     - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
     - PS 0/1 only
     - Consider duration of maintenance IV systemic therapy

5. **Lung cancer**
   - Curative
     - Chemo-radiotherapy
     - Limit adjuvant therapy in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
     - PS 0/1 only
   - Non-curative
     - Limit first line therapy in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
     - Second line only if PD1 (immune checkpoint inhibitors)
     - PS 0/1 only
     - Consider oral options
     - Consider duration of maintenance treatment

6. **Head and neck cancer**
   - Curative
     - Combined modality CRT
     - Limit induction in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
     - PS 0/1 only

7. **Upper GI**
   - Curative
     - Combined modality treatment / preoperative chemotherapy not if presently unresectable; Otherwise same selection as advanced disease
   - Non-curative
     - Limit first line in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
     - PS 0/1 only
     - Consider oral options

8. **Sarcoma**
   - First presentation of Osteosarcoma and Ewing's Sarcoma
   - Soft tissue sarcoma
     - PS 0/1
     - Limit first line in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above

9. **Brain**
   - CRT
   - No intravenous (IV) treatment (adult patients)

10. **Urology**
    - Curative – Neoadjuvant Bladder
      - PS 0/1, and definitely proceeding to definitive surgery
      - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
    - Non-curative - urothelial
      - PS 0/1 and age <70
      - First line chemotherapy and second line PD1
    - Non-curative - Prostate
      - First line Docetaxel
      - Age < 70, PS 0/1
      - Oral and LHRH antagonists should be community supplied/administered with telehealth follow up if possible

11. **Melanoma**
    - Curative – adjuvant therapy
      - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
    - Non-curative
      - PS 0/1
      - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
      - Consider duration of maintenance

12. Neuroendocrine Tumours

- Somatostatin analogue injections should be community based where possible with telehealth follow up

13. Gynaecologic Cancer

- Cervical cancer – Curative CRT
- Ovarian cancer - Neoadjuvant / First line
  - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
  - PS 0/1
  - Consider duration of maintenance
- Endometrial cancer – Adjuvant
  - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
  - PS 0/1

14. Thyroid cancer

- Oral therapy

15. Skin Cancer / Merkel cell cancer

- Non-curative
  - First line immunotherapy
  - Limit in elderly patients, based on additional risk of COVID *versus* benefit of treatment, as detailed above
  - PS 0/1

Suggested Radiation Guidelines re: treatment prioritization

NB: for treatment interruptions necessitated by COVID and/or resource issues, please refer to the following guidelines: https://www.rcr.ac.uk/publication/timely-delivery-radical-radiotherapy-guidelines-management-unscheduled-treatment

1. **Prostate cancer**
   - High Dose Rate (HDR) brachytherapy cancelled or deferred
   - If patient is responding to hormones and tolerating that, to defer external beam radiation therapy (RT)
   - For external beam RT, change to hypo-fractionated RT course as per eviQ guidelines (unless approved by Director)

2. **Thyroid cancer**
   - Defer all adjuvant therapeutic radioactive iodine

3. **Breast cancer**
   - In-situ breast cancer - defer RT
   - For localised breast cancer, treating breast only - for hypo-fractionated radiotherapy as per eviQ guidelines

4. **Lung**
   - Small cell lung cancer - prophylactic cranial RT (PCI) – defer
   - Small cell Lung cancer - Consider once daily treatment in place of BD treatments (45Gy in 15# Vs 45 Gy in 30#)
   - All palliative lung cancer - no more than 5 fractions unless approved by Director RO
   - Non-small cell lung cancer - consider hypofractionation (55Gy in 20fr)
   - Consider deferral consolidation thoracic radiation for extensive stage disease.

5. **Head and neck cancer**
   - Only one fraction per day (i.e. no twice daily fractionation and none for 6F per week) unless approved by Director Radiation Oncology
   - Defer routine naso-endoscopy investigations in routine follow-up if no cancer related symptoms

6. **Brain**
   - Glioblastoma elderly patients – for hypo-fractionated radiotherapy regime
   - Low grade brain tumours - defer

7. **Gynaecologic Cancer**
   - HDR brachytherapy – there will be limited ability to treat more than one fraction per day

8. **Skin**
   - Consider moderate hypo-fractionated regime i.e. 15-20 fractions

   - **Rectum**
   - Consider short course (25Gy/5#) for neoadjuvant rectal treatments.

9. **Palliative RT**
   - All palliative radiotherapy limit to ≤5 fractions
   - Asymptomatic palliative radiotherapy - defer

10. **Lymphoproliferative disease**
    - Continue IFRT as per standard guidelines, especially in aggressive (large cell) LPD.

11. **Acute emergencies e.g. spinal cord compression**
    - Requires Director's approval

Clinical Trials Guidelines

During the pandemic, clinical trials resource is expected to be limited.

The following guidelines are suggested to step-down trials as resource demands.

It is recommended that as soon as resource is available, that trial staff and activity be re-instated as soon as possible.

Step-down suggestions RE: trials (in order):

1. Cease recruitment to all observational / registry / non-interventional studies
2. Selective recruitment to interventional studies
    - Target first line study recruitments only
    - Defer non-local district patients
    - Defer trials requiring in-patient admission for treatment administration
3. On-site monitoring only for active treatment patients
    - Replace follow-up assessments for patient not on treatment with telehealth
4. Cease recruitment to all studies
    - Cease follow-up assessments for non-treatment patients
    - Cease all monitoring visits (active and non-non-active treatment patients)

Acronyms List

Acronym	Meaning
6F	6 fractions
ALL	Acute lymphoblastic leukaemia is a type of cancer where the bone marrow makes too many immature lymphocytes (a type of white blood cell)
AML	Acute myeloid leukaemia is a cancer of the blood and bone marrow
ASAP	As soon as possible
ASCT	Autologous stem cell transplant where stem cells are removed from a patient's body before chemotherapy treatment and then returned afterwards
AZA	Azathioprine is an immunosuppressive medication
BD	Twice-daily
BinetC	Binet staging is based on the number of areas with enlarged lymph nodes or organomegaly for chronic lymphocytic leukaemia
BSQ	Breast Screen Queensland
CLL	Chronic lymphocytic leukaemia
COVID	Illness that can affect lungs and airways and caused by a virus called coronavirus
CRT	Chemo-radiotherapy
CRAB	Symptoms for Multiple Myeloma are known as CRAB symptoms (high levels of **c**alcium, **r**enal problems, **a**naemia and **b**one problems
DIPSS	Dynamic International Prognostic Scoring System used for primary myelofibrosis uses five risk factors to predict survival
ECOG	Eastern Cooperative Oncology Group which was developed to consistently assess the impact of a person's disease on their daily living abilities
FLIPI	Follicular Lymphoma International Prognostic Index is a widely accepted tool for risk assessment of follicular lymphoma
eviQ	A free resource of evidence-based, consensus driven cancer treatment protocols and information for use at the point of care (Cancer Institute New South Wales)
G-CSF	Granulocyte-colony stimulating factor
GP	General Practitioner
HDR	High dose rate
H&N	Head and neck cancer
IFRT	Involved-field radiation therapy
IPI	International Prognostic Index score calculator for lymphoma prognosis
IPSS-R	International Prognostic Scoring System categorizes patients into risk groups
IV	Intravenous
LDT	Laboratory developed tests
LHRH	Luteinising hormone releasing hormone

LPD	Lymphoproliferative disorders
MPN	Myeloproliferative neoplasms are a related group of blood cancers
PBPC	Peripheral blood progenitor cell
PCI	Profilactive cranial irradiation
PET	Positron emission tomography
PS	Performance status
RAI III	The Rai staging system is used to define disease for chronic lymphocytic leukaemia
RT	Radiotherapy
RTS	Return to Sender
S/C	Subcutaneous
SCC	Squamous cell carcinoma
SCT	Stem cell transplantation
SMS	Short message service (text messaging service component of a telephone, internet and mobile device systems)

BMTSANZ COVID19 Position Statement 27th March 2020

In the context of a viral pandemic, utilisation of health care resources may exceed standard capacity. The impact of potential resource limitation on the needs of a stem cell transplant and bone marrow service needs to be carefully considered. Challenges are likely to include reduced availability of highly specialised health care staff due to illness or allocation to other areas of clinical service need, as well as compromised infrastructure and acute care bed capacity.

All the allogenic stem cell transplant centres heads of units in Australia and New Zealand have been in regular communication and have collectively come to a consensus regarding a number of issues:

1. Centres will identify backup donor options for patients undergoing allogeneic transplant from interstate and overseas unrelated donors including haploidentical related donors and cord blood donors. Travel restrictions and illness are likely to reduce the unrelated donor pool.
2. Centres will cryopreserve all unrelated donor products coming from international and possibly interstate prior to starting conditioning. Cryopreservation by the collecting centre will be requested as a preference.
3. Donors who have developed COVID-19 will be excluded for at least 3 months.
4. The ABMDR will update donor questionnaires to include questions specific to risk factors for COVID-19.
5. Transplant recipients will be screened for COVID-19 prior to starting conditioning. Donors and recipients should be screened for symptoms suggestive of COVID-19. Routine donor screening is recommended if feasible.
6. Centres should attempt to triage transplants. Triage will depend on patient, donor and disease factors. This should include consideration of risks of disease progression or relapse and estimated transplant related mortality. It is not possible to develop a strict triage protocol that would take into account all eventualities or the how the COVID19 pandemic will evolve. Nevertheless, in general suggestions for disease-based triage are as follows:

    - High priority: Adverse outcomes are expected if transplant is delayed for any reason other than patient factors.

        Allogeneic transplantation

            Acute leukaemia with considerations for the DRI and HCTCI

            High risk myelodysplastic syndrome not responding to bridging therapy

            Aplastic anaemia

        Autologous transplantation

            Relapsed/refractory aggressive lymphoma or Hodgkin lymphoma

            CNS lymphoma in 1st remission

            T-cell Non Hodgkin Lymphoma in 1st remission

            Multiple myeloma failing induction therapy

    - Intermediate priority: Patients can be delayed with bridging therapies used where possible to stabilise disease while awaiting transplant.

        Allogeneic transplantation

            Myelodysplastic syndrome (stable)

            Stable Myelofibrosis

        Autologous transplantation

            Multiple myeloma

            Relapsed indolent lymphoma

            MCL in first remission

High grade lymphoma in first remission

Germ cell tumours

- Low priority: Patients can be delayed with low risk of adverse outcome

  Allogeneic transplantation

  CML in chronic phase

  Low grade lymphoproliferative disorders including CLL and indolent lymphoma
  Sickle cell disease

  Immunodeficiency

  Autologous transplantation

  Autoimmune diseases (multiple sclerosis, myasthenia gravis, systemic sclerosis)

  Amyloidosis

  Clinical trials: unless the clinical trial provides standard of care transplantation that patients would otherwise receive.