

**Study Title**

PEARL – A randomised phase 3 trial of Palliative care Early in Advanced Lung Cancers.

**Protocol number**

CTC 0145 / ALTG 13/008

**Protocol version number and date**

Version 1.0, 5 August 2016

**Australian Sponsor:** The University of Sydney  
NSW 2006 Australia

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## Abbreviations

ACP	Advance care plan
ALK	Anaplastic lymphoma kinase
ALTG	Australasian Lung Cancer Trials Group
AR-DRG	Australian-Refined Diagnosis Related Groups
CCT	Clinical Care Tasks measure
CRA	Caregiver Reaction Assessment
CRF	Case report form
CTC	NHMRC Clinical Trials Centre, University of Sydney
DALY	Disability adjusted life years
ECOG	Eastern Cooperative Oncology Group
e(CRF)	Electronic case report form
EGFR	Epidermal growth factor receptor
EQ-5D-5L	Euroqol 5 item preference-based measure of health (5L)
FACIT-Sp	Functional Assessment of Chronic Illness Therapy – Spiritual Well-being
FACT-L	Functional Assessment of Cancer - Lung
HREC	Human Research Ethics Committee
HRQL	Health-Related Quality of Life
ICECAP-SCM	ICE-CAP Supportive Care Measure
ICER	Incremental cost effectiveness ratio
LY	Life years
MBS	Medicare Benefits Scheme (Australia)
MPM	Malignant pleural mesothelioma
NAT:PD-C	Needs Assessment Tool: Progressive Disease - Cancer
NHMRC	National Health and Medical Research Council
NSCLC	Non-small cell lung cancer
OS	Overall survival
PaCCSC	Palliative Care Clinical Studies Collaborative
PBS	Pharmaceutical Benefits Scheme (Australia)
PROMIS	Patient Reported Outcomes Measurement Information System
PROMIS – ED	PROMIS – Emotional Distress Forms
QALY	Quality adjusted life year
QAS	Quality-adjusted survival
QODD	Quality of Death and Dying Questionnaire
QOL	Quality of life
RCT	Randomised clinical trial
SCLC	Small cell lung cancer
SD	Standard deviation
TGA	Therapeutic Goods Administration
TOI	Trials Outcome Index

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## SYNOPSIS AND SCHEMA

<b>Background</b>	Early referral to palliative care in advanced lung cancer has been shown to improve HRQL, OS and use of health care resources in a phase 3, randomised clinical trial of patients with newly diagnosed advanced NSCLC in the US. These benefits have not been corroborated in randomised trials in Canada and Australia in mixed cancer populations. The rationale for this trial is to determine if early referral to palliative care improves outcomes for patients with advanced thoracic malignancies in the Australian health care setting.
<b>Aim</b>	To determine whether early referral to palliative care improves HRQL, OS and use of health care resources in patients with recently diagnosed, advanced thoracic malignancies.
<b>Objectives</b>	To determine the effects of early referral to palliative care on:
<b>Primary</b>	1. The frequency of sustained, substantial improvements in HRQL (FACT-L TOI)
<b>Secondary</b>	2. The change in quality of life at 12 weeks (FACT-L TOI) 3. Healthcare resource use, costs and incremental cost effectiveness 4. Specific aspects of HRQL including depression, anxiety, lung cancer symptoms and overall HRQL (FACT-L, PROMIS-ED, EQ-5D-5L, ICECAP-SCM and patient good days diary) 5. Overall survival and quality-adjusted OS (EQ-5D-5L) 6. Carer related outcomes including carer satisfaction and carer burden (Carer Reaction Assessment, Clinical Care Tasks measure, FAMCARE-2, Quality of Death and Dying Questionnaire) 7. Patient and carer understanding of illness and prognosis (2-item questionnaire) 8. Quality of end of life care, including use of advance care plans (ACP) and the use of aggressive therapies in the last month of life
<b>Tertiary</b>	9. The experience of palliative care described by bereaved caregivers (interviews).
<b>Design</b>	Non-blinded, multi-centre, randomised, phase 3 clinical trial.
<b>Population</b>	Adults with advanced thoracic malignancy (NSCLC, SCLC or MPM) that has been newly diagnosed within the last 60 days. Patients must be able to complete patient-rated questionnaires without assistance.
<b>Study arms</b>	Patients are randomly allocated to either early referral to palliative care within 60 days of diagnosis (Intervention arm) or referral to palliative care at clinician's discretion according to standard practice (Control arm). All patients will receive standard oncological care.

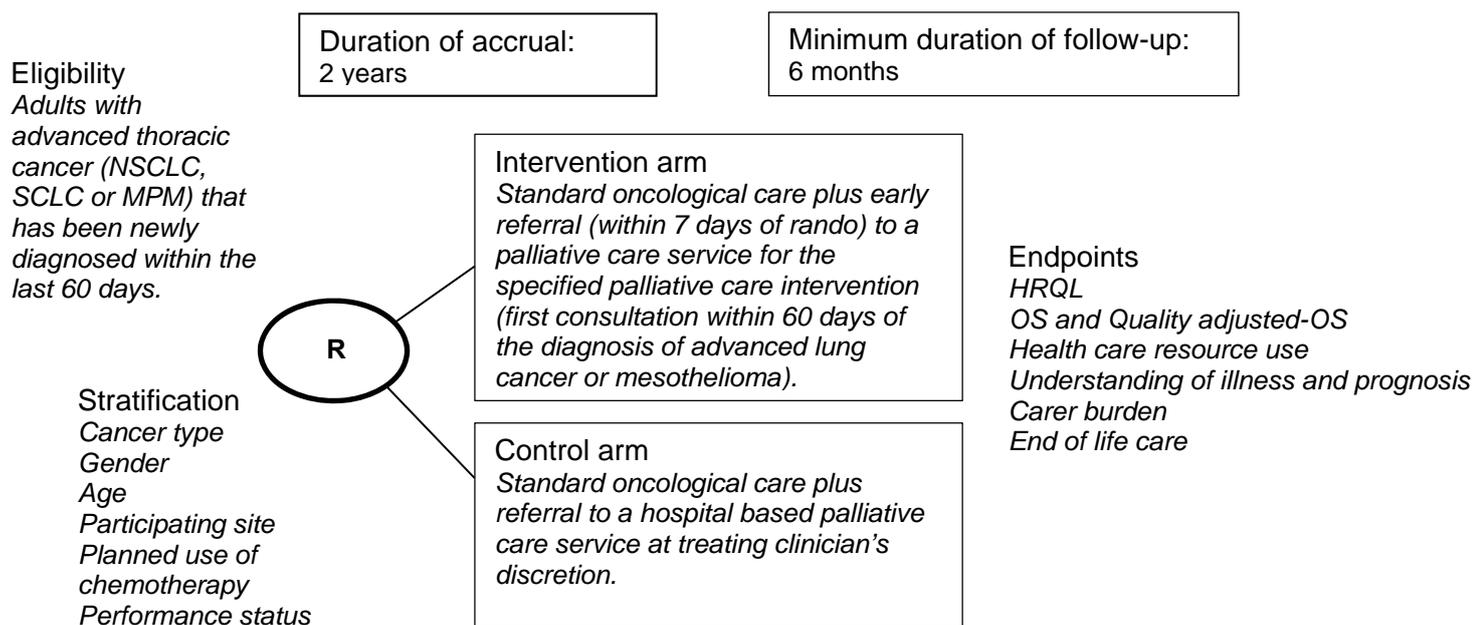
**Assessments**

Patient and carer assessments completed at baseline, every 3-4 weeks for 24 weeks, then 6-8 weekly thereafter until patient's death. An additional carer assessment is completed at 6-12 weeks after patient's death with possible interview after this time in a subset of patients.

**Statistical considerations**

The total sample size is 200 patients. This sample size provides >80% power to detect an absolute difference of 20% in the proportion of patients who achieve the primary endpoint (a clinically important and sustained improvement in HRQL from baseline) with a 2-sided significance level of 5%. The proportion of patients in each arm who achieve the primary endpoint will be reported along with 2-sided 95% confidence intervals. A chi-squared test of independence will be performed to test the null hypothesis.

## Study Schema



# 1 BACKGROUND

## 1.1 *Why thoracic cancer?*

Thoracic malignancy, encompassing lung cancer (NSCLC and SCLC) and malignant pleural mesothelioma (MPM), remains a leading cause of cancer-related morbidity and mortality. In Australia, the Australian Institute of Health and Welfare reports lung cancer as the fourth most common cancer diagnosis, and the leading cause of cancer mortality accounting for almost 20% of all cancer deaths. The incidence of lung cancer is projected to rise by 35% by 2020. Survival rates remain low despite advances in treatments and discoveries of novel targeted therapies. The 5-year survival rate in Australia for 2006-2010 was 14%, with international estimates of median survival for metastatic lung cancer ranging from 7 to 9 months.<sup>1</sup> Australia has the highest incidence of MPM in the world, and although less common than NSCLC, survival rates and times are comparable to those of NSCLC.

Thoracic cancer is a leading cause of burden of disease in Australia, resulting in the loss of approximately 50,000 disability-adjusted life-years (DALYs), about 18% of the total cancer burden.<sup>1</sup> Thoracic cancers are associated with worse quality of life (QOL), increased symptoms and unmet needs compared with other cancer types. Lutz et al report a high proportion of lung cancer patients with physical symptoms of fatigue (80%), cough (77%), dyspnoea (73%), loss of appetite (65%), chest pain (57%) and haemoptysis (17%); with greater frequency and severity of symptoms in those that survive 3 months or less.<sup>2</sup> Patients with MPM have similar symptom burden. Mood disorders are also common with depression reported in over 30% of patients being associated with shorter OS.<sup>3</sup> Impaired QOL is also associated with shorter OS, with physical functioning and dyspnoea being independently significant prognostic factors.<sup>4</sup> Cancer Australia has reported that lung cancer causes 1 in 19 cancer-related hospitalisations, and 1 in 187 of all hospitalisations in Australia. Average length of stay for a lung cancer admission was 10 days, with 77% of these admissions in patients over 60.<sup>1</sup> The number of hospitalisations has increased by >30% in the last decade, and 79% of health expenditure on lung cancer is due to services for patients admitted to hospital. Health expenditure on lung cancer increased 33% from 2000-1 to 2004-5; with this increase being greater than that for all other cancers (31%), and all other diseases (20%). A separate study of 6041 Victorian lung cancer patients by Philip et al showed that patients with lung cancer spent a median of 30 days (SD 28.6) in an acute hospital bed after first admission with advanced disease.<sup>5</sup> Western Australian data from Currow et al indicates that >70% of cancer patients have an emergency department visit in their last year of life and lung cancer is a significant predictor for attending the emergency department in the last month of life, highlighting a great need to improve the quality and cost-effectiveness of care in thoracic cancers.<sup>6,7</sup>

## 1.2 *Why early palliative care?*

Early referral to palliative care offers great promise for improving quality and cost-effectiveness of care in this setting. Studies have identified deficiencies in key areas of cancer care such as advance care planning, defining goals of care, attending caregiver needs and coordination of care across disciplines and organisations.<sup>8</sup> Patients with thoracic cancers and their carers represent a cohort of patients that is ideal for an intervention with a supportive or palliative care strategy, given their high burden of symptoms and other unmet needs.

The strongest evidence for early referral to palliative care is the landmark randomised clinical trial (RCT) published in the NEJM in 2010 by Temel and colleagues from Massachusetts General Hospital.<sup>9</sup> This trial demonstrated significant benefits for patients with newly diagnosed advanced NSCLC who were randomly allocated to receive early palliative care alongside standard oncology care in the ambulatory setting. These benefits included significantly improved QOL, mood, healthcare resources utilisation; and, less use of aggressive therapies in the last month of life (e.g. chemotherapy, emergency department visits, and intensive care unit stays). There was also more frequent documentation of resuscitation preferences in patient medical records.<sup>9-11</sup> This trial also demonstrated a surprising improvement in OS (median survivals of 12 months versus 9 months, adjusted hazard ratio 0.58,  $p = 0.02$ ), despite reduced use of aggressive end-of-life care in the

early palliative care group than the standard care group (33% vs. 54%,  $p=0.05$ ). OS was a secondary endpoint, and the survival benefit may be partly due to the play of chance given the small sample size ( $N=151$ ), but it is nevertheless remarkable that this 3 month improvement in median survival is comparable to the benefit of first-line chemotherapy for metastatic NSCLC, and likely one of the reasons that the Temel trial has been so influential.<sup>12</sup>

Other data that support an integrated care model include earlier work by Bakitas and colleagues (project ENABLE (Educate, Nurture, Advise Before Life Ends) and ENABLE II), with similar results of better QOL and mood in advanced cancer patients receiving a nurse-led intervention focused on palliative care, provided concurrently with standard oncology care.<sup>13,14</sup> However, the critical components of an early palliative care intervention remain unclear. Other than the seeing a palliative care physician once a month, the specific elements of the palliative care intervention were not defined in the Temel trial. A subsequent, qualitative analysis of medical record documentation of the “palliative care intervention” used in this RCT by Yoong et al identified key themes of these consultations as: 1) longitudinal symptom and psychosocial support; 2) elucidation of patients’ preferences for information, and improving understanding of their illness and prognosis; 3) relationship and rapport building by palliative care clinicians with patients and caregivers; 4) collaborative goalsetting and end-of life care planning in a timely fashion; and 5) complementary roles of oncologists and palliative care providers in caring for their patients.<sup>15</sup> A further sub-study suggested that patients who received early palliative care had a more accurate understanding of their disease and prognosis, which may have influenced their decision-making about cancer care, and reduced the use of intravenous chemotherapy near the end of their lives.<sup>10,16</sup>

### **1.3 Limitations of current evidence**

Notably, the Temel trial was done in a tertiary referral, academic hospital based in the US healthcare system, which differs greatly from oncology practice in Australia. For example, use of chemotherapy in the last month of life was much higher in both arms of the trial (42% vs 33%) than in Australia (<2% having chemotherapy in the last 2 weeks of life).<sup>5</sup> The US health care system does not have well-established community palliative care services that are available in Australia. In the US, palliative care services are usually only offered to those no longer having active anticancer treatment, typically in their last few weeks of life. Data about the economic effects of early referral to palliative care are limited. However, palliative care studies in other disease settings have shown lower costs of care, attributed to lower use of expensive interventions including admissions to acute hospital beds or intensive care units, other aggressive end of life care therapies, and fewer investigations, without compromising patients’ outcomes.<sup>17,18</sup>

A recent Canadian randomised trial assessed the addition of early referral to palliative care to standard oncologic care in 461 participants with a range of advanced solid cancers (20% lung) using a similar intervention to Temel. The study failed to meet its primary objective of identifying an improvement in QOL at 3 months using the FACIT-Sp.<sup>12</sup> The intervention also did not impact on symptom severity as measured by the Edmonton Symptom Assessment Scale.<sup>19</sup> However, satisfaction with care was improved at 3 months, and QOL scores after 4 months in the early referral group were superior to those in the control group.

Similarly, a recent Australian randomised trial by Tattersall, Stockler and colleagues assessed the addition of early contact with a palliative care nurse to standard oncological care in 120 ambulatory patients with newly diagnosed advanced cancer.<sup>20</sup> This trial also failed to show any improvement in symptoms or QOL. Possible explanations for the lack of benefit include the experimental intervention not being sufficiently intensive (contact with a palliative care nurse advising about palliative care services), and excellent access to palliative care services in the control group. This trial actually observed worse survival in the early referral group (medians of 7 vs 12 months, hazard ratio 1.6,  $p=0.014$ ), although this effect was less apparent after adjustment for imbalances in baseline characteristics (hazard ratio 1.5,  $p=0.06$ ). The authors recommended that future trials needed to be larger, better specify the intervention, account for baseline differences (especially between cancers), and should assess both patient reported outcomes and survival.

## **1.4 Current practice and preliminary data**

The notion of integrating palliative care with cancer care is gaining momentum in Australia. Recently, our investigators Mileskin, Philip and Le presented data from a multi-centre project across 3 Melbourne hospitals demonstrating the feasibility and acceptability to clinicians of early routine provision of palliative care for patients with incurable thoracic cancer.<sup>21</sup> A qualitative focus group study of multi-disciplinary team members from these sites identified that introduction of a model of routine early referral to palliative care would be acceptable to the majority and identified the following key themes: ability to trust the quality of service, need for streamlined care coordination, ease of referral (presence in the clinic) and management of perceived, potential, reactions of patients and families.<sup>18</sup> In addition, a quantitative survey of 42 non-palliative care members of multi-disciplinary teams at these 3 hospitals identified that most had positive perceptions of, and attitudes to, palliative care. However, only 45% of respondents reported that they routinely referred more than half of their patients with advanced thoracic cancers to palliative care. In addition, only 38% reported that they felt well trained to manage symptoms of advanced cancer themselves, suggesting that additional palliative care input would be very helpful for lung cancer service providers.<sup>21</sup>

However, despite this need and acceptance, a retrospective audit of 90 consecutive patients with advanced thoracic cancers from these 3 Melbourne hospitals showed that 19% were never referred to palliative care, and only 41% were referred within 3 months of their initial diagnosis with advanced disease. The median time from palliative care referral to death was only 46 days. A further study by Philip et al showed that while 62% received palliative care services, most were referred during their final hospital admission, with just 10% referred to palliative care around the time of their first hospital admission for metastatic lung cancer.<sup>5</sup>

Barriers to implementing early referral to palliative care may include: 1) strongly-held beliefs of patients and clinicians that palliative care means “end-of-life” care, that the type of care is “one or the other”, and misconceptions of a sharp demarcation between active oncological care and palliative care rather than a gradual transition; 2) concern that referral will lead to a sense of abandonment and loss of hope; 3) clinicians’ views that “the patient is not ready yet”; and 4) a belief by non-palliative care physicians that “I already do that”.<sup>22-26</sup> The barriers almost certainly account for the ongoing patterns of delayed referrals. Other practical barriers include the heterogeneity of palliative care services across different centres, variable (and largely insufficient) infrastructure and resources for delivery of palliative care services, and inconsistent referral patterns.<sup>24,27</sup> Managing relationships and communication flow across multiple health systems and providers can also be challenging.<sup>28</sup> Hence currently in Australia, there are no well-established early referral pathways to palliative care in disease-specific cancer streams. Major limitations of the current evidence about early referral to palliative care in thoracic cancers include: 1) randomised trials with conflicting results; 2) exclusion of SCLC and MPM in the Temel study; 3) no information about effects on carers; and 4) no information about effects on costs and cost-effectiveness. Key differences in referral patterns, funding, service models and availability are likely to affect the impacts of an intervention of this nature on local outcomes. We plan to address these deficiencies in the PEARL trial by determining if early referral to palliative care using a tailored, more intensive, but readily deliverable intervention should be integrated with thoracic cancer care in the Australian health care setting. We hypothesise that for patients with advanced thoracic cancers, early referral to palliative care compared to referral to palliative care at the clinician’s discretion will increase the frequency of sustained, substantial improvements in overall HRQL. In addition, early referral may improve specific aspects of HRQL such as anxiety, depression and lung cancer related symptoms, reduce burden for carers, improve the quality of end of life care, and be cost-effective.

## **2 AIM AND OBJECTIVES**

The aim of this trial is to determine whether early referral to palliative care improves HRQL, OS and use of health care resources in patients with recently diagnosed, advanced thoracic malignancies.

The specific objectives of this trial are to determine the effects of early referral to palliative care on:

- |                  |   |
|------------------|---|
| <b>Primary</b>   | 1. The frequency of sustained, substantial improvements in HRQL (FACT-L TOI)  |
| <b>Secondary</b> | 2. The change in quality of life at 12 weeks (FACT-L TOI)<br>3. Healthcare resource use, costs and incremental cost effectiveness<br>4. Specific aspects of HRQL including depression, anxiety, lung cancer symptoms and overall HRQL (FACT-L, PROMIS-ED, EQ-5D-5L, ICECAP-SCM and patient good days diary)<br>5. Overall survival and quality-adjusted OS (EQ-5D-5L)<br>6. Carer related outcomes including carer satisfaction and carer burden (Carer Reaction Assessment, Clinical Care Tasks measure, FAMCARE-2, Quality of Death and Dying Questionnaire)<br>7. Patient and carer understanding of illness and prognosis (2-item questionnaire)<br>8. Quality of end of life care, including use of advance care plans (ACP) and the use of aggressive therapies in the last month of life |
| <b>Tertiary</b>  | 9. The experience of palliative care described by bereaved caregivers (interviews) (sub-study/subset of carers)   |

### 3 DESIGN

This is a multi-centre, non-blinded, phase 3, randomised controlled clinical trial.

Participants will be allocated to one of the two study arms in a ratio of 1:1 (early referral to palliative care within 60 days of cancer diagnosis plus palliative care intervention plus standard oncological care OR discretionary referral to palliative care plus standard oncological care) by a central randomisation system that stratifies for:

1. Cancer type non-small cell lung cancer (NSCLC) which is EGFR or ALK mutation positive versus NSCLC which is EGFR and ALK mutation negative/unknown versus small cell lung cancer (SCLC) versus malignant pleural mesothelioma (MPM)
2. Gender
3. Age (younger than 70 years vs 70 years and older)
4. Planned or current use of chemotherapy
5. Australia-modified Karnofsky performance status (70 or lower vs 80 and above) (see Appendix 1)
6. Study site.

### 4 STUDY POPULATION

Patients must meet all of the inclusion criteria and none of the exclusion criteria to be eligible for this trial. No exceptions will be made to these eligibility requirements at the time of randomisation. All enquiries about eligibility should be addressed by contacting the NHMRC CTC prior to randomisation.

## **4.1 Target Population**

The target population is adults with advanced NSCLC, SCLC or MPM that has been newly diagnosed within the last 60 days.

## **4.2 Inclusion Criteria**

1. Adults, aged 18 years and older, with a histological or cytological diagnosis within the last 60 days of either:
  - (a) Advanced NSCLC (this includes de novo stage IV disease, recurrent NSCLC after definitive treatment, and locally advanced disease which is not planned for curative treatment), or
  - (b) Extensive stage SCLC, or
  - (c) Advanced MPM which is not planned for extrapleural pneumonectomy or pleurectomy-decortication.
2. Australia-modified Karnofsky performance status of 50 to 100 at the time of randomisation (see Appendix 1).
3. Willing and able to comply with all study requirements, including ability at the time of screening to complete the QOL questionnaires without assistance, in accordance with protocol requirements.
4. Signed, written informed consent.

## **4.3 Exclusion Criteria**

1. Immediate referral to palliative care required, or already referred to palliative care (this includes referral to a community or hospital based palliative care service, or palliative care physician).
2. Life expectancy of less than 3 months.
3. Serious medical or psychiatric conditions that might limit the ability of the patient to comply with the protocol.

## **4.4 Study Enrolment**

### **4.4.1 Screening**

#### **4.4.1.1 Patient consent**

Written informed consent must be signed and dated by the patient, and signed and dated by the Investigator, prior to any study-specific assessments being performed.

#### **4.4.1.2 Carer consent**

Patients will be asked at screening to nominate a carer who would be willing to complete study assessments. A carer may be any person (including a relative or friend) whom the patient:

- (a) Perceives to be their main support person (primary carer)
- (b) Agrees for the research team to approach for potential research participation; and
- (c) Is agreeable to have their medical information shared.

Written informed consent must be signed and dated by the carer, and signed and dated by the Investigator, prior to any trial-specific carer assessments being completed.

It is preferable for patients to have a nominated carer however patients unable to nominate a carer who are willing to complete the trial assessments will still be eligible for the trial.

## 4.4.2 Randomisation

Patients meet all on-trial eligibility criteria before being randomised and before starting the trial intervention.

Randomisation will be performed according to the instructions in the Study Manual.

Once the randomisation process has been completed, the patient will be assigned to an intervention group. Written confirmation of randomisation will be provided to the site.

For participants in the intervention arm, the early referral to a palliative care service should be completed within 7 days of randomisation.

Individuals may only be randomised once in this trial.

## 5 STUDY INTERVENTION

### 5.1 Study arms

Arm	Intervention
Intervention arm	Standard oncological care plus <i>early referral</i> (within 7 days of randomisation) to a palliative care service for the specified palliative care intervention (first consultation within 60 days of the diagnosis of advanced lung cancer or mesothelioma).
Control arm	Standard oncological care plus <i>referral</i> to a hospital based palliative care service at treating clinician's discretion.

#### 5.1.1 Palliative Care Intervention

The Palliative Care Intervention in this trial will include:

1. An initial structured, palliative care consultation with a hospital-based palliative care service using the NAT:PD-C tool

AND

2. A case conference between the hospital-based palliative care service and the patient's general practitioner (GP) within 28 days of the initial palliative care consultation

AND

3. Prescribed, regular follow-up with the hospital-based palliative care service after the initial consultation according to the patient's needs every 3-4 weeks.

Palliative care consultations will be hospital-based and with a palliative care physician, specialised palliative care registrar or specialised palliative care nurse, according to institutional preferences and resources. The content of palliative care consultations will be based on the current National Comprehensive Cancer Network guidelines for palliative care (2012).<sup>28</sup> Consultations will include an assessment of physical, psychological, social and spiritual needs of the patient, will appropriate provision of additional medication (for example, analgesia) and referral to additional support services as required. By nature of this care, it is bespoke and further tight definitions or strict requirements of the intervention are not possible. To ensure a standard structure and approach to consultations across different centres, providers will also use the Palliative Care Needs Assessment Tool: Progressive Disease – Cancer (NAT:PD-C) during the consultation to allow tailoring to the patient's needs (see Appendix 13).

In addition, all palliative care consultations will be recorded, and 1 in 6 subsequently audited, to compare the fidelity of the consultations to the information documented by the clinician on the NAT:PD-C (see Appendix 13).

Following the initial consultation, a case conference by telephone will occur with the patient's GP, providing they have one, within 28 days. This will be attended by the GP and relevant palliative care doctor/nurse, as well as the patient and/or carer if they wish. The GP will be eligible to obtain a Medicare rebate for the consult.

The initial consultation with the palliative care service for patients allocated to the intervention arm should occur within one month of the date of randomisation and must be a face to face meeting with the patient. Subsequent follow-up consultations with the palliative care service should also occur in person. However, if the patient is too unwell to attend the hospital then the consultation, may be performed by telephone or in the community if the patient is well enough to participate. The NAT:PD-C (see Appendix 13) should be completed at each of the follow-up consultations.

It is recommended (but not mandatory) that patients in the Control arm receive the same Palliative Care Intervention outlined above, if or when they are referred to a palliative care service.

### **5.1.2 Required Background Treatment**

All patients will receive standard oncological care which may include receiving chemotherapy or radiotherapy, as clinically indicated. Details of all anticancer treatment received by the patient will be recorded in the (e)CRF.

### **5.2 Palliative Care Intervention Discontinuation**

The reasons for discontinuing trial intervention will be documented in the patient's medical record and (e)CRF.

Patients who decline further palliative care intervention as recommended in the protocol will be requested to continue follow-up visits according to the protocol.

If a patient wishes to stop the trial visits, they will be requested to allow their ongoing health status to be periodically reviewed via phone contact or from their GP or medical records.

## PEARL

### 6 ASSESSMENT PLAN

#### 6.1 Schedule of Assessments

Timing	Randomisation	Weeks 0 to 24		Beyond week 24		After patient's death	
	<i>Baseline</i> <sup>1</sup>	<i>Every 3-4 weeks</i>	<i>Weeks 6-8, 12-16, 24 (+/- 2 weeks)</i>	<i>Every 6-8 weeks</i>	<i>Every 12 weeks</i>	<i>Carer follow-up 1 (performed 6-12 weeks after the patient's death)</i>	<i>Carer follow-up 2 (performed 2-6 months after the patient's death)</i>
Informed consent (patient and carer)	X						
Clinical assessment <sup>2</sup>	X						
Australia-modified Karnofsky Performance Status	X	X		X			
Patient QOL assessments <sup>3</sup> FACT-L EQ-5D-5L ICECAP-SCM	X <sup>3</sup>	X <sup>3</sup>		X <sup>3</sup>			
Health resource use		X		X			
Good days diary	X	X		X			
PROMIS-ED (patient and carer)	X		X		X		
Illness understanding (patient and carer)	X		X		X		
Carer assessments <sup>4</sup> CRA CCT	X <sup>4</sup>	X <sup>4</sup>		X <sup>4</sup>			
FAMCARE2 (carer)			X		X		
QODD (carer)						X	
Carer interview (sub-study)							X

#### Footnotes:

<sup>1</sup> To be performed within 7 days prior to randomisation

<sup>2</sup> Clinical assessment includes a directed history and physical examination

<sup>3</sup> Patient QOL assessments should be completed **before** any scheduled oncology or palliative care clinic visits

<sup>4</sup> It is recommended that the carer be the same person throughout the trial. If a carer is unable to attend a patient consultation, carer assessments may be mailed to the carer in prepaid return envelopes.

## **6.2 Schedule of study assessments**

Before trial entry, throughout the trial, and after patient death, patient and carer assessments are performed at specified intervals to ensure consistent data collection during each patient's disease trajectory. Clinical evaluations may be required more frequently, if clinically indicated. The Schedule of Assessments is provided in Table 6.1.

## **6.3 Description of Patient Reported Outcomes**

### **6.3.1 Functional Assessment of Cancer Therapy-Lung (FACT-L)**

The Functional Assessment of Cancer Therapy - General (FACT-G) is a reliable and validated self-reported measure that assesses 4 dimensions of well-being: physical, social/family, emotional and functional well-being. A lung cancer specific sub-scale (LCS) of the FACT consisting of 7 items has been developed and can be combined with the FACT-G questionnaire. Together, the FACT-G and LCS are referred to as the FACT-L questionnaire which consists of 34 items.<sup>29,30</sup> Items are rated on a 5-point scale and summed to give a score from 0-136, with higher scores indicating worse QOL (see Appendix 2).

### **6.3.2 PROMIS Emotional Distress Forms (PROMIS-ED)**

The PROMIS is a National Institutes of Health (US) Roadmap initiative designed to improve self-reported outcomes using state-of-the art psychometric methods. PROMIS has developed item-banks for anxiety and depression which are validated, self-reported measures of anxiety and depression, respectively.<sup>31</sup> Short forms are available for these measures of emotional distress which comprise 15 items which independently measure anxiety (7 items) and depression (8 items), respectively. Items are rated on a 5-point scale and summed to give a score from 7-35 for anxiety and 8-56 for depression, with higher scores indicating increased severity of symptoms (see Appendix 3).

### **6.3.3 Euroqol 5 item preference-based measure of health (EQ-5D-5L)**

The EQ-5D-5L is a preference-based multi-attribute utility index and is the most widely used measure for estimating QALYs.<sup>32,33</sup> It comprises 5 domains (mobility, self-care, usual activities, pain/discomfort and anxiety/depression) each of which are rated on a 5-point scale. In addition, there is a global health rating on a scale from 0-100 (see Appendix 4).

### **6.3.4 ICE-CAP Supportive Care Measure (ICE-CAP SCM)**

The ICE-CAP SCM is a relatively new instrument that has been developed as a tool for use in economic evaluation conducted in an end of life setting.<sup>34</sup> It contains 7 items rated on a 4 point scale and covers the following capabilities: physical suffering, emotional suffering, choice/having a say, being supported, being with people who care, dignity and preparation (see Appendix 5).

### **6.3.5 Patient good days diary**

Participating patients will be asked to rate the quality of each day from randomisation by answering the question: "how would you rate the last 24 hours, all things considered" on a 5 point scale (1 poor, 2 fair, 3 good, 4 very good, 5 excellent). This "good days diary" rating will be used to calculate the number of good days (good, very good or excellent) each patient has from randomisation till death (Appendix 11).

### **6.3.6 Patient and carer understanding of illness and prognosis**

Patients and their carers (if available) will be asked to complete a 2 item self-report questionnaire to assess their perception of prognosis and goals of therapy (see Appendix 12). This questionnaire was utilised in the Temel trial.<sup>16</sup>

## **6.4 Description of Carer assessments**

### **6.4.1 Caregiver Reaction Assessment (CRA)**

The CRA is a self-rated measure of caregiver burden. It comprises a total of 24 items with 5 general components: caregiver esteem, lack of family support, impact on finances, impact on schedule and impact on health (see Appendix 6).<sup>35</sup> The CRA is widely used in caregiver research and validity has been demonstrated in caregivers of advanced cancer patients.

### **6.4.2 Clinical Care Tasks measure (CCT)**

The CCT assesses objective caregiver burden by measuring the care tasks conducted by the caregiver.<sup>36</sup> It comprises 26 items in 3 broad categories: activities of daily living, instrumental activities of daily living and clinical care tasks (see Appendix 7).

### **6.4.3 PROMIS Emotional Distress Forms (PROMIS-ED)**

Carers will be asked to complete the PROMIS-ED which comprise 15 items which independently measure anxiety (7 items) and depression (8 items), respectively. This questionnaire is described in more detail in section 6.3.2 (see also Appendix 3).

### **6.4.4 FAMCARE-2**

FAMCARE was developed to measure the degree to which family members are satisfied with a patient's end-of-life care.<sup>37</sup> FAMCARE-2 is a revised and validated tool that includes 17 items in 4 broad components: management of physical symptoms and comfort, provision of information, family support and patient psychological care (see Appendix 8).

### **6.4.5 Quality of Death and Dying Questionnaire (QODD)**

The QODD is a well-validated and reliable after death assessment questionnaire for carers regarding their perception of quality of death and distress in the last week of life.<sup>38,39</sup> It comprises 17 items on a 10-point scale (see Appendix 9).

### **6.4.6 Carer understanding of illness and prognosis**

Carers will be asked to complete a 2 item self-report questionnaire to assess their perception of the prognosis and goals of therapy for the patient for whom they provide care (see Appendix 12). This questionnaire was utilised in the Temel trial.<sup>16</sup>

### **6.4.7 Carer interview**

A sub-set of carers in each arm of the trial will be identified to participate in semi-structured telephone interviews to explore carer perceptions of palliative care delivery, in particular, its timing. Consecutive sampling of carers will be supplemented by purposive sampling to ensure representation across age, gender, diagnoses and regionality. An anticipated sample of 15 carers from each trial arm will be required to reach data saturation. Interviews will be recorded, transcribed verbatim and analysed using conventional steps of thematic analysis (see Appendix 10).

## **6.5 Patient or carer unable to attend clinic visits**

In some cases, a patient or carer will be unable to attend a clinic visit at the time of one (or more) of their scheduled assessments, however it is still very important to be able to capture their required QOL data.

If a patient or carer is unable to attend a clinic visit at the time of a scheduled assessment, patient QOL assessment and/or carer assessment (whichever is applicable) may be mailed in a reply paid envelope to the patient or carer (as applicable) for completion. Telephone consultations or home visits are also permitted to perform scheduled assessments.

## **6.6 Health resources use**

Information on the following health-care resource usage will be collected: hospitalisations or emergency department presentations (for all participants by trial staff via a standard (e)CRF), visits to health professionals (for Australian participants via Medical Benefits Schedule (MBS)), and medications (for Australian participants via Pharmaceutical Benefits Scheme (PBS)). Consent will be sought from Australian participants for access to their MBS and PBS records.

Participant healthcare resource use will be collected from the date of randomisation to death or end of trial in a number of ways including:

1. The number of inpatient hospital days and associated Australian-Refined Diagnosis Related Groups (AR-DRGs) will be recorded. Inpatient hospital days are defined as the number of days that a patient is admitted to an acute care hospital and/or palliative care unit (including a hospice).
2. The number of hospital emergency department admissions and reason for admission
3. The number of intensive care unit admissions and reason for admission
4. The number of appointments with General Practitioner (GPs) and other specialist visits (including palliative care and oncologists)
5. The number and type of allied health specialist appointments
6. Use of pharmaceuticals
7. Use of anticancer treatments like chemotherapy, targeted therapy, immunotherapy and radiation therapy.

## **6.7 Follow-up after Treatment**

Patients will be followed up until the trial endpoint is reached (i.e. death) by phone/clinic visit.

# **7 OUTCOMES, ENDPOINTS AND OTHER MEASUREMENTS**

## **7.1 Lung cancer-specific Health Related Quality of Life (HRQL)**

The primary outcome is lung cancer-specific HRQL assessed by the Functional Assessment of Cancer Therapy-Lung (FACT-L) Trials Outcomes Index (TOI). This comprises the sum of scores from 21 items on the physical well-being, functional well-being and lung cancer specific subscales of the FACT-L questionnaire. Items are rated on a 5-point scale and summed to give a score from 0-84, with higher scores indicating better QOL.

The primary endpoint for this trial is a clinically important improvement in the FACT-L TOI. This is defined as an improvement of 5 points or more from baseline, which is maintained for at least 2 consecutive assessments and which occurs within 6 months from randomisation.

## **7.2 Change in QOL at 12 weeks**

A secondary endpoint for this trial is an improvement in QOL at 12 weeks. This is defined as change in baseline to 12 weeks in the score on the FACT-L TOI.

## **7.3 Healthcare resources use, costs and cost-incremental effectiveness**

The aim of the economic evaluation is to determine the incremental cost-effectiveness and cost-utility of early referral to palliative care versus discretionary referral. This evaluation will focus primarily on the health care perspective. Outcomes of interest will include: incremental costs, gains in QOL and quality adjusted life years (QALY) gained compared to the comparator. From these data, the incremental cost per life year gained (Dollars/LY) and incremental cost per QALY gained (Dollars/QALY) will be calculated.

Effects on out-of-pocket costs and other financial burdens for patients and their families will be assessed as secondary objectives.

Australian unit costs will be applied to the resource usage data (e.g. AR-DRGs) costs for hospitalisations, and scheduled costs for MBS and PBS items including anticancer treatments like chemotherapy, targeted therapy, immunotherapy and radiation therapy). This will enable estimation of health care usage and costs outside of hospital ultimately providing an incremental cost of adding early referral of palliative care to standard treatment.

Quality-adjusted survival (QAS) time will be used to quantify the incremental effectiveness of new treatment. QAS will be calculated by applying Australian utility weights for quality of life derived from the 'utility instrument' to survival data using established methods.

#### **7.4 General HRQL**

A secondary objective is to evaluate the effect of early referral to palliative care on specific aspects of HRQL including depression, anxiety, lung cancer symptoms and overall HRQL. These will be assessed using FACT-L (see Appendix 2), PROMIS-ED (see Appendix 3), EQ-5D-5L (see Appendix 4) and ICECAP-SCM (see Appendix 5). These tools as described earlier comprise multiple items which are scored providing an overall score for each questionnaire. The percentage of patients reporting these specific aspects of HRQL will be determined at baseline and at each time specified in the schedule of assessments.

Participating patients will be asked to rate the quality of each day from randomisation by answering the question: "how would you rate the last 24 hours, all things considered" on a 5 point scale (1 poor, 2 fair, 3 good, 4 very good, 5 excellent). This "good days diary" rating will be used to calculate the number of good days (good, very good or excellent) each patient has from randomisation till death (Appendix 11).

#### **7.5 Overall Survival (OS) and quality-adjusted OS**

OS is defined as the interval from the date of randomisation to date of death from any cause. Patients who are still alive, or whose status is unknown, at the end of follow-up will be censored on the date of last known follow-up alive.

Quality-adjusted OS will be used to quantify the incremental effectiveness of early referral to palliative care. Quality-adjusted OS will be calculated by applying Australian utility weights for quality of life derived from the EQ-5D-5L (see Appendix 4) to survival data using established methods.

#### **7.6 Carer related outcomes**

Carer related outcomes including carer satisfaction with care, carer mood and burden, and after death assessment will be assessed using various carer-specific questionnaires including the CRA (see Appendix 6), CCT (see Appendix 7), PROMIS-ED (see Appendix 3), FAMCARE-2 (see Appendix 8) and QODD (see Appendix 9). These tools (as described earlier) are comprised of multiple items which are scored providing an overall score for each questionnaire. Carer satisfaction will also be assessed with a sub-set of carers using semi-structured interviews.

#### **7.7 Understanding of illness and prognosis**

The accuracy of patients' and their carers' understanding of prognosis and goals of care will be assessed using a 2 item questionnaire asking yes/no questions regarding understanding about whether or not the cancer is curable and the goals of care (see Appendix 12).

#### **7.8 Quality of end of life care**

Quality of end of life care will be assessed by comparing the rates of the following descriptions:

1. Existence and timing of documentation of an advanced care plan in the patient's medical record; and

## 2. Aggressiveness of therapy use in the last month of life.

Aggressiveness of therapy use will be described by recording:

- a. Receipt of any chemotherapy within 30 days of patient's death
- b. Commencement of a new chemotherapy regimen within 30 days of the patient's death
- c. Receipt of radiotherapy within 14 days of patient's death
- d. The number of emergency department visits, acute hospital admissions and intensive care unit admissions in the last 30 days of life; and/or
- e. The duration of stay in an acute hospital in the last 30 days of life.

### **7.9 Key elements of palliative care consultation**

A tertiary objective of this trial is to determine the key elements of the trial intervention to inform future trial design/care. This will be assessed using semi-structured interviews to capture the experience of palliative care as described by the bereaved caregivers.

## **8 STATISTICAL CONSIDERATIONS**

### **8.1 Sample Size**

The planned sample size is 200 patient participants (100 per treatment group) recruited over 2 years with a minimum additional follow-up of 6 months. This sample size provides over 80% power to detect an absolute difference of 20% in the frequency of a clinically important and sustained improvement in HRQL from baseline, e.g. from 40% in the control arm to 60% in the study arm, using a two-sided significance level of 5%. Assuming a consent rate of 65%, approximately 310 patients will need to be approached about the trial.<sup>40</sup>

### **8.2 Statistical Analysis**

A comprehensive statistical analysis plan will be produced by the study statistician, containing additional detail on the methods summarised below. It will be approved by the trial management committee prior to any analyses being undertaken.

All analyses will be performed according to the intention to treat principle: that is, all eligible randomised patients will be included and analysed according to the study arm to which they were randomised, regardless of intervention received. Methods of accounting for missing data will be described in the statistical analysis plan.

The primary endpoint for this trial is a clinically important improvement in the FACT-L TOI. This is defined as an improvement of 5 points or more from baseline, which is maintained for at least 2 consecutive assessments. The proportion of patients in each arm who achieve the primary endpoint will be reported along with two-sided 95% confidence intervals. A chi-squared test of independence will be performed to test the null hypothesis that the proportions are equal against a two-sided alternative, using a 5% significance level. Supplementary analyses will include adjustment for stratification factors that were used in the randomisation, as well as consider changes in the raw TOI score over time.

Analyses of secondary endpoints will be performed according to the same principles. Binary outcomes will be presented as proportions and compared using chi-squared tests of independence. Continuous outcomes will be summarised by means or medians and compared using independent *t*-tests or Wilcoxon rank-sum tests, as appropriate. Time-to-event outcomes will be presented using Kaplan-Meier estimates and compared using a log-rank test. A two-sided 5% significance level will be used for all tests and there will be no formal adjustment for multiple comparisons, but statistically significant differences in secondary outcomes will be interpreted conservatively, particularly if the primary analysis is non-significant. Supplementary subgroup and adjusted analyses will be defined in the statistical analysis plan.

### **8.3 Economic evaluation**

The economic evaluation will compare the costs (and possible cost savings) and outcomes of early referral versus discretionary referral on a background of standard oncological care. The economic evaluation will take a cost-utility approach, in which the health benefit will be estimated in terms of the quality-adjusted life years (QALYs). A within trial cost-utility analysis will examine the costs of the intervention and any cost-offsets due to reduced health service use arising from early palliative care. The results will be presented in terms of the incremental cost-effectiveness ratio (ICER). Uncertainty will be assessed using methods for bootstrapping the data. Sensitivity analyses will be undertaken to explore the robustness and validity of cost-effectiveness data and test any assumptions that were used.

### **8.4 Qualitative analysis of interviews with bereaved caregivers**

Interviews will be recorded, transcribed verbatim and analysed using conventional steps of thematic analysis: (1) reducing the raw information, (2) creating codes, (3) determining the reliability of the code, (4) identifying themes within subthemes and (5) comparing themes across subsamples.

### **8.5 Interim analyses**

There will be no formal interim analysis for this trial.

## **9 STUDY COORDINATION and COMMITTEES**

### **9.1 Study coordination**

This study is an investigator-initiated, academically-sponsored, cooperative group trial conducted under the auspices of the Australasian Lung cancer Trials Group (ALTG) in collaboration with the NHMRC Clinical Trials Centre, University of Sydney (CTC). Trial coordination, monitoring, data acquisition, management and analyses will be performed by the CTC.

### **9.2 Trial Management Committee**

The Trial Management Committee (TMC) will oversee study planning, monitoring, progress, review of information from related research, and implementation of recommendations from other study committees and external bodies (e.g. ethics committees).

The TMC will consider whether to continue the trial as planned, modify, or stop it, based on interim analyses or other information.

## **10 ADMINISTRATIVE ASPECTS**

### **10.1 Ethics and regulatory compliance**

In Australia, the trial will be conducted according to the Note for Guidance on Good Clinical Practice (CPMP/ICH/135/95) annotated with TGA comments (Therapeutic Goods Administration DSEB July 2000) and in compliance with applicable laws and regulations. The trial will be performed in accordance with the NHMRC Statement on Ethical Conduct in Research Involving Humans 2007, the NHMRC Australian Code for the Responsible Conduct of Research 2007, and the principles laid down by the World Medical Assembly in the Declaration of Helsinki 2008.

To this end, no patient will be recruited to the trial until all the necessary approvals have been obtained and the patient has provided written informed consent. Further, the investigator shall comply with the protocol, except when a protocol deviation is required to eliminate immediate hazard to a participant. In this circumstance the NHMRC CTC, principal investigator and HREC must be advised immediately.

## **10.2 Confidentiality**

The trial will be conducted in accordance with applicable Privacy Acts and Regulations. All data generated in this trial will remain confidential. All information will be stored securely at the NHMRC CTC, University of Sydney and will only be available to people directly involved with the trial and who have signed a Confidentiality Agreement.

Personal data identifying trial participants will be held securely at the NHMRC CTC for the purpose of follow up if the participant is unable to/wishes to discontinue clinic based follow-up.

## **10.3 Protocol Amendments**

Changes and amendments to the protocol can only be made by the Trial Management Committee. Approval of amendments by the Institutional HREC is required prior to their implementation. In some instances, an amendment may require a change to a consent form. The Investigator must receive approval/advice of the revised consent form prior to implementation of the change. In addition, changes to the data collected, if required, will be incorporated in the amendment.

## **10.4 Data Handling and Record Keeping**

All trial data required for the monitoring and analysis of the trial will be recorded on the (e)CRFs provided. All required data entry fields must be completed. Data corrections will be done according to the instructions provided. The investigator will be asked to confirm the accuracy of completed (e)CRFs by signing key (e)CRFs as indicated.

Source documents pertaining to the trial must be maintained by investigational sites. Source documents may include a patient's medical records, hospital charts, clinic charts, the investigator's participant study files, as well as the results of diagnostic tests such as X-rays, laboratory tests, and electrocardiograms. The investigator's copy of the case report forms serves as part of the investigator's record of a participant's trial-related data.

The following information should be entered into the patient's medical record:

- a. The patient's protocol identification
- b. The date that the patient entered the trial, and patient number
- c. A statement that informed consent was obtained (including the date)
- d. Relevant medical history
- e. Dates of all patient visits and results of key trial parameters
- f. The date the patient exited the trial, and a notation as to whether the patient completed the trial or reason for discontinuation.

All trial-related documentation at sites will be maintained for 15 years following completion of the trial.

## **10.5 Study Monitoring**

Data from this trial will be monitored by Clinical Trials Program staff from the NHMRC CTC or their delegates. Monitoring will include centralised review of (e)CRFs and other trial documents for protocol compliance, data accuracy and completeness. The NHMRC CTC will be given direct access to source documents, (e)CRFs and other trial-related documents. By signing the informed consent form, the patient gives authorised NHMRC CTC staff direct access to their medical records and the trial data.

## **10.6 Audit and Inspection**

This study may be audited or inspected by representatives of the ALTG or the CTC.

## **10.7 Clinical Study Report**

A Clinical Study Report which summarises and interprets all the pertinent study data collected will be issued which may form the basis of a manuscript intended for publication. The Clinical Study Report or summary thereof will be provided to the study Investigators, ALTG, and the ethics committees.

## **10.8 Publication Policy**

The Trial Management Committee will appoint a Writing Committee to draft manuscript(s) based on the trial data. Manuscript(s) will be submitted to peer-reviewed journal(s). The first publication will be the report of the full trial results based on the main protocol generally using the trial group name for large Phase I/III studies, with subsequent publications of data subsets in individual names based on contribution. The Writing Committee will develop a publication plan, including authorship, target journals and expected dates of publication. All publications must receive prior written approval from the TMC prior to submission.

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## **12 APPENDICES**

***Appendix 1 - Australia-modified Karnofsky Performance Status Scale***

***Appendix 2 - Functional Assessment of Cancer – Lung (FACT-L)***

***Appendix 3 - PROMIS Emotional Distress Forms (PROMIS-ED)***

***Appendix 4 - Euroqol 5 item preference-based measure of health (EQ-5D-5L)***

***Appendix 5 - ICE-CAP Supportive Care Measure (ICE-CAP SCM)***

***Appendix 6 - Carer Reaction Assessment (CRA)***

***Appendix 7 - Clinical Care Tasks (CCT) measure***

***Appendix 8 - FAMCARE-2***

***Appendix 9 - Quality of Death and Dying (QODD) Questionnaire***

***Appendix 10 - Template of carer interview questions***

***Appendix 11 - Number of “good days” survey questions***

***Appendix 12 - Patient and carer understanding of disease questionnaire***

***Appendix 13 - Needs Assessment Tool: Progressive Disease (NAT:PD-C)***

## **Appendix 1 - Australia-modified Karnofsky Performance Status Scale**

The Australia-modified Karnofsky Performance Status (AKPS) Scale is a measure of the patient's overall performance status. It is a single score between 10 and 100 assigned by a clinician based on observations of a patient's ability to perform common tasks relating to activity, work and self-care. A score of 100 signifies normal physical abilities with no evidence of disease. Decreasing numbers indicate a reduced performance status.

<b>AKPS Assessment Criteria</b>	<b>Score</b>
Normal; no complaints; no evidence of disease	100
Able to carry on normal activity; minor sign of symptoms of disease	90
Normal activity with effort; some signs or symptoms of disease	80
Cares for self; unable to carry on normal activity or to do active work	70
Able to care for most needs; but requires occasional assistance	60
Considerable assistance and frequent medical care required	50
In bed more than 50% of the time	40
Almost completely bedfast	30
Totally bedfast and requiring extensive nursing care by professionals and/or family	20
Comatose or barely rousable	10
Dead	0

Ref: Abernethy AP, Shelby-James T, Fazekas BS, Woods D, Currow DC. [The Australia-modified Karnofsky Performance Status \(AKPS\) scale: a revised scale for contemporary palliative care clinical practice.](#) BMC Palliat Care. 2005 Nov 12;4:7.

## Appendix 2 - Functional Assessment of Cancer – Lung (FACT-L)

Below is a list of statements that other people with your illness have said are important. Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

### PHYSICAL WELL-BEING

		Not at all	A little bit	Some- what	Quite a bit	Very much
GP1	I have a lack of energy .....	0	1	2	3	4
GP2	I have nausea .....	0	1	2	3	4
GP3	Because of my physical condition, I have trouble meeting the needs of my family .....	0	1	2	3	4
GP4	I have pain .....	0	1	2	3	4
GP5	I am bothered by side effects of treatment .....	0	1	2	3	4
GP6	I feel ill .....	0	1	2	3	4
GP7	I am forced to spend time in bed .....	0	1	2	3	4

### SOCIAL/FAMILY WELL-BEING

		Not at all	A little bit	Some- what	Quite a bit	Very much
GS1	I feel close to my friends .....	0	1	2	3	4
GS2	I get emotional support from my family .....	0	1	2	3	4
GS3	I get support from my friends .....	0	1	2	3	4
GS4	My family has accepted my illness .....	0	1	2	3	4
GS5	I am satisfied with family communication about my illness .....	0	1	2	3	4
GS6	I feel close to my partner (or the person who is my main support) .....	0	1	2	3	4
Q1	<i>Regardless of your current level of sexual activity, please answer the following question. If you prefer not to answer it, please mark this box <input type="checkbox"/> and go to the next section.</i>					
GS7	I am satisfied with my sex life .....	0	1	2	3	4

Please circle or mark one number per line to indicate your response as it applies to the past 7 days.

**EMOTIONAL WELL-BEING**

		Not at all	A little bit	Some-what	Quite a bit	Very much
GE1	I feel sad .....	0	1	2	3	4
GE2	I am satisfied with how I am coping with my illness.....	0	1	2	3	4
GE3	I am losing hope in the fight against my illness.....	0	1	2	3	4
GE4	I feel nervous.....	0	1	2	3	4
GE5	I worry about dying.....	0	1	2	3	4
GE6	I worry that my condition will get worse.....	0	1	2	3	4

**FUNCTIONAL WELL-BEING**

		Not at all	A little bit	Some-what	Quite a bit	Very much
GF1	I am able to work (include work at home).....	0	1	2	3	4
GF2	My work (include work at home) is fulfilling.....	0	1	2	3	4
GF3	I am able to enjoy life .....	0	1	2	3	4
GF4	I have accepted my illness .....	0	1	2	3	4
GF5	I am sleeping well .....	0	1	2	3	4
GF6	I am enjoying the things I usually do for fun.....	0	1	2	3	4
GF7	I am content with the quality of my life right now .....	0	1	2	3	4

Below is a list of statements that other people with your illness have said are important. **Please circle or mark one number per line to indicate your response as it applies to the past 7 days.**

**ADDITIONAL CONCERNS**

**Not at all    A little bit    Some-what    Quite a bit    Very much**

B1	I have been short of breath.....	0	1	2	3	4
C2	I am losing weight.....	0	1	2	3	4
L1	My thinking is clear .....	0	1	2	3	4
L2	I have been coughing .....	0	1	2	3	4
B5	I am bothered by hair loss .....	0	1	2	3	4
C6	I have a good appetite .....	0	1	2	3	4
L3	I feel tightness in my chest.....	0	1	2	3	4
L4	Breathing is easy for me.....	0	1	2	3	4
Q3	Have you ever smoked? No ___ Yes ___ If yes:					
L5	I regret my smoking .....	0	1	2	3	4

### Appendix 3 - PROMIS Emotional Distress Forms (PROMIS-ED)

PROMIS Item Bank v 1.0 - Emotional Distress – Anxiety – Short Form 7a

Emotional Distress – Anxiety – Short Form 7a

Please respond to each item by circling or one number per row.

In the past 7 days....

		Never	Rarely	Sometimes	Often	Always
EDANX01	I felt fearful	1	2	3	4	5
EDANX05	I felt anxious	1	2	3	4	5
EDANX30	I felt worried	1	2	3	4	5
EDANX40	I found it hard to focus on anything other than my anxiety	1	2	3	4	5
EDANX46	I felt nervous	1	2	3	4	5
EDANX53	I felt uneasy	1	2	3	4	5
EDANX54	I felt tense	1	2	3	4	5

PROMIS Item Bank v 1.0 - Emotional Distress – Depression Short Form 8a

Emotional Distress –Depression– Short Form 8a

Please respond to each item by circling or one number per row.

In the past 7 days....

		Never	Rarely	Sometimes	Often	Always
1	I felt worthless	1	2	3	4	5
2	I felt helpless	1	2	3	4	5
3	I felt depressed	1	2	3	4	5
4	I felt hopeless	1	2	3	4	5
5	I felt like a failure	1	2	3	4	5
6	I felt unhappy	1	2	3	4	5
7	I felt that I had nothing to look forward to	1	2	3	4	5
8	I felt that nothing could cheer me up	1	2	3	4	5

#### **Appendix 4 - Euroqol 5 item preference-based measure of health (EQ-5D-5L)**

Under each heading, please tick the ONE box that best describes your health TODAY.

##### **MOBILITY**

- I have no problems with walking around
- I have slight problems with walking around
- I have moderate problems with walking around
- I have severe problems with walking around
- I am unable to walk around

##### **PERSONAL CARE**

- I have no problems with washing or dressing myself
- I have slight problems with washing or dressing myself
- I have moderate problems with washing or dressing myself
- I have severe problems with washing or dressing myself
- I am unable to wash or dress myself

##### **USUAL ACTIVITIES** (e.g. work, study, housework, family or leisure activities)

- I have no problems doing my usual activities
- I have slight problems doing my usual activities
- I have moderate problems doing my usual activities
- I have severe problems doing my usual activities
- I am unable to do my usual activities

##### **PAIN / DISCOMFORT**

- I have no pain or discomfort
- I have slight pain or discomfort
- I have moderate pain or discomfort
- I have severe pain or discomfort
- I have extreme pain or discomfort

##### **ANXIETY / DEPRESSION**

- I am not anxious or depressed
- I am slightly anxious or depressed
- I am moderately anxious or depressed
- I am severely anxious or depressed
- I am extremely anxious or depressed

We would like to know how good or bad your health is TODAY.

This scale is numbered from 0 to 100.

100 means the best health you can imagine.

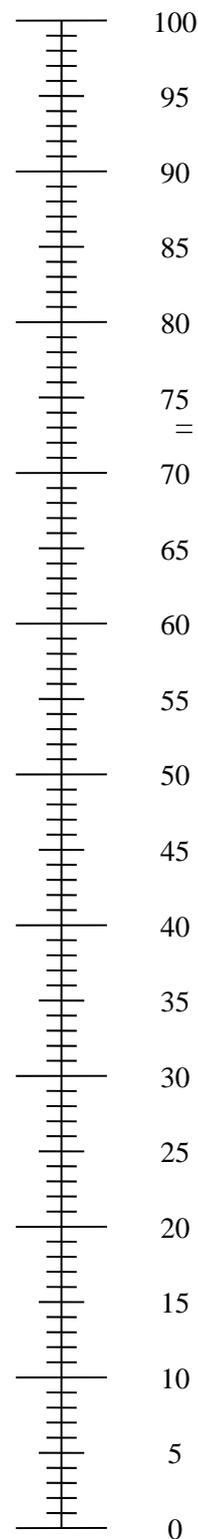
0 means the worst health you can imagine.

Mark an X on the scale to indicate how your health is TODAY.

Now, please write the number you marked on the scale in the box below.

YOUR HEALTH TODAY =

The best health you can imagine



The worst health you can imagine

## Appendix 5 - ICE-CAP Supportive Care Measure (ICE-CAP SCM)

### ABOUT YOUR WELL-BEING

Please place a tick (✓) in ONE box in EACH group below, to indicate which statement best describes your situation at the moment. **For each group please tick one box only.**

**1) Having a say** – Your ability to influence where you would like to live or be cared for, the kind of treatment you receive, the people who care for you

- |  |   |
|--|---|
| I can make decisions that I need to make about my life and care <b>most of the time</b>          | 4 |
| I can make decisions that I need to make about my life and care <b>some of the time</b>          | 3 |
| I can make decisions that I need to make about my life and care <b>only a little of the time</b> | 2 |
| I can <b>never</b> make decisions that I need to make about my life and care                     | 1 |

**2) Being with people who care about you** – Being with family, friends or caring professionals

- |   |   |
|---|---|
| If I want to, I can be with people who care about me <b>most of the time</b>          | 4 |
| If I want to, I can be with people who care about me <b>some of the time</b>          | 3 |
| If I want to, I can be with people who care about me <b>only a little of the time</b> | 2 |
| If I want to, I can <b>never</b> be with people who care about me                     | 1 |

**3) Physical suffering** – Experiencing pain or physical discomfort which interferes with your daily activities

- |   |   |
|---|---|
| I <b>always</b> experience significant physical discomfort    | 4 |
| I <b>often</b> experience significant physical discomfort     | 3 |
| I <b>sometimes</b> experience significant physical discomfort | 2 |
| I <b>rarely</b> experience significant physical discomfort    | 1 |

**4) Emotional suffering** – Experiencing worry or distress, feeling like a burden)

- |   |   |
|---|---|
| I <b>always</b> experience emotional suffering    | 4 |
| I <b>often</b> experience emotional suffering     | 3 |
| I <b>sometimes</b> experience emotional suffering | 2 |
| I <b>rarely</b> experience emotional suffering    | 1 |

**Please remember to tick one box only.**

**5) Dignity** – Being yourself, being clean, having privacy, being treated with respect, being spoken to with respect, having your religious or spiritual beliefs respected

- I can maintain my dignity and self-respect **most of the time**
- I can maintain my dignity and self-respect **some of the time**
- I can maintain my dignity and self-respect **only a little of the time**
- I can **never** maintain my dignity and self-respect

4
3
2
1

**6) Being supported** – Having help and support

- I am able to have the help and support that I need **most of the time**
- I am able to have the help and support that I need **some of the time**
- I am able to have the help and support that I need **only a little of the time**
- I am **never** able to have the help and support that I need

4
3
2
1

**7) Being prepared** – Having financial affairs in order, having your funeral planned, saying goodbye to family and friends, resolving things that are important to you, having treatment preferences in writing or making a living will

- I have had the opportunity to make **most** of the preparations I want to make
- I have had the opportunity to make **some** of the preparations I want to make
- I have **only** had the opportunity to make a **few** of the preparations I want to make
- I have **not** had the opportunity to make **any** of the preparations I want to make

4
3
2
1

**Thank you for your help**

## Appendix 6 - Carer Reaction Assessment (CRA)

We are trying to understand how providing care has affected you, your family, and your daily routine in the **past week**. In the questions that follow, please circle the response that represents how you feel about each statement. There are no “right” or “wrong” answers.

During the <b>past week</b> ...		Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
<b>a.</b>	My activities are... centred around care for the person I care for.	1	2	3	4	5
<b>b.</b>	I am healthy enough to care for the person I care for.	1	2	3	4	5
<b>c.</b>	My family works together at caring for the person I care for.	1	2	3	4	5
<b>d.</b>	Caring for the person I care for is important to me.	1	2	3	4	5
<b>e.</b>	It takes all my physical strength to care for the person I care for.	1	2	3	4	5
<b>f.</b>	I enjoy caring for the person I care for.	1	2	3	4	5
<b>g.</b>	I have to stop in the middle of my work or activities to provide care.	1	2	3	4	5
<b>h.</b>	My health has gotten worse since I've been caring for the person I care for.	1	2	3	4	5
<b>i.</b>	Since caring for the person I care for, I feel my family has abandoned me.	1	2	3	4	5
<b>j.</b>	Caring for the person I care for makes me feel good.	1	2	3	4	5
<b>k.</b>	It is very difficult to get help from my family in taking care of the person I care for.	1	2	3	4	5
<b>l.</b>	I feel privileged to care for the person I care for.	1	2	3	4	5
<b>m.</b>	Others have dumped caring for the person I care for onto me.	1	2	3	4	5
<b>n.</b>	I have eliminated things from my schedule since caring for the person I care for.	1	2	3	4	5
<b>o.</b>	I resent having to care for the person I care for.	1	2	3	4	5
<b>p.</b>	The constant interruptions make it difficult to find time for relaxation.	1	2	3	4	5
<b>q.</b>	My family (brothers, sisters, children) left me alone to care for the person I care for.	1	2	3	4	5

<b>During the past week...</b>		<b>Strongly disagree</b>	<b>Disagree</b>	<b>Neither agree nor disagree</b>	<b>Agree</b>	<b>Strongly agree</b>
<b>r.</b>	Since caring for the person I care for, it seems like I'm tired all of the time.	1	2	3	4	5
<b>s.</b>	I really want to care for the person I care for.	1	2	3	4	5
<b>t.</b>	I visit family and friends less since I have been caring for the person I care for.	1	2	3	4	5
<b>u.</b>	I will never be able to do enough caregiving to repay the person I care for.	1	2	3	4	5
<b>v.</b>	Financial resources are adequate.	1	2	3	4	5
<b>w.</b>	It is difficult to pay for the person I care for.	1	2	3	4	5
<b>x.</b>	Caring for the person I care for puts a financial strain on me.	1	2	3	4	5

## Appendix 7 - Clinical Care Tasks (CCT) measure

We are interested in the amount of time that you dedicate to care and the sorts of tasks that you complete for the person you care for. Please answer **question 1** by **printing** your response. Answer all other questions by marking the box that best represents your answer with a cross (×). There are no “right” or “wrong” answers.

### 1. Thinking about all the care you provide to the care recipient, due to his or her illness, on average...

a. How many days a week do you provide care? \_\_\_\_\_ DAY(S)

b. How many hours of care do you provide on a typical day of care? \_\_\_\_\_ HOUR(S)

2. In the <u>past 2 weeks</u> , have you helped the person you care for...		Yes	No	Not needed
a.	Get around inside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Get around outside	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Eat	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Get in or out of bed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	Get dressed	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	Bathe	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g.	Get on or off the toilet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h.	Clean him or herself after she/he used the toilet	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i.	With a bedpan	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j.	With a catheter or colostomy bag	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k.	Manage his or her money	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**3. In the past 2 weeks, have you helped the person you care for do the following...**

		Yes	No	Not needed
a.	Made telephone calls for the person I care for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b.	Done housework you wouldn't normally do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c.	Washed laundry you wouldn't normally do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d.	Shopped for groceries for the person I care for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e.	Driven the person I care for to a doctor's office, clinic, or hospital	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f.	Had to do other chores and tasks the person I care for would normally do if he or she was not ill	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g.	Help administer medicine to the person I care for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h.	Make a decision about whether the person I care for needed medication	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i.	Keep track of or watch for side effects from the care recipient's treatment	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j.	Spend time assisting the person I care for manage or control symptoms such as nausea/vomiting, fatigue, or pain	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k.	Change bandages for the person I care for	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l.	Give oxygen, give a nebulizer treatment, or perform chest percussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m.	Decide whether to call a doctor	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n.	Accompany the person I care for to treatments or doctor's appointments	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**For office use only:**

Average hours per week spent providing care (1.a x 1.b) =

- 1 Less than 20 hours per week
- 2 21-40 hours per week
- 3 More than 40 hours per week

## Appendix 8 - FAMCARE-2

### Instructions

Think about the care that the person for whom you care has received. Please answer the questions below indicating how satisfied you are with the care received: very satisfied (VS), satisfied (S), undecided (U), dissatisfied (D), very dissatisfied (VD), or not applicable (NA). Please circle the letters below that best match your experience. You may choose not to respond to some items. "Patient" refers to the person for whom you care, "Family" refers to you and others important to the patient, and "Team" refers to the health care team looking after the patient.

### How satisfied are you with:

1	The patient's comfort	VS	S	U	D	VD	NA
2	The way in which the patient's condition and likely progress have been explained	VS	S	U	D	VD	NA
3	Information given about the side effects of treatment	VS	S	U	D	VD	NA
4	The way in which the team respects the patient's dignity	VS	S	U	D	VD	NA
5	Meetings to discuss the patient's condition and plan of care	VS	S	U	D	VD	NA
6	Speed with which symptoms are treated	VS	S	U	D	VD	NA
7	The team's attention to the patient's description of the symptoms	VS	S	U	D	VD	NA
8	The way in which the patient's physical needs for comfort are met	VS	S	U	D	VD	NA
9	Availability of the team to the family	VS	S	U	D	VD	NA
10	Emotional support provided to family members by the team	VS	S	U	D	VD	NA
11	The practical assistance provided by the team (e. g., bathing, home care, respite)	VS	S	U	D	VD	NA
12	The doctor's attention to the patient's symptoms	VS	S	U	D	VD	NA
13	The way the family is included in treatment and care decisions	VS	S	U	D	VD	NA
14	Information given about how to manage the patient's symptoms (e. g., pain, constipation)	VS	S	U	D	VD	NA
15	How effectively the team manages the patient's symptoms	VS	S	U	D	VD	NA
16	The team's response to changes in the patient's care needs	VS	S	U	D	VD	NA
17	Emotional support provided to the patient by the team	VS	S	U	D	VD	NA

**Used with Permission. Source:** Aoun S, Bird S, Kristjanson L, Currow D (2010). Reliability testing of the FAMCARE-2 Scale: measuring family carer satisfaction with palliative care. *Palliative Medicine*. 24 (7), 674-681.

## **Appendix 9 - Quality of Death and Dying (QODD) Questionnaire**

### **QUALITY OF DEATH AND DYING QUESTIONNAIRE (MODIFIED)**

#### **Instructions**

This questionnaire is about the last days of life of the person for whom you cared. We are interested in your experiences because we want to improve the care received by patients and their carers.

Some of the questions may be difficult to answer because you may not have had all these experiences. Other questions may be hard to answer because they remind you of a difficult emotional time. Please feel free to skip questions that you find too difficult to answer. This questionnaire will be kept entirely confidential. None of the healthcare providers who have provided care to the person for whom you cared will see any of your answers unless there are significant concerns raised.

From your perspective, we would like:

1. To know how often the person for whom you cared had the experiences described below. Please tick one box for each question on the scale from “None of the time” to “all of the time”.
2. You to rate each aspect of the person for whom you cared’s dying experience on a scale from 0 to 10, where “0” is a “terrible experience”, and “10” is an “almost perfect experience”.

Please make your best effort to choose a number, even if you are not completely certain of the answer. If you cannot choose a number, please circle “Don’t Know” so that we will know this is a question that you cannot answer. We want you to choose a number based on your experience, not what you think that you the person for whom you cared might have answered.

A stamped self-addressed envelope is attached. Please complete this questionnaire and send it back to us as soon as possible. If you have any questions or problems when filling out this questionnaire, please feel free to call us and we’ll do everything we can to assist you. If you feel any distress when completing the questionnaire and would like to speak to someone, please don’t hesitate to contact us.

Once again, thank you for your help.

**During the last 7 days of your loved ones life** (please tick one column for each question):

	<b>How often did?</b>	<b>None of the time</b>	<b>A little of the time</b>	<b>Some of the time</b>	<b>A good bit of the time</b>	<b>Most of the time</b>	<b>All of the time</b>
<b>1</b>	How often did they appear to have their pain under control?						
<b>2</b>	How often did they appear to have control over what was going on around them?						
<b>3</b>	How often did they appear to have control of their bladder or bowels?						
<b>4</b>	How often did they appear to breathe comfortably?						
<b>5</b>	How often did they appear to be at peace with dying?						
<b>6</b>	How often did they appear to be unafraid of dying?						
<b>7</b>	How often did they laugh and smile?						
<b>8</b>	How often did they appear to be worried about the strain on their loved ones?						
<b>9</b>	How often did they appear to keep their dignity and self-respect?						
<b>10</b>	How often did they spend time with family and friends?						

**During the last 7 days of your loved ones life** (please tick either yes or no for each question):

	<b>Question</b>	<b>Yes</b>	<b>No</b>
<b>11</b>	Were they touched or hugged by their loved ones?		
<b>12</b>	Were all of their health care costs taken care of?		
<b>13</b>	Did they say goodbye to loved ones?		
<b>14</b>	Did they have one or more visits from a religious or spiritual advisor?		
<b>15</b>	Was a mechanical ventilator or kidney dialysis used to prolong their life?		
<b>16</b>	Did they have their funeral arrangements in place prior to death?		

During the last 7 days of your loved ones life, please rate each aspect of the dying experience from 0 to 10 (please circle one box only for each item or mark as “Don’t know”)

	Experience	Terrible experience										Almost perfect	Don't know
1	Pain under control	0	1	2	3	4	5	6	7	8	9	10	
2	Control over what was going on around themr	0	1	2	3	4	5	6	7	8	9	10	
3	Control over their bowel or bladder	0	1	2	3	4	5	6	7	8	9	10	
4	Breathing comfortably	0	1	2	3	4	5	6	7	8	9	10	
5	At peace with dying	0	1	2	3	4	5	6	7	8	9	10	
6	Unafraid of dying	0	1	2	3	4	5	6	7	8	9	10	
7	Laughing and smiling	0	1	2	3	4	5	6	7	8	9	10	
8	Worried about strain on their loved ones	0	1	2	3	4	5	6	7	8	9	10	
9	Keep their dignity and self respect	0	1	2	3	4	5	6	7	8	9	10	
10	Spend time with family and friends	0	1	2	3	4	5	6	7	8	9	10	
11	Touched or hugged by their loved ones	0	1	2	3	4	5	6	7	8	9	10	
12	Health care costs taken care of	0	1	2	3	4	5	6	7	8	9	10	
13	Said goodbye to loved ones	0	1	2	3	4	5	6	7	8	9	10	
14	Visits from a religious or spiritual advisor	0	1	2	3	4	5	6	7	8	9	10	
15	Mechanical ventilator or dialysis used to prolong life	0	1	2	3	4	5	6	7	8	9	10	
16	Funeral arrangements in order prior to death	0	1	2	3	4	5	6	7	8	9	10	
17	The care your loved one received from all doctors and other health care providers	0	1	2	3	4	5	6	7	8	9	10	

## **Appendix 10 - Template of carer interview questions**

Suggested interview schedule

Thank you for agreeing to talk to us, particularly at this time. We think that your insights and thoughts are very important and can teach us a great deal.

We realise that talking about (xxx) and the lead up to (his/her) death this might be difficult. Please take your time, and stop or tell me if you would like a break or feel you have had enough.

We will be recording this interview, just so that we can carefully think through and understand the things you bring up. Once recorded, your name will not be associated with the things you say, and all these will be confidential. What you say will not have any bearing on your relationships with the hospital or health care providers.

Once again, let me know at any time if you want to pause.

1. Perhaps to begin, can you tell me about the few weeks leading up to (xxx)'s death?
  - Tell their story
  - Prompt (if relevant) and listen respectfully
    - o What was going on for him/her?
    - o Where did he/she die?
    - o Was it a surprise he/she died then?
2. What were the biggest issues or concerns for (xx) in the last few weeks?
3. What were the biggest issues / concerns for you in that time?
4. What things were helpful for you at this time?
  - a. What particular things done by the doctors and nurses did you find helpful.
5. What things did you think were not helpful?
  - a. And particularly things done by the doctors and nurses?
6. You might remember (xxx) was on a study which is testing if and how palliative care can help people with advanced cancer. (xx) was among the group who had:
  - a. [palliative care at the beginning of the study]
  - b. [involvement with palliative care when his/her doctor thought it the right time]
  - c. [was not referred to palliative care]

Thinking over things, what are your reflections on the care / palliative care that (xx) received?

- What was the timing of it like? Was it the right time / too early / too late?
  - What was useful about the palliative care?
  - What was not useful about the palliative care?
  - Would there be things you think should have been done different or that you would recommend?
7. Are there others things that you want to tell us about this time for (xx) and for you? Things we should know, suggestions for doing things better?

Thank you for your time. You have been very generous with your thoughts and your reflections. Sometimes talking about these things can make things come up for you. Please let me know if this is the case, and if so, we can discuss some things which might be helpful to think through.

## Appendix 11 - Good days' dairy

### Patient study number, Study ID for site.

Please put a number in the box for each day to indicate how you would rate that day, all things considered, on the following scale ...

An excellent day	5
A very good day	4
A good day	3
A fair day	2
A poor day	1

E.g. if today (Tuesday 28 June) you considered yesterday (Monday 27 June) to have been an excellent day, you would put the number 5 in the box for Monday 27 June.

	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday
Week 1	June 27  5	June 28	June 29	June 30	July 1	July 2	July 3
Week 2	July 4	July 5	July 6	July 7	July 8	July 9	July 10
Week 3	July 11	July 12	July 13	July 14	July 15	July 16	July 17
Week 4	July 18	July 19	July 20	July 21	July 22	July 23	July 24
Week 5	July 25	July 26	July 27	July 28	July 29	July 30	July 31
Week 6	August 1	August 2	August 3	August 4	August 5	August 6	August 7
Week 7	August 8	August 9	August 10	August 11	August 12	August 13	August 14
Week 8	August 15	August 16	August 17	August 18	August 19	August 20	August 21

## **Appendix 12 - Patient and carer understanding of disease questionnaire**

Two self-report questions will be used in to assess patient and carer's perceptions of prognosis and goals of therapy, as per the Temel study of patients with advanced cancer.<sup>16</sup>

### **Patient questions**

Question 1: My cancer is curable (yes/no)

Question 2: The goals of my cancer treatment are to:

- i. help me live longer (yes/no)
- ii. try to make me feel better (yes/no)
- iii. get rid of all my cancer (yes/no)

### **Carer questions**

Question 1: My loved one's cancer is curable (yes/no)

Question 2: The goals of my loved one's cancer treatment are to:

- i. help them live longer (yes/no)
- ii. try to make them feel better (yes/no)
- iii. get rid of all their cancer (yes/no)

## Appendix 13 - Needs Assessment Tool: Progressive Disease (NAT:PD-C)

COMPLETE ALL SECTIONS

<b>Patient Name:</b>	<<Patient Full Name>>
<b>Diagnosis:</b>	<<Patient Diagnosis>>
<b>Date:</b>	<<Date>>

SECTION 1: PRIORITY REFERRAL FOR FUTHER ASSESSMENT			
<i>Please mark with an 'X' relevant columns</i>			
	Yes	No	If dotted boxes are ticked, consider assessment by SPCS
1. Does the patient have a caregiver readily available if required?		•	
2. Has the patient or caregiver requested a referral to a Specialist Palliative Care Service?	•		
3. Do you require assistance in managing the care of this patient and/or family?	•		

SECTION 2: PATIENT WELLBEING						
Record level of concern for each item by marking relevant column with an 'X'.						
If a need is identified (ie "some/potential" or "significant" level of concern), record an action to address this need.						
If a referral is required for any item, please complete the referral section at the end of this form.						
	Level of Concern			Action Taken		
	None	Some/ Potential	Significant	Directly managed	Managed by other care team member	Referral required (complete referral section at end of form)
1. Is the patient experiencing unresolved physical symptoms (including problems with pain, sleeping, appetite, nausea, bowels, breathing or fatigue)?						
2. Does the patient have problems with daily living activities?						
3. Are the patient's psychological symptoms interfering with wellbeing or relationships?						
4. Does the patient have concerns about spiritual or existential issues?						
5. Does the patient have financial or legal concerns that are causing distress or require assistance?						
6. From the health delivery point of view, are there health benefits, cultural or social factors involving the patient or family that are making care more complex?						
7. Does the patient require information about (please delete irrelevant options):						
<input type="checkbox"/> Their prognosis <input type="checkbox"/> The cancer <input type="checkbox"/> Treatment options <input type="checkbox"/> Financial/legal issues <input type="checkbox"/> Medical/health/support services <input type="checkbox"/> Social/emotional issues						
COMMENTS:						

<b>SECTION 3: ABILITY OF CAREGIVER OR FAMILY TO CARE FOR PATIENT</b>						
Record level of concern for each item by marking relevant column with an 'X'. If a need is identified (ie "some/potential" or "significant" level of concern), record an action to address this need. If a referral is required for any item, please complete the referral section at the end of this form.						
Who provided this information? (please delete irrelevant options) <input type="checkbox"/> Patient <input type="checkbox"/> Caregiver <input type="checkbox"/> Both	Level of Concern			Action Taken		
	None	Some/ Potential	Significant	Directly managed	Managed by other care team member	Referral required (complete referral section at end of form)
1. Is the caregiver or family distressed about the patient's physical symptoms?						
2. Is the caregiver or family having difficulty providing physical care?						
3. Is the caregiver or family having difficulty coping?						
4. Does the caregiver or family have financial or legal concerns that are causing distress or require assistance?						
5. Is the family currently experiencing problems that are interfering with their functioning or inter-personal relationships, or is there a history of such problems?						
6. Does the caregiver or family require information about (please delete irrelevant options): <input type="checkbox"/> Their prognosis <input type="checkbox"/> The cancer <input type="checkbox"/> Treatment options <input type="checkbox"/> Financial/legal issues <input type="checkbox"/> Medical/health/support services <input type="checkbox"/> Social/emotional issues						
COMMENTS:						

<b>SECTION 4: CAREGIVER WELLBEING</b>						
Record level of concern for each item by marking relevant column with an 'X'. If a need is identified (ie "some/potential" or "significant" level of concern), record an action to address this need. If a referral is required for any item, please complete the referral section at the end of this form.						
Who provided this information? (please delete irrelevant options) <input type="checkbox"/> Patient <input type="checkbox"/> Caregiver <input type="checkbox"/> Both	Level of Concern			Action Taken		
	None	Some/ Potential	Significant	Directly managed	Managed by other care team member	Referral required (complete referral section at end of form)
1. Is the caregiver or family experiencing physical, practical, spiritual, existential or psychological problems that are interfering with their wellbeing or functioning?						
2. Is the caregiver or family experiencing grief over the impending or recent death of the patient that is interfering with their wellbeing or functioning?						
COMMENTS:						

**IF REFERRAL(S) REQUIRED FOR FUTURE ASSESSMENT OR CARE, PLEASE COMPLETE THIS SECTION**

**1. Referrals suggested to be made (please note disciplines required, eg. community nurse, home care etc...):**

**2. Priority of assessment needed:**

(Please delete irrelevant options)

- Urgent (within 24 hours)
- Semi-Urgent (2-7 days)
- Non-Urgent (next available)

**3. Discussed the referral with the client** (please delete irrelevant option) **Yes / No**

**4. Client consented to the referral** (please delete irrelevant options) **Yes / No**

**5. Referral from:**

**Name:** <<Doctor:Name>>

**Signature:** \_\_\_\_\_

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**Acknowledgement:** NSW Central West Division of General Practice for their assistance in developing this template.