End of Life and Palliative Care in Vascular Surgery

How you can be right, even when you're wrong!

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Beng MBBS PGCert MD PhD

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VORTEX

VASCULAR ONLINE RESOURCE FOR TRAINING AND EXPERIENCE

Content

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1. Define end of life care
2. Is enough end of life care given?
3. How do we do good end of life care
4. **How we can be right even when we’re wrong!**

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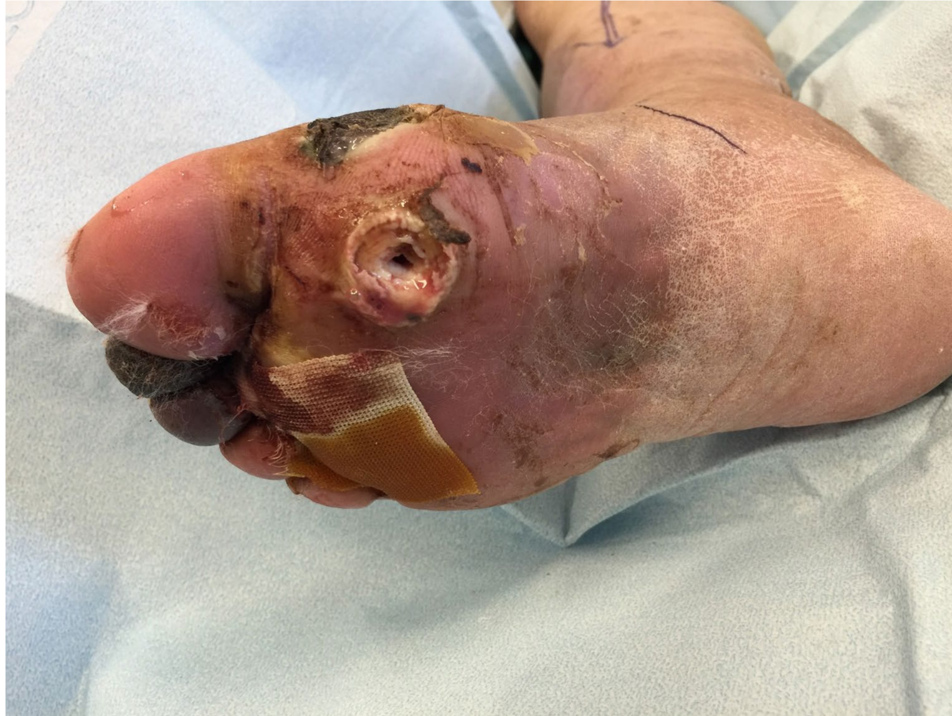

Chronic Limb Threatening Ischaemia

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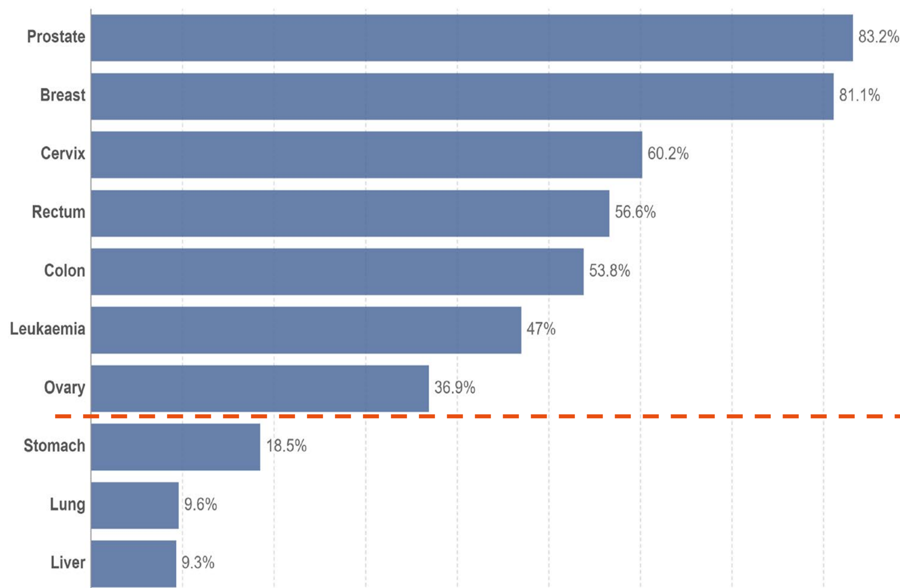

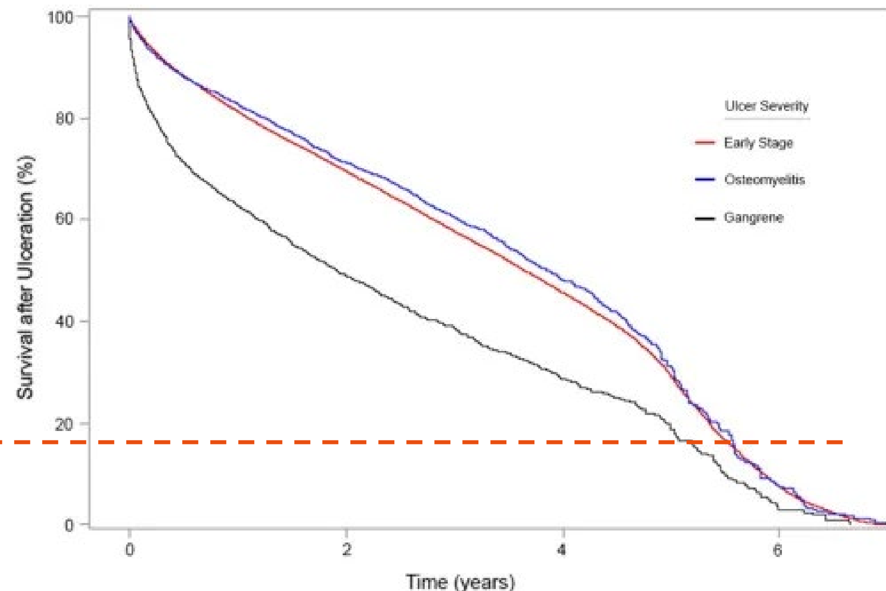

Vascular Evidence

Mortalities from Best CLI, BASIL1, 2 worse than MND diagnosis

End of Life Care ≠ End of Life Care

End of Life Care = Palliative Care +/- Disease Modifying Care

Palliative Care = Physiological and **Psychological symptoms** and **Social** and **Spiritual needs**

End of Life Care

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- **Advanced**, **progressive**, **incurable** conditions
- General **frailty** and **coexisting** conditions
- Risk of dying from acute **deterioration** of condition

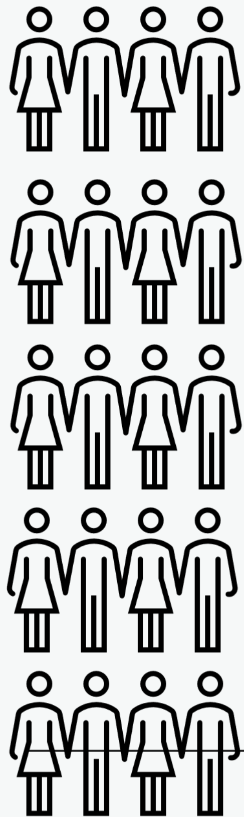
NICE National Institute for Health and Care Excellence

NICE guideline

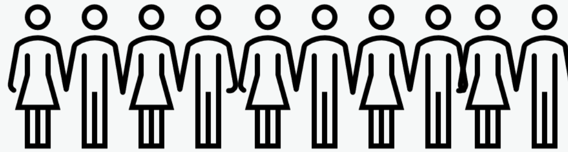
End of life care for adults: service delivery

NICE guideline
Published: 16 October 2019

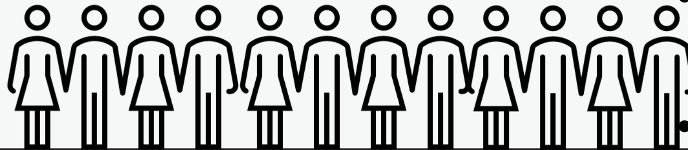
Palliative Care makes a difference



Standard cancer care



Standard cancer care
+ Palliative care



- Improved symptoms
- Fewer hospitalisations
- Less aggressive care
- More deaths at home
- Improved quality of life
- Improved survival

Research to date

End-of-life care and advance care planning for outpatients with inoperable aortic aneurysms

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ABSTRACT

Objective: A significant proportion of patients with abdominal and thoracic aortic aneurysms (AA) do not proceed to intervention after reaching treatment threshold diameter due to a combination of poor cardiovascular reserve, frailty, and aortic morphology. This patient cohort has a high mortality; however, until this study, there exist no studies on the end-of-life care conservatively managed patients receive.

Methods: This is a retrospective multicenter cohort study of 220 conservatively managed patients with AA referred to Leeds Vascular Institute (UK) and Maastricht University Medical Centre (the Netherlands) for intervention between 2017 and 2021. Demographic details, mortality, cause of death, advance care planning and palliative care outcomes were analysed to examine predictors of palliative care referral and efficacy of palliative care consultation.

Results: A total of 1506 patients with AA were seen over this time period, giving a nonintervention rate of 15%. There was a 3-year mortality rate of 55%, a median survival of 364 days, and rupture was the reported cause of death in 18% of the decedents. Median follow-up was 34 months. Only 8% of all patients and 16% of decedents received a palliative care consultation, which took place a median of 3.5 days before death. Patients >81 years of age were more likely to have advance care planning. Only 5% and 23% of conservatively managed patients had documentation of preferred place of death and care priorities respectively. Patients with a palliative care consultation were more likely to have these services in place.

Conclusions: Only a small proportion of conservatively treated patients had advance care planning and this was far below international guidelines on end-of-life care for adults, which recommends it for each of these patients. Pathways and guidance should be implemented to ensure patients not offered AA intervention receive end-of-life care and advance care planning. (J Vasc Surg 2023;78:378-86.)

Keywords: End-of-life care; Advance care planning; Palliative care; Aortic aneurysm; Outpatient; Clinic

End of Life Care for Unplanned Vascular Admissions

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Background: Unplanned vascular admissions have a high mortality. Previous studies have indicated that end of life care (EoLC) among this group of patients is low but there exist limited data on EoLC in the United Kingdom. The aim of this study was to evaluate the quality and predictors of EoLC for unplanned vascular admissions to a tertiary center in the United Kingdom.

Methods: This was a retrospective single-center cohort study of unplanned vascular surgery admissions from August 1, 2019 to January 22, 2020. Data on patient demographics, markers of quality of palliative care, mortality, and cause of death of unplanned admission to the vascular surgery department were collected from hospital and general practitioner records and evaluated against EoLC to evaluate predictors and efficacy of EoLC. Quality of palliative care markers included documentation of preferred place of death and care priorities, time spent in hospital and the intensive care unit toward the end of life, and realization of documented care objectives. EoLC input was defined as a dedicated palliative care consultation (PCC) by a palliative care professional, medical doctor, surgeon, or advanced care practitioner. We also conducted a subgroup analysis of patients within this group with chronic limb-threatening ischemia (CLTI), diabetic foot, and ruptured aortic aneurysms, as all patients in this group should be offered EoLC according to international guidelines.

Results: One-hundred and fifty patients were included. Median age at presentation was 70.5 years, and the cohort consisted of mostly men (72%). CLTI (31%) was the most common reason for admission. Surgical intervention was carried out in 60% of patients. Two-year mortality was 36%, and pneumonia (22%) was the most common cause of death. Seven percent of patients received PCC, which occurred a median of 10 days before death. Only a minority of patients had preferred place of care/death (14%), care priorities (37%), and family involvement during advance care planning (17%) documented in their notes; 29% of patients had Recommended Summary Plan for Emergency Care and Treatment forms in place. A diagnosis of left ventricular systolic dysfunction, chronic kidney disease, and increasing age predicted Recommended Summary Plan for Emergency Care and Treatment form completion. Patients with

Palliative Care Interventions for Peripheral Artery Disease: A Systematic Review and Narrative Synthesis

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Abstract

Background: Peripheral artery disease (PAD) encompasses conditions with poor outcome and severe suffering, both mentally and physically, yet utilization and research into palliative care interventions remain sparse.
Objective: The purpose of this study is to identify existing evidence on palliative care intervention for chronic limb threatening ischaemia (CLTI) and abdominal aortic aneurysm (AAA).
Design: We conducted a PROSPERO-registered systematic review of studies published between 1991 and 2020 in which people with PAD received palliative care interventions and at least one patient outcome was recorded. For the purpose of this study, a palliative care intervention was defined as one which aims primarily to reduce negative impact of PAD on patients' and/or caregivers' physical, emotional, psychological, social, or spiritual condition.
Results: A total of 8 studies involving 87,024 patients met the inclusion criteria (4 cohort studies and 4 cross-sectional studies). Methodological quality ranged from low to moderate. The small number of studies and study heterogeneity precluded meta-analysis. Regarding our primary outcomes, only two articles recorded patient-reported outcomes. Five articles found an association between palliative care and reduction in health care utilization, a secondary outcome of the study. Most of the studies reported that palliative care was likely underused. Only two of the studies included non-hospital patients.
Conclusion: Despite high mortality and morbidity associated with PAD, evidence of the effectiveness of palliative care in this group of patients is lacking. There are only a handful of articles on palliative care for people with PAD, and the majority are small, methodologically flawed and lack meaningful patient-reported outcomes. High-quality research of palliative care interventions in patients with PAD is urgently needed to better understand the impact of palliative care on quality of end of life and to develop and evaluate service-level interventions.

Keywords: aortic aneurysm; chronic limb threatening ischemia; critical limb ischemia; end of life; palliative care; peripheral artery disease; peripheral vascular disease

End of life care in chronic limb threatening ischemia: a retrospective cohort study

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ABSTRACT

Objective: Chronic limb-threatening ischemia (CLTI) is the end-stage of peripheral artery disease, defined as 2 or more weeks of rest pain and/or tissue loss from objectively proven obstructive arterial disease. Mortality is high, yet literature on end-of-life and palliative care in this setting is scarce. Palliative care is care that is aimed at alleviating the physiological and psychological symptoms and addresses the social and spiritual needs of patients and family/carers. End-of-life care is an umbrella term for palliative care given alongside disease-modifying care. The aim of this study was to evaluate predictors of end-of-life and palliative care and corresponding outcomes using surgical revascularization and amputation as surrogate markers for CLTI.

Methods: This was a retrospective single-center cohort study of people with CLTI who underwent either surgical revascularization (bypass) or amputation between January 2018 and December 2019. Palliative care input was defined as a dedicated palliative care consultation by a palliative care professional, medical doctor, surgeon, or advanced care practitioner. Data was collected on patient demographics, cause and place of death, and palliative and end-of-life care outcomes, which included documentation of preferred place of care/death and care priorities, family involvement in advance care planning discussions, key workers allocated to coordinate palliative care, use of community palliative care registers, hospice referral, time spent in hospital and the intensive care unit toward the end of life, and realization of documented care objectives. The data was analyzed to determine predictors of palliative care and tangible outcomes.

Results: One-hundred and eighty-six patients were included (116 bypass and 70 amputation) with a median age of 67.5 years (interquartile range, 58-76 years) and most were male (73.7%) with a median survival of 46 months (interquartile range, 21-54 months) and a 2-year survival of 72% (95% confidence interval, 66%-79%). Palliative care consultations occurred for 10.8% of patients, with the median time from consultation to death of 5 days. Of the deceased, only a few had preferred place of care/death (8.1%), care priorities (18.3%), and family involvement during advance care planning (15.1%) documented in their notes. Cause of death was most commonly due to sepsis (n = 30), malignancy (n = 11), and myocardial infarction (n = 10). Mortality and in-hospital death were significantly higher in patients who underwent amputation in comparison to bypass surgery. There was an association of both cardiac and renal dysfunction with palliative care input. Patients with palliative care input were more likely to have documentation of preferred place of care/death, care priorities, and resuscitation decisions; and family involvement in advance care planning decisions. However, this did not translate into a reduction in hospital readmission or time spent in the hospital or intensive care unit towards the end of life.

Conclusions: Patients with CLTI are not being offered palliative care in line with The National Institute for Health and Care Excellence or The Vascular Society of Great Britain and Ireland guidance. There was an association between palliative care input and end-of-life care quality. However, input occurred too close to death to have a very significant effect. Further research, development of clinical pathways and services, and better integration between palliative and vascular services is needed to improve the end-of-life care of patients living with CLTI. (JVS-Vascular Insights 2024;2:100141.)

Keywords: Chronic limb threatening ischaemia; End of life care; Palliative care; Advance care planning; Vascular surgery

Case 1

79M Right black necrotic toes with surrounding infection, non viable foot.

PMH Diabetes, CLTI, IHD, Frailty

2-month hospital stay following fall and long lie; fluctuating capacity. Currently, not oriented to place or time and minimal communication due to ongoing confusion. Was independent before fall.

The Question

Which conversation is quicker to have?
Which one of these is better for the patient and family to hear?

1) “We’ll try some antibiotics.”
2) “It is likely he will die in weeks to months”

Our Culture in Vascular Surgery

- We optimise our day: quick reviews, pre-planned decisions, minimal patient contact.
- Maximise theatre time doing challenging operations.
- It's understandable – we were self-selected by the hard process of becoming consultants.
- But frank conversations get delayed and passed to the next person.

Why It Matters

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- Patients deserve certainty, closure and a meaningful, dignified, comfortable death.
- Families remember how you made them feel.
- Doing this well is a different kind of courage.
- It actually saves time later – fewer repeated unclear conversations.

Palliative Care

Use a palliative approach
for life limiting illness

Optimizing
Quality of Life

End-of-Life Care
- Weeks to months
- Palliative and medical treatments
- Ongoing supports

Last Days/Hours Care
- Pain & Symptom Mgt
- Psychosocial & Spiritual supports

Advanced care planning

Being-towards-death

Authentic human life can only be found by confronting finitude and trying to make a meaning out of the fact of our death.

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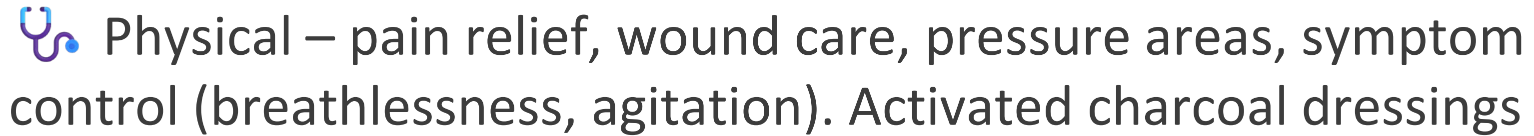
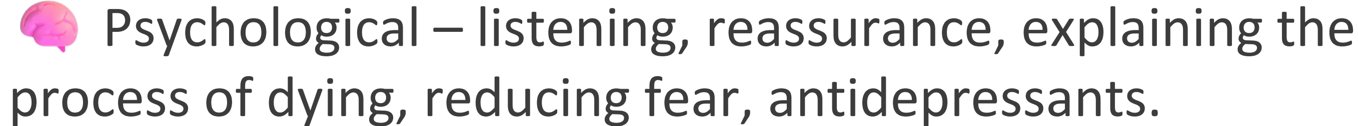
Case 2

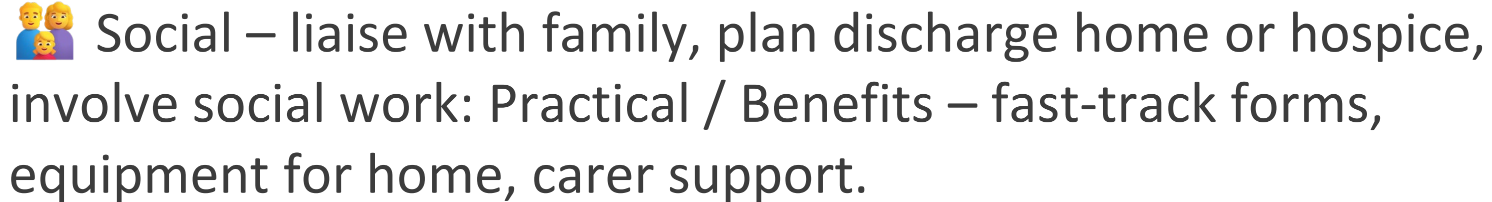
76F Dry necrosis left forefoot, Severe arthritis, fixed flexion deformity of left lower leg, bed bound at home for 6 months, long time smoker

> "Surgeons in 2025, and the best you can come up with is chopping someone's leg off?"
> — Patient

What We Can Actually Do


🩺 Physical – pain relief, wound care, pressure areas, symptom control (breathlessness, agitation). Activated charcoal dressings


🧠 Psychological – listening, reassurance, explaining the process of dying, reducing fear, antidepressants.


👨‍👩‍👧 Social – liaise with family, plan discharge home or hospice, involve social work: Practical / Benefits – fast-track forms, equipment for home, carer support.

🌿 Spiritual – chaplaincy/faith leader if wanted, even if you're not religious.

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Department for Work & Pensions

Guidance

The Special Rules for end of life: information for healthcare professionals

Updated 6 August 2025

Contents

What the Special Rules are for
Sending an SR1 form
Completing the SR1 form
Understanding your patient's eligibility for the Special Rules
Supporting patients

Find out about getting benefits if you're nearing end of life

Resources for healthcare professionals to promote the Special Rules for end of life

What the Special Rules are for

The Special Rules allow people nearing the end of life to:

- get faster, easier access to certain benefits
- get higher payments for certain benefits
- avoid a medical assessment

An adult or child is nearing the end of life when they are likely to have less than 12 months to live.

If a person is likely to have less than 12 months to live, they can make a fast-tracked claim to the following benefits (if they are eligible):

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the gold standards framework

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We are the UK's leading charitable provider of End of Life Care Training & Accreditation for frontline health and social care staff, in all settings.

TRAINING & ACCREDITATION

Type to start searching...

What is the Gold Standards Framework?

The Gold Standards Framework (GSF) is a registered charity and has been the UK's leading training provider for generalist frontline staff in caring for people in the last years of life for over 25 years. GSF is a practical and evidence-based end of life care service improvement programme.

Case 3

79M AKA - Day 8, fluctuating responsiveness, but mainly minimally responsive, obs ok and inflammatory markers marginally raised, now under medics being treat for SUO, stump healing well

Recognising Dying

Slow down; show some emotion; recognise when someone is actively dying.

Acknowledge it and speak to the patient and relatives – don't rush to the next case.

Deliver the right amount of hope, calibrated to where the family is.

How to be right even when you're wrong

80-year-old, frailty, LV dysfunction, CKD
Fem-pop bypass → MI and death
Was it wrong to operate?

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Review of Evidence; Guidelines; Training Curricula and Structured Care Objective Consultation

End of life care in vascular surgery

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Background

Historically, vascular surgery has been associated with a lack of holistic care or insufficient consideration for non-operative management. In part, these observations stem from the fact that many vascular conditions are rapidly progressive in nature and usually exist in patients with a high burden of co-morbidity and frailty.

This article defines the terms 'end of life care', 'palliative care', 'surgical palliative care', and 'terminal care', before going on to summarize published evidence, guidelines, and training curricula and to offer a 'structured care objective consultation' that trainees can use to increase the likelihood that offered procedures align with patients' needs.

The two vascular conditions associated with highest co-morbidity, frailty, and symptom burden—be it physiological or psychological—are chronic limb-threatening ischaemia (CLTI) and aortic aneurysm.

The annual incidence of CLTI is estimated to be 22 of 100 000[1] and, despite technological advances, morbidity and mortality remain high. For a patient presenting with CLTI, the major lower limb amputation rate at 6 months is 40% and the mortality rate at 1 year is over 20%[2]. The 30-day mortality rate after major lower limb amputation in the UK is 6.5%[3], with a 2-year mortality rate greater than 50%[4]. The 5-year mortality rate for CLTI has been reported to be 70%—higher than that for colorectal cancer, breast cancer, stroke, and coronary artery disease[5]. Mortality in young patients presenting with diabetes and renal disease in addition to CLTI is even higher[6].

care' are regularly interpreted to mean the withdrawal or limitation of care, when, in fact, they should represent the enhancement of care by stopping to ask 'What is important to the patient?' and making efforts to direct care accordingly[9]. 'Palliative care' is defined as care aimed at improving comfort and quality of life through relief from pain and other symptoms, integrating the psychological, social, and spiritual aspects of care and helping people to live as actively as possible until their death[10]. 'Palliative care' can be given alongside disease-modifying care and their combination constitutes 'end of life care'. 'End of life care' is defined by National Health Service (NHS) England as care provided in the last year of life; however, they recognize that, for some conditions, it may be provided for longer than a year[10]. Despite these definitions being set out a number of years ago, end of life care is still regularly confused with 'terminal care' (care in the last few days of life)—even amongst medical professionals.

The nomenclature for the intersection between surgical and palliative care is even more confusing. 'Surgical palliative care', 'palliative care interventions', and 'palliative surgery' have been used interchangeably in the medical literature. In 2023, The Surgical Palliative Care Society[11] proposed standardized nomenclature—'surgical palliative care'—which they define as 'the treatment of suffering and the promotion of quality of life for seriously or terminally ill patients receiving surgical care'[12].

Existing guidelines

End of life and palliative care guidelines are published by

- Lack of **high-level evidence**
- Practice did not adhere to the multiple **guidelines** which exist
- Minimal mention of **palliative care** in **UK** and **European** vascular training curriculum

Structured Care Objective Consultation

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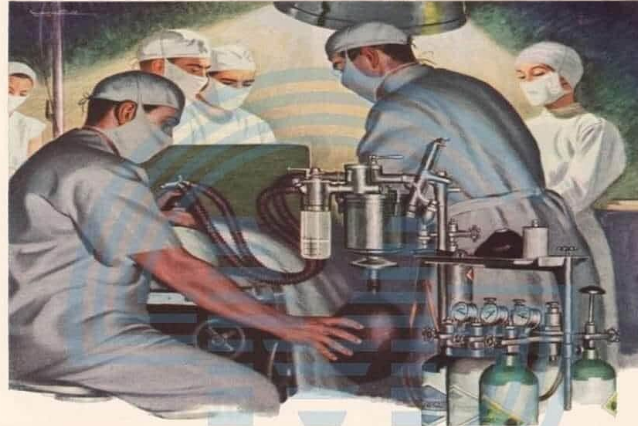
- **Situation**: explain the underlying pathology, the severity, and the associated morbidity and mortality figures in easy to understand numbers to the patient and family/carer.
- **Objective**: elicit the patient's wishes for the outcome of the medical encounter—for example 'Do they want to extend the length of their life at all costs, despite the possibility that they will never recover to their baseline function or will need a wheelchair for the rest of their life for mobility?' and 'Are they willing to undergo a long intensive care stay with invasive procedures and a long hospital stay to meet their objectives?'.
- **Analysis (of options)**: explain the realistic outcomes from previous clinical experience and published literature for each of the available options.
- **Plan**: decide on plan of action with the patient and family/carer.

Key Take-Home Messages



A good surgeon knows how to operate

A better surgeon knows when to operate

The best surgeon knows when not to operate

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Thank you
Any questions?
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