

up of a syringe driver (58%), vena punctures (46%), or antibiotics (26%). Patients had undergone a median of 3 nursing types of care during the last 3 days of life, such as daily washing or showering (76%), measurements of body temperature (63%) and blood pressure (61%), and a routine turning procedure to prevent bedsores (25%).

**Discussion:** Most patients dying in hospital receive medical and nursing types of treatment that may have decreased their comfort during the dying process. Caregivers in the hospital may not in all cases have been aware that patients were dying and that care had to be refocused. Currently, it is studied whether the Dutch version of the *Liverpool Care Pathway for the Dying Patient* can be helpful in these situations.

## 1309

## PUBLICATION

**Procalcitonin in cancer patients with febrile neutropenia**

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**Background:** This study was undertaken to determine the value of procalcitonin (PCT), measured in cancer patients on presentation with chemotherapy-induced febrile neutropenia (FN), as a predictive marker to distinguish patients with serious infection from those with less serious infection and non-infective causes of pyrexia, as well as relationships between PCT and the Multinational Association of Supportive Care in Cancer (MASCC) score, as well as the leucocyte, monocyte and neutrophil counts.

**Patients and methods:** Baseline and serial PCT levels were determined in 78 febrile neutropenic episodes. Patients were classified into groups with normal (<0.5 ng/mL) or elevated (≥0.5 ng/mL) initial circulating PCT values.

**Results:** of 57 patients (73%), mostly with fever of unknown origin (FUO), who had low PCT values at baseline, 56 survived. The remaining 21 patients (27%), 11 (57.1%) of whom had microbiologically proven infections, presented with elevated PCT values, and 7 (31.8%) of these died ( $p < 0.0001$ ). With respect to relationships with clinical and haematological criteria, PCT was found to correlate significantly and negatively with the MASCC score, as well as with the leucocyte, monocyte and neutrophil counts.

**Conclusion:** If used as an adjunct to conventional scoring systems, PCT measured on resatation with FN is a potentially useful strategy to distinguish between patients who are at high risk of life-threatening infection and those with either less severe infection or non-infective causes of pyrexia.

## 1310

## PUBLICATION

**Speed of response to epoetin beta in patients with solid tumours undergoing chemotherapy: results of a meta-analysis**

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**Background:** Anaemia is common in patients with solid tumours undergoing myelosuppressive chemotherapy. Recombinant human erythropoietins (epoetins) have been available for the treatment of anaemia for many years and have a proven efficacy across a range of malignancy types. Patients generally undergo around six cycles of chemotherapy (18–24 weeks), and so it is important for patients to obtain a rapid haemoglobin (Hb) rise when receiving epoetin therapy to maximise quality of life and minimise the need for transfusion. A meta-analysis was performed to investigate the speed of response to epoetin beta (NeoRecormon®) in patients with solid tumours undergoing chemotherapy.

**Methods:** Data were pooled from three randomised, controlled clinical trials of epoetin beta in anaemic patients with solid tumours undergoing chemotherapy (ten Bokkel Huinink et al 1998; Oberhoff et al 1998; Boogaerts et al 2003). Patients were divided into those receiving epoetin beta (~30 000–60 000 IU per week) or standard care (control). Changes in Hb level from study records over a treatment period of 16 weeks were collected and analysed.

**Results:** A total of 454 patients were included in this analysis (epoetin beta,  $n = 255$ ; control,  $n = 199$ ); the most common tumour types were ovarian (39%) and breast cancer (11%). Treatment groups were well balanced with regard to demographic characteristics. Hb levels increased rapidly, with a mean Hb increase from baseline of 1.0 g/dl seen after 4 weeks of treatment with epoetin beta. In contrast, a mean Hb increase from baseline of 0.1 g/dl was seen in the control group. A sub-analysis of change in

Hb level based on the type of chemotherapy received (platinum versus non-platinum) was also conducted. In patients receiving platinum-based chemotherapy, a mean increase of 1.0 g/dl was seen after 4 weeks in the epoetin beta group compared with no change from baseline in the control group. In those receiving non-platinum-based chemotherapy, mean Hb increases of 1.0 g/dl and 0.4 g/dl were seen after 4 weeks in the epoetin beta and control groups, respectively.

**Conclusions:** Epoetin beta rapidly increases Hb levels in anaemic patients with solid tumours undergoing myelosuppressive chemotherapy. Moreover, this rapid increase is seen regardless of the type of chemotherapy used.

## References

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## 1311

## PUBLICATION

**The prevalence of concern about weight loss and decline in food intake in people with advanced cancer**

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**Aim:** This paper reports findings of a survey of the prevalence of concern about weight loss and decline in food intake in patients with advanced cancer. It was part of a larger study with the purpose of exploring the potential for helping patients and their families live with the symptoms.

**Background:** Weight loss and anorexia are commonly reported symptoms in people with advanced cancer. Little is known about patient experience of the symptoms, in particular whether they find them of concern. If patients are troubled by the symptoms, mitigating this distress may be important in enabling them to die at home.

**Methods:** The research was a case study design. The cases were two community palliative home care teams serving a population of over 1 million people in the South of England in 2003. Multiple methods of data collection included a questionnaire survey and semi-structured conversational style interviews with a purposive sample of patients ( $n = 30$ ), carers ( $n = 23$ ) and nurse specialists ( $n = 14$ ). The survey was of 233 patients with advanced cancer (response rate 85%). These people represented 67% of the total caseload across the two study sites over a two week period.

Analyses of the survey data were conducted using SPSS (Statistical Package for Social Scientists version 12.0). Interview data were analysed thematically.

**Results:** More than three-quarters of the 199 patients who returned questionnaires reported weight loss (78.8%) and/or to be eating less (75.9%). More than one third of the people reporting weight loss (35%) and nearly half (45%) of people who reported eating less considered the changes of concern.

Patients who were within 6 months of death were found most likely to report concern about either weight loss and/or eating less. The interview data provide insights into the reasons why the symptoms can be experienced as distressing.

**Conclusion:** Weight loss and eating related distress are commonly experienced and previously unresearched problems in people with advanced cancer. Further work is needed to establish if concerns are amenable to interventions that translate into meaningful outcomes for patients and their families.

## References

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## 1312

## PUBLICATION

**A prospective survey of the management of cancer patients undergoing invasive procedures: evolution during the last five years**

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All along the course of their disease cancer patients are submitted to a lot of repeated invasive procedures. Little is known about the distress and pain induced by these procedures.