

Four groups of patients were compared—group A: death in September 1987–1988 and last visit less than a week before death; group B: death in September 1987–1988 and last visit more than a week before death; group C: death in 1977–1985 and last visit less than a week before death; and group D: death in 1977–1985 and last visit more than a week before death.

Among the patients who died in 1987–1988 more than a week after the last visit (Group B), the type and intensity of examinations was similar to the earlier period (Group D). Substantially fewer examinations were made on patients who died in 1987–1988 a week or less after the last visit (Group A). The decrease (Group A vs. C) in both roentgenological examinations and clinical tests was statistically significant (Table 1).

Most of the treatment was cancer-related and only relatively seldom was there recorded any treatment for physical discomfort related to the patient herself. In the more recent period, the overall treatment intensity was somewhat less than earlier. A statistically significant decrease occurred in the prescription of chemotherapy for the patients who died a week or less after the last visit (group A vs. C) (Table 1). This decrease was partially compensated for by an increase in palliative treatment for relief of discomfort of the patient such as aspiration of ascites or fluid from the pleural cavity.

It can be argued that rare incidences of prolonged survival in selected patients and the unpredictability of the terminal stages of cancer motivate frequent examinations and treatment.

We found earlier that only 3 of the 54 patients who died a week or less after the last visit were likely to benefit from the examinations [1]. Chemotherapy is known to frequently cause side-effects, and it will not prolong average survival time at this stage [3–5]. All patients suffer from side-effects, and if some patients have their lives prolonged, others must have theirs shortened in order to leave the average unchanged. Therefore, the hope of prolongation is not based on well-established evidence, and any policy based on such a hope will not counterbalance the detrimental effects of chemotherapy.

No major changes occurred in the distribution of treatment among patients who died more than a week after the last

visit (Groups B and D). However, there was a change from chemotherapy to other treatment aimed at relief of discomfort among patients who died a week or less after the last visit (Group A vs. C). Also, examinations at the terminal stage became fewer. The results therefore demonstrate that the terminal stages of breast cancer were adequately predictable.

The results also demonstrate that there are grounds for substantial and rapid changes in clinical practice. The reasons for such changes can not be fully identified. The results of the previous study were originally reported in Finnish in August 1987 [2]. The report itself obviously stirred some discussion on diagnostic procedures and treatment practices. In 1987–1988 Finland's first hospice was designed and built in Tampere. The general idea of the hospice may have changed general attitudes. The hospice itself did not directly influence the results: only 3 patients died in the hospice, all surviving more than a week after admission.

The instigation of treatment which proves unsuccessful may be the wish of the patient, relatives, nurse, doctor or other physicians, or it may be a consequence of a threat of legal action [6]. Reduction in the use of high technology in medicine has been proposed on the basis of economic constraints [7, 8]. No critical new scientific evidence on survival of patients with metastatic breast cancer appeared within this period, nor were there any changes in resources or economic constraints in the clinic. The changes in clinical practice are probably attributable mainly to changes in value judgements of the doctors responsible for the treatment of the terminal patients.

Table 1. Number (%) of examinations and treatments measured at the last follow-up visit of patients who died from breast cancer at the Tampere University Hospital in 1977–1985 and in 1987–1988

	Death $\leq 7$ days after visit		Death $> 7$ days after visit	
	Group A 1987–88 (n = 24)	Group C 1977–85 (n = 50)	Group B 1987–88 (n = 22)	Group D 1977–85 (n = 94)
<b>Diagnostic examinations</b>				
X-rays	7 (29)	37 (74)	14 (64)	63 (67)
Clinical tests	14 (58)	46 (92)	18 (82)	78 (83)
Isotopes	– (–)	2 (4)	1 (5)	4 (4)
Other	1 (4)	– (–)	1 (5)	6 (6)
<b>Treatment for cancer and physical discomfort</b>				
Chemotherapy	1 (4)	17 (34)	5 (23)	28 (30)
Hormonal therapy	19 (79)	41 (82)	13 (59)	72 (77)
Surgery	– (–)	– (–)	– (–)	4 (4)
Radiotherapy	1 (4)	1 (2)	3 (14)	12 (13)
Physical discomfort	8 (33)	9 (18)	4 (18)	15 (16)

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## Correction

**Fotemustine with or without dacarbazine for brain metastases of malignant melanoma.**— In this article by Dr O. Merimsky *et al.* (Vol. 27, 1066), references 3–4 were omitted from the reference list. They are:

- Balch CM, Houghton A, Peters L. Cutaneous melanoma. In: DeVita VT, Hellman S, Rosenberg SA, eds. *Cancer Principles and Practice of Oncology*, 3rd ed. Philadelphia, Lippincott, 1989, 1499–1542.
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- Aamdal S, Calabresi F, Moreschi M, *et al.* Phase II trials with alkylating agents dacarbazine and fotemustine in the treatment of advanced malignant melanoma (AMM): from antagonism to synergy. *J Cancer Res Clin Oncol* 1990, 116, 469.