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Multidisciplinary decision-making on chemotherapy for colorectal cancer: An age-based comparison

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ABSTRACT

Introduction: With the ageing of society, optimising decision-making for older patients with cancer becomes increasingly important. A first step is awareness of current clinical practice. We analysed how treatment decisions regarding chemotherapy for older and younger patients with colorectal cancer are currently being made by the multidisciplinary team, the oncologist and the patient.

Methods: A total of 316 patients with colorectal cancer (median age 68.3 years), discussed at the multidisciplinary gastrointestinal oncology team meetings between 2010 and 2013, were reviewed to select patients for whom guidelines recommended chemotherapy. Multidisciplinary decision-making and subsequent clinical course were extracted from medical files.

Results: The multidisciplinary team recommended chemotherapy in 97% of younger patients treated with curative intent, compared to 65% of older patients; 86% of younger patients and 42% of older patients subsequently received chemotherapy. In a palliative setting, the multidisciplinary team recommended chemotherapy in 98% of younger and 69% of older patients and 81% and 45%, respectively, subsequently received this treatment. In addition to comorbidity and the patient's physical condition, chronological age was an important reason for withholding chemotherapy. When older patients did receive chemotherapy, reduced intensity regimens were often effectuated.

Conclusion: Multidisciplinary decision-making regarding chemotherapy for older patients with colorectal cancer is still frequently based on clinical impressions, preconceptions or chronological age alone. Rather, treatment decisions should be made after thorough evaluation of the patient's health status across multiple domains, either by a geriatrician or within the oncology team itself. Given the preference-sensitive nature of chemotherapy decisions in the elderly, shared decision-making should be strived for whenever possible.

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1. Introduction

Over the past ten years, the incidence of colorectal cancer in the Netherlands has risen by 43%. It is currently the second most common malignancy in both men and women and 12% of cancer-related deaths can be attributed to this disease. More than half of newly diagnosed patients are older than 70 years.[1] Many questions still remain regarding the optimal treatment for the elderly, thus presenting a significant challenge to cancer specialists.

Historically, older patients and those with comorbidities have been excluded from clinical trials.[2] Among the Food and Drug Administration (FDA) approved treatments for cancer, only 9% of patients enrolled in registration trials were older than 75 years of age, whereas 31% of patients with cancer are within that age group.[3] It cannot be assumed that those treatment regimens that are most beneficial to younger patients will also be the best choice for the elderly, given their heterogeneity in physiological reserves, comorbidity, functional capacity and geriatric syndromes.[4] The lack of evidence specific to the older patient means that cancer specialists must determine for themselves what the optimal treatment will be in each individual case.

This decision-making process will often consist of several steps. In the Netherlands, over 95% of treatment decisions regarding chemotherapy for newly diagnosed colorectal cancer are first discussed in a multidisciplinary cancer team meeting.[5] Potentially eligible patients will subsequently be referred to the oncologist for further evaluation and education of the patient on the benefits and risks. After this, the oncologist and the patient need to make a final decision on the eligibility and desirability of chemotherapeutic treatment. For each of these steps, assumptions and preconceptions of both cancer specialists and patients regarding this type of treatment in the elderly can result in suboptimal decisions.

With the imminent ageing of western societies,[6] and the subsequent rise in the number of older patients with colorectal cancer, optimising decision-making for this patient population is becoming increasingly important. A first step is to become aware of current clinical practice. Therefore, we set out to determine how treatment decisions regarding chemotherapy for older and younger patients are currently being made by the multidisciplinary team, the oncologist and the patient.

2. Methods

The multidisciplinary gastrointestinal cancer team at the Diakonessenhuis—a large teaching hospital in Utrecht, the Netherlands—meets weekly to discuss treatment options for newly diagnosed patients as well as for ongoing cases in which decisions need to be made regarding the next treatment step. The team consists of specialists from the Departments of Gastroenterology, Surgery, Oncology, Radiotherapy, Radiology and Pathology. Patients are discussed on the basis of a case sheet, which is prepared in advance and contains all information considered relevant to the case or decision. Once a consensus is reached within the team, the treatment recommendations are summarized on the case sheet and then double-checked with the team members. The case sheet is subsequently archived in the patient's medical file.

For this audit, all patients with colorectal cancer discussed at the team meetings between March 2010 and February 2013 were reviewed to select those patients for whom guidelines recommended that chemotherapy should be considered (either as neoadjuvant treatment for rectal cancer and irresectable colon tumours, as adjuvant treatment after surgery for colorectal cancer, or as palliative treatment for both colon or rectal cancers). A summary of these guidelines[7,8] can be found in Table 1. Patients were excluded if they had received prior chemotherapy for colorectal cancer or if no case sheet was available in the medical file.

The following data were collected: age at inclusion, sex, prior medical history (assessed using the Charlson comorbidity index[9]) date of the meeting, date of oncologic diagnosis, prior oncologic treatment (if any), and the treatment decision to be discussed at meeting. The contents of the case sheet were reviewed to determine what data were presented at the meeting, both regarding the patient and the malignancy. Patient-related data were classified as comorbidity, functional status, nutritional status, and psychosocial status.

Subsequently, the patient's medical files were reviewed to retrieve the recommendation of the multidisciplinary team regarding chemotherapy and to determine to what extent these recommendations were implemented. The reasons behind these decisions were also retrieved from the medical file and subdivided in the following categories: comorbidity, physical condition, age, patient's wish, progressive disease or complications of prior treatment, insufficient expected benefit and unclear.

For patients receiving chemotherapy, the following data were collected: planned chemotherapy regimen, intended dosage, intended number of cycles, and intended interval. The intended regimen was compared to the standard regimen according to treatment guidelines.[7,8] Adaptations from guideline-recommended treatment were classified as primary

Table 1 – Summary of Dutch guidelines for (neoadjuvant) treatment of stage I–III colorectal cancer according to tumour stage.[7,8]

	Neoadjuvant treatment	Adjuvant treatment
Colon cancer		
Stage I and II	None	None
Stage III	None	Chemotherapy
Rectal cancer		
Stage I	Short course radiotherapy	None
Stage II		
T3	Short course radiotherapy	–
T4	Chemoradiation therapy	–
Stage III		
N1	Short course radiotherapy	To be considered*
N2	Chemoradiation therapy	To be considered*

* In the 2008 guidelines, applicable during the study period, the recommendations regarding adjuvant chemotherapy for adjuvant treatment were ambivalent given contradicting study results. In our centre, the policy was that patients with stage III rectal cancer should be referred to the oncologist.