Colorectal Cancer Treatment in Elderly Patients: Results of a Retrospective Analysis Addressed to the Chiefs of Medical Oncology Units in Italy

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Abstract. *Background: The aim of this retrospective analysis was to evaluate the differences of 1-year treatment and chemotherapy related-toxicity in elderly colorectal cancer (CRC) patients in different Italian medical oncology units. Patients and Methods: An open questionnaire on the management of CRC patients over 70 years of age, from January to December 2004, was sent to Italian centres. One hundred and seventy-five files from 10 centres were analysed. Variables considered were age, gender, educational level, comorbidities and modality of therapy administration. Results: In only a minority of units were there some staff specifically dedicated to the older patients in close cooperation with geriatricians and the Multidimensional Geriatric Assessment (MGA) was not routinely used (11.2%-16.8% of cases). Only 5.7% patients were routinely enrolled in a protocol. In total, 95 out of 175 (54.3%) of CRC underwent adjuvant chemotherapy and 80 out of 175 (45.7%) received palliative chemotherapy. Of the patients who underwent adjuvant chemotherapy, 75.6% immediately accepted postoperative treatment while 12.2% were initially dubious but subsequently agreed. Only 5.5 and 9.7% of these patients reported very bad or bad tolerability, respectively. At disease progression, 62.5% patients accepted chemotherapy instantly while 33.3% accepted subsequently. Only 1.3% cases reported very bad and 1.3% bad tolerability. Conclusion: In those units in which the problem of the elderly is actually recognised, CRC treatment is adequate, not influenced by age discrimination but inhomogeneous. In the future, standardizing treatment in different oncology units could prove to be beneficial to this population.*

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Considerable progress has been achieved in the field of geriatric oncology over the last 20 years in the USA and Europe as evidenced by specific meetings, conferences, text books, articles in the main oncological journals, and oral presentations and posters at American Society of Clinical Oncology and European Society of Medial Onology meetings (1). These developments have produced an impact on the awareness of the problem of age discrimination in cancer treatment in the European medical oncology community. Moreover, the incidence of colorectal cancer (CRC), which is approximately 650,000 new cases per year worldwide and 30,000 in Italy, has increased recently (2). In patients over 85 years, CRC constitutes one third of all neoplasms with 70% of patients aged 65 years and over (3) but only 24% of them receive any additional therapy (radiotherapy or chemotherapy) following an operation, compared to 44% of those under 60 years. Moreover, for those over 80 years, radiochemotherapy is administered in only 8% of cases (4, 5). Commonly, the major barriers to treatment in the elderly are the substantial toxicities of aggressive therapies, the large number of coexisting illnesses, the small number of schedules designed for older patients, the patients' limited expectations of long-term benefits and the lack of financial, logistic and social support (6). The cancer-specific treatment of elderly patients should take account of all these factors.

Therefore, an analysis of how the specific problems of elderly cancer patients are perceived by Italian medical oncologists and what general policy of management is adopted for this segment of population was undertaken in an attempt to understand existing issues among patients over 70 years of age.

Patients and Methods

Eligibility criteria. From November 2005 to May 2006, an open questionnaire (Table I) concerning the number of CRC patients ≥70 years old in 2004, the clinical care organization for older patients, the opinions on the use of antitumor drugs, hematopoietic growth factors, administration methods, specific protocols, family role, type of support required and so forth was sent to all medical oncology units in Italy.

The questionnaire was forwarded to the Heads of the Units with an accompanying letter from the former International Society of Geriatric Oncology President. The questionnaires were sent back in the following 3 months by only 10 units. By June 2006, 175 completed files (subdivided into adjuvant and palliative chemotherapy groups) collected from all the CRC elderly patients who presented to the above units in one-year were analysed.

Results

Patient characteristics. Among the 175 returned questionnaires, 95 concerned patients adjuvantly treated and 80 patients treated with palliative intent.

i) Adjuvant group: The age range was 70-84 years and the male:female ratio was 48:36 (for 11 patients the gender was undefined) (Table II). Comorbidities were described but not always graded. A multidimensional geriatric assessment (MGA) was routinely used in only 16 cases (16.8%). Fifty-five patients presented with obstructive symptoms, 18 with blood loss, while diagnosis was incidental in 22 cases.

ii) Metastatic group: The age range was 70-84 years and the male:female ratio was 34:28 (for 18 patients the gender was undefined) (Table III). Comorbidities were described but not always graded. An MGA was routinely used in only 9 cases (11.2%). Forty-two patients presented with obstructive symptoms, 4 with blood loss, while diagnosis was incidental in 34 cases.

Tumour characteristics.

i) Adjuvant group: In 23 cases (24.2%) the primitive lesion was in the rectum, in 21 (22.1%) it was sigma located, in 40 (42.1%) in the colon and in 5 in the cecum (5.3%). In 6 (6.3%) cases the site was undisclosed. Thirty-nine patients had stage II disease and 56 stage III.

ii) Metastatic group: In 17 cases (21.3%) the primitive lesion was in the rectum, in 5 (6.3%) it was sigma-located and in 57 (71.2%) it was in the colon. In 1 case the site was undisclosed. Twenty-seven patients had stage II disease and 46 stage III, in 7 the stage was not reported. In total, 30 patients (37.5%) were metastatic at diagnosis in 2004 while the other patients developed metastases from a previous primitive lesion in the same year. In 33 cases the number of metastases was more than 3.

Treatment. The treatments are outlined in Table IV. Only 9 metastatic patients were enrolled in a protocol (5.1%).

i) Surgery: In the adjuvant group, 20 out of 95 patients immediately (21%) accepted to undergo intervention; in 11 cases (11.6%) the patient had to be convinced by medical staff or family; in the remaining cases the timing of the decision was not reported. In the palliative group, 1 patient was lost at follow-up and 8 patients did not undergo surgery for undefined causes; 36 patients (45%) personally accepted to undergo intervention; in the remaining cases the timing of the decision was not reported. Only 11 cases (13.8%) underwent metastasectomy.

ii) Adjuvant therapy: Twenty-three (24.2%) out of 95 candidate patients for adjuvant chemotherapy did not receive treatment for the following reasons: 14 significant comorbidities (ictus grade 2, cardiopathy grade 3, renal failure grade 2, pneumopathy grade 3); 6 patient refusals; 2 lack of family support and 1 undefined. Out of the 72 patients who underwent chemotherapy, 62 immediately accepted (75.6%) while 10 (12.2%) were initially dubious, but about 1 week later they accepted persuaded by their families and by good information on possible side-effects (Table V).

Schedule: Sixty-six out of the 72 treated patients (91.7%) received 5FU-based chemotherapy (Mayo Clinic, Machover regimen or 5FU weekly bolus administration) without oxaliplatin due to the stage of disease in 17 cases, age in 15 cases, comorbidities in 12 cases, no European Agency for the Evaluation of Medical Products (EMEA) indication for CRC adjuvant treatment with oxaliplatin in 2004 in 8 cases, patient refusal of concomitant 5FU continuous infusion (*c.i.*) in 7 cases and undefined reasons in 7 cases (Table VI).

Toxicity: Chemotherapy without oxaliplatin was precociously stopped because of toxicities in 5 patients (7.6%), for refusal in 4 cases (6.2%), for concomitant disease in 2 cases (3.1%) and for unknown causes in 2 cases (3.1%). Out of the 6 patients treated with oxaliplatin, 1 stopped prematurely because of toxicity and 1 due to progressive disease. Only 4 patients (4.2%) needed hospitalisation. A dose reduction occurred in 12 of the patients (18%) treated with 5FU alone and in 1 of the patients (16.7%) treated with 5FU and oxaliplatin.

Four out of the 72 treated patients (5.5%) reported very bad tolerability, 7 (9.7%) reported bad tolerability, 30 (41.7%) acceptable tolerability, 12 (16.7%) good tolerability and 9 (12.5%) very good tolerability. In the other 10 cases tolerability was not reported (Table VII).

Table I. *Questionnaire.*

General
Medical Unit

Patient-related information
General background
Educational level
Profession
Physical characteristics
Date of birth
Weight
Height
Disease-related characteristics of patient
Blood value of albumin and creatinine
Creatinine clearance
Symptoms at diagnosis
Intestinal function
First appearance
Multidimensional geriatric assessment (MGA)
Performance status (PS)
Activity of daily living (ADL)
Instrumental of activity of daily living (IADL)
Mental status (MMS)
Depressive geriatric symptoms (GDS)
Comorbidities according to Charlson's classification

Disease-related information
Neoadjuvant therapy
Surgery
Surgery of the primary lesion and number of resected nodes
Patient's agreement to surgery
Disease characteristics
Date of diagnosis
Site
Stage
Grading
Macroscopic feature
Vascular involvement
Lymphatic involvement

Adjuvant treatment
Indication and reasons
Was chemotherapy suggested by the doctor?
Patient informed about disease
Comorbidities adequacy to therapy
PS adequacy to therapy
Cognitive functioning adequacy to therapy
Family involvement in the patient's life
Family agreement to adjuvant chemotherapy
Adequate logistic support
Chemotherapy administered and reasons why
Precocious interruption and causes
Number of cycles
Before any cycle:
- patient PS
- weight
- body surface
- blood value of albumin, creatinine and cholesterol
- creatinine clearance
- delay of dose administration
- dose reduction and cause
- maximal toxicity, neurotoxicity, febrile neutropenia
- granulocyte growth factor administration
- erythropoietic growth factor administration
- hospital admission, time and causes

Two months after the end of treatment:
- patient PS
- weight
- MGA
- personal experience of chemotherapy
- late toxicity
- relapse local or systemic
- date of relapse
- site and number of metastases

Palliative therapy
Was chemotherapy suggested by the doctor?
Patient informed about disease
Comorbidities adequacy to therapy
PS adequacy to therapy
Cognitive functioning adequacy to therapy
Family involvement in the patient's life
Family agreement to palliative chemotherapy
Adequate logistic support
Patient's attitude towards palliative chemotherapy
Chemotherapy administered and reasons why
Premature interruption and causes
Number of cycles
Before any cycle or any line of palliative therapy:
- patient PS
- weight
- body surface
- blood value of albumin, creatinine and cholesterol
- creatinine clearance
- delay of dose administration
- dose reduction and cause
- maximal toxicity, neurotoxicity, febrile neutropenia
- granulocyte growth factor administration
- erythropoietic growth factor administration
- hospital admission, time and causes

Best supportive care (BSC)
Causes
Activation of Domiciliary Integrate Assistance (ADI)

Patient Status

Only 1% of the medical oncologists interviewed used hematopoietic growth factors and 1% administered erythropoietin. In 2% of cases, MGA was repeated at the end of chemotherapy.

iii) Palliative therapy: In the metastatic group (80 patients), an adjuvant chemotherapy at diagnosis was proposed to 24 patients (30%). One out of the 24 patients refused (4.2%), 15 (62.5%) immediately accepted, 8

Table II. *Characteristics of 95 elderly patients who underwent adjuvant chemotherapy.*

Characteristic	No.	%
Age		
Median (range) years		
≥70 to 75	49	51.6
>75 to 84	46	48.4
Gender		
Male	48	50.5
Female	36	37.9
n.a.	11	11.6
Education level		
No education	2	2.1
Primary school	46	48.4
Middle school	22	23.1
Secondary school	5	5.3
University	3	3.1
n.a.	17	17.9
Geographical distribution		
Northern Italy	70	73.7
Central Italy	18	18.9
Southern Italy	7	7.4
Performance status (PS)		
0	39	41.0
1	38	40.0
2	5	5.3
3	1	1.0
na	12	12.7
Symptoms		
Yes	36	37.9
No	51	53.7
n.a.	8	8.4
Site of primary lesion		
Rectum	23	24.2
Sigma	21	22.1
Colon	40	42.1
Ceco	5	5.3
n.a.	6	6.3
Stage of colon disease		
pT4N2M0	5	5.2
pT4N1M0	4	4.2
pT4N0M0	10	10.5
pT3N2M0	16	16.9
pT3N1M0	25	26.3
pT3N0M0	25	26.3
pT2N1M0	5	5.2
pT2N0M0	2	2.2
pT1N1M0	1	1.0
pT1N0M0	2	2.2

n.a.=not available.

(33.3%) patients, initially dubious, later accepted due to adequate support and advice from their family (Table V). Three patients received an oxaliplatin-based chemotherapy (13%), all the others received a 5-fluorouracil (5FU)-based regimen but 3 of them interrupted therapy because of toxicity.

Table III. *Characteristics of 80 elderly patients with metastatic disease who underwent palliative chemotherapy.*

Characteristic	No.	%
Age		
Median (range) years	39	
≥70 to 75	41	48.7
>75 to 84	51.3	
Gender		
Male	34	42.5
Female	28	35.0
n.a.	18	22.5
Education level		
No education	3	3.7
Primary school	36	45.0
Middle school	21	26.2
Secondary school	7	8.8
University	3	3.7
n.a.	10	12.6
Geographical distribution		
Northern Italy	60	75.0
Central Italy	13	16.2
Southern Italy	7	8.8
Performance status (PS)		
0	38	47.5
1	21	26.2
2	5	6.3
3	3	3.7
n.a.	13	16.2
Symptoms		
Yes	28	35
No	44	55
n.a.	8	10
Site of primary lesion		
Rectum	17	21.3
Sigma	5	6.3
Colon	57	71.2
n.a.	1	1.2
Stage of colorectal disease at diagnosis		
pT4N2	4	5.0
pT4N1	4	5.0
pT4N0	2	2.5
pT4Nx	5	6.2
pT3N2	17	21.2
pT3N1	19	23.7
pT3N0	15	18.7
pT2N2	2	2.5
pT2N0	4	5.00
pTxNx	1	1.2
n.a.	7	8.7
Site of metastases		
Liver alone	36	45.0
Liver + lung	11	13.8
Liver + peritoneum	7	8.7
Liver + nodes	2	2.5
Lung	8	10.0
Lung + different site	4	5.0
Peritoneum	5	6.3
Pelvis	2	2.5
Pelvis + nodes	1	1.2
n.a.	4	5.0

n.a.=not available.

Table IV. *Different treatments in 175 elderly patients.*

Characteristic	No.	%
Surgery of the primary lesion		
Adjuvant group	95	100% of the adjuvant group
Palliative group	71	88.7% of the palliative group
Surgery of metastases	14	8.0% of 175 patients
Adjuvant therapy in 2004		
Radiotherapy		
(for rectal cancer only)	11	27.5% of the 40 rectal cancer cases
Chemotherapy	72	75.8% of the adjuvant group
With oxaliplatin	6	8.3% of the adjuvantly treated group
Without oxaliplatin	66	91.7% of the adjuvantly treated group
Palliative therapy		
First-line	77	96.2% of the palliative group
Second-line	37	48.0% of the first-line treated group
Third-line	11	29.7% of the second-line treated group
Fourth-line	2	18.2% of the third-line treated group
Best supportive care		
(after any CHT line)	32	40.0% of the palliative group

CHT=chemotherapy.

Table V. *Medical and patient's attitude towards treatment.*

Characteristics	No	% of the total patients in each group
Adjuvant chemotherapy		
Indication to adjuvant chemotherapy	95	100
Doctor's proposal to patient	79	83.1
Patient information	83	87.4
Family compliance	51	53.7
Family agreement to chemotherapy	48	50.5
Adequate logistic support	48	50.5
Patient agreement	72	75.8
Palliative chemotherapy		
Indication to palliative chemotherapy	80	100.0
Doctor's proposal to patient	77	96.2
Patient information	74	92.5
Family compliance	69	86.2
Family agreement to chemotherapy	69	86.2
Adequate logistic support	70	87.5
Patient agreement	70	87.5

In 2004, at disease progression, all except 3 of 80 metastatic patients (3.7%) underwent chemotherapy but the causes for this were not described. In those patients undergoing chemotherapy, 48 immediately accepted (62.3%) while 19 (24.7%), initially dubious, later accepted. In 10 cases, initial patient reaction to the therapy proposal was not described.

First-line schedule: Twelve out of the 77 treated patients (15.6%) did not receive oxaliplatin-, irinotecan- and 5FU *c.i.*-based chemotherapy due in 3 cases to the patient's refusal of

Table VI. *Basis for treatment decision.*

Factors estimated to influence medical decision	No.	%	
Adjuvant chemotherapy (72 patients)			
Without oxaliplatin:	66	91.7% of the 72 patients	
Stage of disease	17	25.7%	of the 66 patients
Age	15	22.7%	
Comorbidities	12	18.2%	
No EMEA indication	8	12.2%	
Pts concomitant 5FU *c.i.* refusal	7	10.6%	
Not determined	7	10.6%	
Palliative chemotherapy (77 patients)			
Without oxaliplatin, irinotecan and 5FU *c.i.*:	12	15.6% of the 77 patients	
Comorbidities	9	75.0% of the 12 patients	
Pts concomitant 5FU *c.i.* refusal	3	25.0% of the 12 patients	
Without oxaliplatin and irinotecan:	7	9.1% of the 77 patients	
Low performance status	1	14.3% of the 7 patients	
Not determined	6	85.7% of the 7 patients	
Without 5FU *c.i.*:	5	6.5% of the 77 patients	
Comorbidities	3	60.0% of the 5 patients	
Pts refusal	2	40.0% of the 5 patients	

Pts=patient's; 5FU=5-fluorouracil; *c.i.*=continuous infusion.

Table VII. *Treatment compliance.*

Factors estimated to influence patient decision to stop therapy	No.	% of the total in group
Adjuvant chemotherapy	72	
Toxicity	6	8.3
Refusal	4	5.5
Concomitant comorbidity	2	2.8
Not determined	2	2.8
Progressive disease	1	1.4
Tolerability		
Very bad	4	5.5
Bad	7	9.7
Acceptable	30	41.7
Good	12	16.7
Very good	9	12.5
Not reported	10	13.9
Palliative first-line chemotherapy	77	
Toxicity	9	11.7
Refusal	4	5.2
Concomitant comorbidity	1	1.3
Not determined	2	2.6
Progressive disease	2	2.6
Clinical progression	2	2.6
Death	1	1.3
Tolerability		
Very bad	1	1.3
Bad	1	1.3
Acceptable	34	44.1
Good	2	2.6
Not reported	39	50.6

a port-a-cath and in 9 cases because of comorbidities. Seven out of the 77 treated patients (9.1%) did not receive oxaliplatin- and irinotecan-based chemotherapy due in 1 case to low performance status and in 6 cases for undefined reasons. Five out of the 77 treated patients (6.5%) did not receive 5FU *c.i.*-based chemotherapy in 2 cases because the patient refused the port-a-cath and in 3 cases because of comorbidities (Table VI). Forty-five out of the 77 treated patients (58.4%) received an oxaliplatin- and/or irinotecan-based chemotherapy, 2 patients (2.6%) received an oxaliplatin- or irinotecan- and 5FU *c.i.*-based chemotherapy, 2 patients (2.6%) received an oxaliplatin-based chemotherapy, 3 patients (3.9%) received 5FU bolus-based chemotherapy and 1 patient was treated with oral fluoropyrimidine (1.3%). The more common first-line regimens were XELOX (xeloda plus oxaliplatin), XELIRI (xeloda plus irinotecan), Xeloda alone or plus mitomycin C (MMC) or plus oxaliplatin and irinotecan, FOLFOX (5FU *c.i.* plus oxaliplatin) alone or plus 1-[4-chloroanilino]-4-[4-pyridylmethyl] phthalazine succinate; PTK/ZK (PTK787/ZK 222584, a potent inhibitor of VEGFR tyrosine kinases), FOLFIRI (5FU *c.i.* plus irinotecan), tomudex alone or plus oxaliplatin, tegafur-uracil (UFT) + oxaliplatin or irinotecan, "Muggia" (5FU bolus plus oxaliplatin), 5FU/leucovorin (LV) or folinic acid (FA).

Toxicity: Chemotherapy was prematurely stopped due to toxicities in 9 patients (11.7%), refusal in 4 cases (5.2%), for progression of disease in 2 cases (2.6%), subjective progression of disease in 2 cases (2.6%), concomitant disease in 1 case (1.3%), death in 1 patient (1.3%) and unknown causes in 2 cases (2.6%). During therapy, only 7.8% of the medical oncologists interviewed used hematopoietic growth factors and none administered erythropoietin. Four out of the 77 (5.2%) treated patients were hospitalised due to gastrointestinal toxicity. In 24 patients (31.2%), a dose reduction was described. One out 77 treated patients reported very bad tolerability, 1 reported bad tolerability, 34 acceptable tolerability and 2 good tolerability. In the other cases tolerability was not reported (Table VII).

Second-line schedule: Forty of the 77 patients (51.9%) did not receive a second-line therapy. The more common second line regimens were XELOX, XELIRI, xeloda alone, FOLFOX alone or plus PTK, FOLFIRI, irinotecan alone, oxaliplatin alone, "Muggia", 5FU alone or plus MMC. During therapy, only 10.8% of the medical oncologists interviewed used hematopoietic growth factors and none administered erythropoietin. Two out of the 37 (5.4%) treated patients were hospitalised, 1 due to a hemorrhage and the other because of gastrointestinal toxicity. In 17 patients (45.9%) a dose reduction was described. One out of 37 treated patients (2.7%) reported very bad tolerability, 1 (2.7%) reported bad tolerability, 15 (40.5%) acceptable tolerability and 1 (2.7%) good tolerability; in the remaining cases tolerability was not reported.

Third-line schedule: Of the 37 patients who received a second-line therapy, 26 did not receive a third-line therapy (70.3%). For the 11 treated patients, the more common third line regimens were XELOX, XELIRI, FOLFOX, FOLFIRI, tomudex and MMC. During therapy, only 9.1% of the medical oncologists interviewed used haematopoietic growth factors and administered erythropoietin. None of the treated patients was hospitalised. In 4 patients a dose reduction was described. Two out of the 11 treated patients reported an acceptable tolerability, in the remaining cases tolerability was not reported.

Fourth-line schedule: Only 2 patients received a fourth-line therapy, 1 with MMC and the other with the FOLFIRI regimen. Both were still alive at the time of the study. During therapy, erythropoietin was not administered. Neither of the treated patients was hospitalised. One of the patients reported acceptable tolerability, in the other tolerability was not reported.

Best Supportive Care: Thirty-two out of 80 patients received the best supportive care when chemotherapy did not work any more and when clinical conditions became worse. In 14 cases, Home Assistance was activated. In all cases MGA was repeated at the end of chemotherapy. Of these 80 patients, 26.2% have died.

Discussion

Data were reported from only 10 Italian centres, so this was probably a well-selected survey of the elderly patients, moreover nothing is known about those patients who were untreated for different reasons. Unfortunately, the opinion of the medical oncologists from the majority of Italian centres is not known. The number of CRC elderly patients observed was high, but lower than the estimated epidemiological dimension of the problem (about 47.8% of males and 56.7% of females affected by CRC are over 70 years of age) (7), probably because not all patients were referred to the medical oncologist after radical surgery or radiotherapy or to the family physician or geriatrician and because of the small number of reports collected.

In only a minority of units were there some staff specifically dedicated to the older patients in close cooperation with geriatricians. MGA was used in only a minority of the units (20%), but this is in line with the European situation where this tool is used by a relatively small percentage of medical oncologists (8-11).

In the adjuvantly treated group, 93.7% of patients underwent surgery and then 75.8% received chemotherapy. Postoperative chemotherapy was badly tolerated in only 15.3% of these patients. Many patients, but not all of them, were conscious of their disease stage.

In the metastatic group, 96.2% patients underwent first-line chemotherapy, 48.1% underwent second-line therapy, 29.7% underwent third-line therapy, 2.5% underwent fourth-line therapy. Only 2.6% of patients badly tolerated first-line palliative chemotherapy.

All this information, along with the fact that the elderly are willing to accept chemotherapy, is important and it shows that in Italy, even though a small sample of patients from few centres was available, there is an opening for conducting studies in this field. The elderly CRC patients were in fact treated as adult patients, with the same regimens, the same doses of drugs and the same toxicity rate, moreover, almost all the patients were well informed before treatment.

The superiority of oral drugs in the elderly has often been suggested by some pharmaceutical companies because of their easy administration. The majority of medical oncologists agreed, but more than one third did not think that this is a real advantage over intravenous administration (12). In our series only 30% of patients received oral fluoropyrimidines alone or in combination with intravenous drugs as first-line therapy. This can probably be ascribed to the problems of the self administration of the drugs at home and to the lack of advantage of the oral administration drugs in terms of toxicity.

The use of hematopoietic growth factors or erythropoietin has been, at least in Italy, one of the factors thought to be responsible for the increased cost of drugs prescribed for elderly cancer patients, but in this inquiry only 7-8% of Italian medical oncologists used them. Italian medical oncologists think that the elderly cost more because of longer hospital admission and because, after discharge, they often need home care support. In our analysis, only 5.2-5.4% of treated patients were hospitalised. Forty percent received the best supportive care when chemotherapy did not work any more, but in only 18.2% of cases was Home Assistance activated. More economic resources for elderly cancer patients care are likely needed, especially toward the end of life when they need more domiciliary support.

In this study (13, 14), it was interesting to learn the direct opinion of those accused of being partially responsible for discrimination against the elderly. Unfortunately, only 10 centres responded to this retrospective analysis, but the 1-year data on 175 patients helped us to understand that in those units in which elderly patients were actually treated, the CRC treatment was adequate (even if diverse) and not compromised by age discrimination (15, 16). It might be useful to standardize the treatment in different oncology departments and to enrol more patients over 70 years of age in cooperative studies to understand both them and their problems better.

Conclusion

Even though only few centres responded to this retrospective analysis, the data gained helped us to understand that in those units in which elderly patients were actually treated, the CRC treatment was adequate and not compromised by age discrimination. In conclusion, Italian medical oncologists are well aware of the large number of elderly CRC patients taken into care, of the particular problems concerning drug administration in older patients and of the need for specific protocols and guidelines. Unfortunately, the necessity for a continuous relationship with a geriatrician is still only perceived by a small number of them. The problem of the cost is evident, but the awareness of this problem does not seem to lead to an attitude of reduced prescriptions but to a search for possible solutions and to a request for increased economic resources. Specific competence and the possibility to participate in definitive clinical trials for elderly cancer patients should always be considered.

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