observed FOXP3 protein expression exclusively in infiltrating lymphocytes,[2,3] a recent article by Zuo et al[4] reported the expression of both FOXP3 protein and mRNA in human breast epithelial cells. Their FOXP3 protein expression data, obtained using a polyclonal antibody, are contrary to our findings with the anti-FOXP3 236A/E7 monoclonal antibody[2,3] and studies are ongoing to investigate the reasons for this discrepancy. However, using real-time PCR this group have demonstrated *FOXP3* mRNA expression in human and murine mammary epithelial cells.[4] These data thus suggest that the quantification of *FOXP3* mRNA levels is not a surrogate marker for Tregs within the breast tumor microenvironment. Moreover, as it is reported that normal breast tissue has high epithelial *FOXP3* mRNA expression[4] and low Treg numbers,[2] while tumors have reduced epithelial *FOXP3* mRNA expression[4] and increased Treg numbers[2] then it is possible that these factors may cancel out and obscure any clinical significance dependent on Treg-derived *FOXP3* expression. This may also have contributed to the lack of clinical significance provided by this study of *FOXP3* mRNA expression in breast cancer patients.[1]

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Age Group–Specific Gap Between Treatment Cost of and Mortality Due to Breast and Colorectal Cancer

To the Editor: We read with great interest the articles by Sanoff et al[1] and Crivellari et al[2] on the treatment of older patients with breast and colorectal cancer. Both articles review the special needs of elderly population during cancer treatment.

In a country like Hungary, where health care resources are more limited, the efficiency and equity problems of health care are more important. We analyzed the annual (2001), nationwide treatment cost distribution of breast[3] and colorectal[4] cancer. We compared the annual out- and inpatient care treatment cost of and the annual number of deaths due to breast and colorectal cancer according to age groups. Data were extracted from the nationwide the database of the National Health Insurance Fund Administration (OEP), the only health care financing agency in Hungary, containing routinely collected financial data. Compared with Medicare claims data, the Hungarian OEP's database covers the whole country and all age groups, not only those older 65 years of age.[5]

We found that women age birth to 64 accounted for 42% of all deaths due to breast cancer and they received 72% of the health insurance expenditures for in- and outpatient care treatment of breast cancer. In contrast, women older than 65 accounted for 58% of all deaths due to breast cancer and received only 28% of treatment cost.

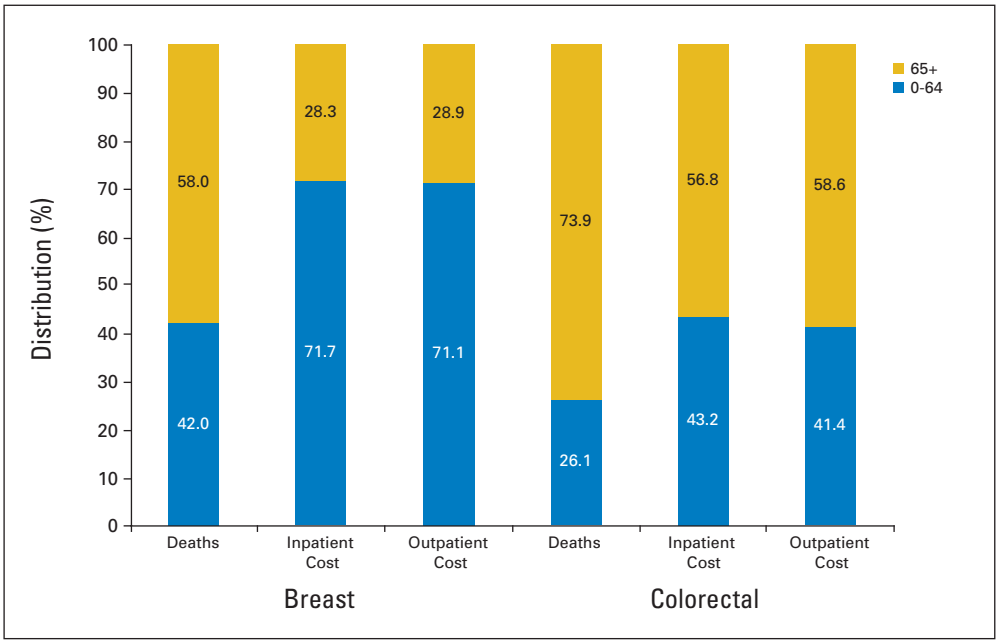

Fig 1. Distribution of annual number of deaths and annual treatment cost of breast and colorectal cancer according to age groups (Hungary).

In case of colorectal cancer, 26% of all deaths due to colorectal cancer occurred in people from birth to 64 years, while they consumed 41% to 43% of treatment cost. People older than 65 account for 74% of deaths due to colorectal cancer and received only 57% to 59% of all of the treatment cost (Fig 1).

Taking into consideration even the natural course of these diseases, there is a shift between the distribution of treatment cost of and deaths due to breast and colorectal cancer in favor of younger age groups. Max et al reported a similar finding in cervical cancer, where almost two thirds (64%) of the deaths due to cervical cancer occurred among women younger than 65, while they represent 84.2% of hospital costs. Most of these differences are derived from the different preferences in treatment, and the undertreatment of senior patients older than 65 years resulted in a higher breast cancer mortality.[6] Our study also confirmed that older colorectal cancer patients are less likely to receive treatment.[7]

Although the undertreatment of elderly population can be explained partly by the general health status of senior people, it is a major challenge for oncologists to balance the risks and benefits of treatment in elderly patients on an individual level. Health care financing agencies face the same challenge in providing equal access to treatment for elderly patients on a population level.

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In Reply: Dr Boncz and colleagues present an interesting overview of the age-related differential distribution of health care costs, a surrogate for health care resource utilization, among Hungarian patients with breast and colorectal cancer. In a society that necessarily caps spending on health care, how does one allocate that precious resource? The preponderance of money spent on patients younger than 65 in Hungary is certainly striking, particularly for young women with breast cancer who account for only 42% of Hungarian breast cancer deaths yet receive 72% of the breast cancer health care expenditures. This vastly unequal cost distribution suggests that older Hungarian patients may be undertreated for their cancers and do not get their proportionate share of resources based on disease burden. These findings are in line with American studies, where health care resources are assumed to be more plentiful, showing a marked decline in colorectal cancer treatment with age.[1]

We thoroughly agree with Boncz et al's assertion that individualized care is the gold standard for treatment of elderly patients with cancer.[2] That is, in order to avoid undertreatment of the fit elderly or overtreatment of the frail, treatment decisions in older patients must be individualized based on physician and patient preference, function, and individual health rather than chronological age. This is particularly true considering that there are clear data that colorectal cancer patients 70 or older who were enrolled on clinical trials had equal benefit with similar toxicity when treated with oxaliplatin-containing[3] and irinotecan-containing regimens[4] as did younger patients. Both younger and older fit patients with stage IV colorectal cancer are likely to have a similar median survival of 20 months with oxaliplatin, folinic acid, and fluorouracil (FOLFOX) compared with 12 to 14 months with fluorouracil plus leucovorin or 6 months with best supportive care. Devaluing this benefit for the older person by preferentially directing resources to relatively youthful patients is problematic.

With individualized care as a gold standard, future attempts to assess the progress of cancer care in the elderly will need to incorporate novel quality measures beyond cost and use of recommended care—both reasonable surrogates for aggressiveness of care, but poor measures of appropriate individualized care. Innovative quality measures that encompass some aspects of care essential to individualized decision making have already been used[5,6] to assess the quality of colorectal cancer care. Hopefully using similar measures adapted to the needs of elderly cancer patients, we will be better equipped to study the success of our efforts to individualize the care of the elderly with cancer.

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