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ASSESSMENT OF THE USE OF BEVACIZUMAB IN ONCOLOGY PATIENTS

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Background: Bevacizumab is a monoclonal humanised antibody against vascular endothelial growth factor (VEGF) that is produced by ovarian cells of the Chinese hamster using recombinant DNA technology. Bevacizumab inhibits the biological activity of VEGF by preventing the interaction between this factor and its ligands, such that the vascularisation of tumours is reduced, and tumour growth is therefore blocked/inhibited. Bevacizumab is suitable for different types of cancer, including breast, lung, colorectal, renal, glioblastoma (CNS) and ovarian. In the present work, the use of bevacizumab is evaluated in oncology patients with various cancer pathologies at a tertiary hospital, excluding patients who were already enrolled in a clinical trial.

Methods: The following data were gathered from the Pharmacy Department's oncology database, ONCOWIN®, for all the patients who were treated with bevacizumab from January 2004 until July 2011: sex, age, diagnosis, time from the diagnosis to the beginning of treatment, duration of treatment, total number of cycles and the total administered dose of bevacizumab. A descriptive analysis of the frequencies, median and measurements of dispersion is conducted based on the type of variable.

Results: A total of 188 patients, 104 women and 74 men, were treated with bevacizumab during the study period. The media age of the patients was 55 years (sd 12.4). The cancer diagnoses were as follows: colorectal, 79 cases; breast, 42 cases; lung, 26 cases; CNS tumours, 17 cases; ovarian, 13 cases; and other cancer, 11 cases. The media duration of treatment was 214 days (sd 234.7; median 133), and the media administered bevacizumab cycles was 10.7 (sd 9.7 – median 8); the media total bevacizumab dose was 657 mg (sd 288), and this value was influenced by the diagnosis and the regularity of the treatment cycles. The media time between the diagnosis and the initiation of bevacizumab therapy was 87 weeks. In 56 patients, bevacizumab was included as the first line therapy, and 132 patients received bevacizumab in subsequent lines of treatment. The median duration of treatment with bevacizumab was 125 days, and in the patients who had treatments previous it was 139, although this difference was not significant. For diagnosis, the median duration of treatment was 166 days for colorectal cancer, 163 days for ovarian cancer, 140 days for breast cancer, 112 days for gliomas and 70 days for lung cancer. The median of the time of treatment in patients under and over 65 years was 144.5 and 99.5 days, respectively.

Conclusions: The median treatment durations for the various pathologies are consistent with those in the literature for progression-free survival, so this parameter might be useful as a measure of the effectiveness of bevacizumab treatment. There were no observed significant differences between the median duration of treatment when bevacizumab was used as a first line treatment or when it was used after other lines of treatment had been tried. There were differences in the duration of treatment in patients who were younger than 65 years; however, the most substantial differences were based on the cancer diagnosis, although a more detailed analysis of these trends should be conducted.