Background: Home-based cancer treatment offers an integrated and patient-centered approach to deal with the challenges oncological day (care) units are facing. Current cancer therapies require frequent hospital visits that are known to be stressful for the patient and generate a high workload for hospital staff. Furthermore, these hospital visits are associated with significant costs for patients and the society, this against the background of increasing attention towards more cost-effective healthcare. Consequently, the general hospital Groeninge (Belgium) has initiated a research project to assess both, the clinical and economic impact of oncological home hospitalization. The project is supported by "Kom op tegen Kanker", a non-profit organization.

Trial design: Ambulatory treated adult cancer patients (EEOG ≤ 2 and living within a 30-minute drive of hospital) are visited at home by a clinical nurse specialist to conduct the necessary measures prior to therapy administration; that is nursing review, toxicity scoring, vital signs monitoring, blood collection, and IV line access provision. These assessments are performed one day prior to the actual therapy administration at the hospital, enabling the oncologist to prescribe and pharmacy to prepare cancer therapy before arrival of the patient. In addition, some safe experienced subcutaneous cancer therapies (i.e. bortezomib, azacitidine and trastuzumab) are administered directly at the patient’s home. This new care model will be evaluated in terms of patient’s quality of life, safety and cost-efficiency by performing a single-center randomized clinical trial allocating leastways 100 subjects to either home-hospitalization or standard ambulant hospital care. Currently, a non-randomized pilot study is launched in which the sensitivity of several validated patient reported outcome measuring tools is examined in both treatment settings (n = 50). Those instruments that show sufficient sensitivity will be included in the randomized trial. A second objective of the pilot study is to gather an extensive costs-inventory that will be used to set up an appropriate and reliable cost-analysis of home-based cancer treatment.

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