

6TH WORLD FORUM ON BREAST AND CERVICAL CANCER



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Home self-testing of complete blood count in patients with breast cancer during chemotherapy

Background

Before administration of myelosuppressive chemotherapy complete blood counts (CBC) collected at the hospital/nursing stations are evaluated to avoid severe bone marrow suppression. This maintains disease fixation which often reduces their quality of life. This mixed-method study examined at home self-testing of complete blood count (CBC), the test quality, and the effects on patients' mental well-being.

Objective

We therefore examined if the blood tests, which are a central part of monitoring the treatment effects, could be performed by the patients themselves in their own homes.

Methods

Patients with breast cancer receiving chemotherapy were recruited and trained to perform capillary finger prick CBC testing at home using the HemoScreen Point-of-Care instrument and to upload the test results to the hospitals IT system subsequently. A venous reference CBC sample was taken and tested at the hospital on the day of self-testing. Semi-structured interviews with open-ended components were performed to investigate the user experience and the impact of self-testing on the patients' everyday lives.

Results

Thirty-nine patients completed the self-testing education using the HemoScreen instrument. Eight patients withdrew, while the remaining 31 patients performed 161 home tests (2-11 tests per patient) over a four-month period. The test results compared well with the venous reference CBCs except for platelet counts (correlation coefficient 0.26). Qualitative interviews with 9 of the 31 patients emphasized that the patients were comfortable using the self-testing instrument and becoming an active partner in their own treatment.

Conclusion

Before administration of myelosuppressive chemotherapy complete blood counts (CBC) collected at the hospital/nursing stations are evaluated to avoid severe bone marrow suppression. This maintains disease fixation which often reduces their quality of life. This mixed-method study examined at home self-testing of complete blood count (CBC), the test quality, and the effects on patients' mental well-being.

Biography

Niels Henrik Holländer is a senior oncologist, and his expertise is in innovation of e-health care for Cancer Patients. He has been the leader of several international cross boarder projects with the focus on Home self-testing of complete blood count in patients with cancer during chemotherapy. He is the leader of Advanced Modeling of Baltic cancer e-caRe (Amber).