

A Biopsy Clinic Pilot in a Pathology Department in a Low Income Country

Background: The World Health Organization (WHO) recognizes the importance of treating low-stage breast cancer as a cost-effective global priority, while palliating advanced disease is a humanitarian necessity. The appropriate treatment and palliation of breast cancer depend on pathology. We previously audited the primary diagnosis of breast cancer in a referral hospital in Uganda; this revealed that many cases were diagnosed using fine-needle aspiration cytology (FNAC) or open biopsy, while relatively few patients had needle biopsies due to the high cost of disposable semi-automatic biopsy instruments. We thus identified a need for a low-cost service that could provide needle biopsies with reports including predictive markers. This study reports the results of the first 6 months of a pilot biopsy clinic.

Methods: The clinic is in a university pathology department and staffed by a scientific officer and postgraduate trainees in cellular pathology supervised by senior staff. Biopsies are taken using a reusable biopsy instrument (BARD Magnum), and disposable needles are cleaned and sterilized for reuse, reducing the total consumables cost from approximately 30 USD to 3USD per patient. Conventional histology and immunohistochemistry (IHC) for predictive markers are performed manually. Reports include the tumour type, grade, and predictive markers.

Results: 29 patients were seen in 6 months, of whom 20 were diagnosed with cancer. The turnaround time (TAT) for diagnosis, including predictive markers, was a median of 11 days. During the same period, the department diagnosed a total of 52 cases of breast cancer. 73% were diagnosed by needle biopsy, compared to 40% in the previous audit.

Conclusion: The biopsy clinic has enabled more patients to access needle biopsy for diagnosis. Departmental control of the process has improved quality and TAT. More work needs to be done to standardize the reports, reduce the cost of, and quality control predictive markers.

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