Rarity of Core Biopsy (With or Without Ultrasound Guidance) Procedure for Diagnosing Breast Cancer in Indonesia: Patients or Providers Reluctance?

A Preliminary Study

Farida Briani Sobri¹, Adang Bachtiar², Sonar Soni Panigoro³, Patria Wardana Yuswar⁴

¹ Doctorate Student, Faculty of Public Health, Universitas Indonesia, Depok, Indonesia; Department of Surgery, MMC Hospital, South Jakarta, Indonesia
² Faculty of Public Health, Universitas Indonesia, Depok, Indonesia
³ Department of Surgery, Faculty of Medicine, Universitas Indonesia, Central Jakarta, Indonesia
⁴ Faculty of Medicine, Universitas Indonesia, Central Jakarta, Indonesia

Corresponding author:
Name : Farida Briani Sobri
Phone : +628121291272
Email : didabriani@gmail.com
Address: MMC Hospital, H. R. Rasuna Said, Karet Kuningan, Setiabudi, South Jakarta, Jakarta Province, 12940, Indonesia

Background: Globally, breast cancer is the second most prevalent cancer with high mortality rates. In Indonesia, it is the most common cancer in women and general population. Ultrasound-guided core biopsy (US-guided CB) has become the international standard for the purpose of definitive diagnosis of breast cancer since decades ago. However, it has become a public knowledge that open biopsy remain the preferred method for obtaining breast tumor pathology specimen in Indonesia. This study aimed to ascertain the cause of this phenomenon through double approaches to both health care providers’ and public’s perceptions in Indonesia.
Methods: A cross-sectional study was done in the early December 2020 for a period of one week. Two set of different surveys were conducted to providers and public. Providers were divided into two groups: general surgeons and surgical oncologists. Any active general surgeons and surgical oncologists were eligible as participants. Public survey was done to breast cancer survivors group, with non-survivors as control group. Any women with age 18 or above were eligible as participants, but those with medical education background were excluded. Each group in providers’ and public’s surveys were targeted to have at least 15 participants. Consecutive sampling was done through electronic invitations to fill electronic questionnaire. Relationship between each group were statistically analyzed with IBM SPSS version 25 software.

Result: There were 17 surgical oncologists and 16 general surgeons who participated in the providers survey; meanwhile, the public survey had 41 and 20 participants in survivors and non-survivors group, respectively. In providers survey, participants practiced at various provinces in Sumatra, Java, and Sulawesi islands, with 27.3% had practiced for ≥10 years. While most participants (81.82%) agreed that US-guided CB is the preferred method for breast cancer diagnosis, 15.5% of them still thought excisional biopsy is suitable with the current clinical guideline. About 69.7% of providers unable to performed US-guided CB in clinical practice, due to unproficiency (30.3%, all in general surgeons), unavailability of devices (63.6%), unavailability of supporting local hospital guideline (21.2%), and inadequate coverage by Universal Health Coverage (39.4%). Except for hospital type, there were no statistically significant difference on all questions between surgical oncologists and general surgeons.

There were 41 survivors and 20 non-survivors who participated in the public survey. The formal education attainment of survivors were significantly higher than non-survivors. In the survivors group, only some of them had a history of CB (42.9%), while the rest had open biopsy (35.7%) and fine-needle aspiration biopsy (FNAB) (7.1%). After given a written overview of available biopsy methods, only 66.7% of survivors chose CB if they had to underwent biopsy again, while some still chose open biopsy (21.4%) and FNAB (7.1%). More survivors (64.3%) thought that biopsy is incapable of spreading cancer compared to non-survivors (35%). Majority but not all survivors (76.2%) agreed that CB is beneficial for breast cancer diagnosis.
Conclusions: US-guided CB is underutilized in Indonesia due to multiple factors from provider and patient factors. Establishing of appropriate local hospital guideline, cooperation of multiple stakeholders to ensure adequate coverage of US-guided CB, provision of required devices, and training of US-guided CB for general surgeons were needed. On the other hand, proper education on the available method of breast tumor biopsy and their respective risks and benefits must be delivered to the public. More studies are required to explore the factors that may influence the decision of patients when choosing breast biopsy method.