

# Useful remarks and statistic correlations from a series of 4120 patients undergone minimally invasive breast biopsy with the B.L.E.S. technique.

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**Purpose:** To evaluate the usefulness of percutaneous stereotactic vacuum assisted breast biopsy system utilizing radiofrequency (BLES®), in the preoperative histological diagnosis of mammographically suspicious lesions.

**Method:** From April 2011 to October 2018, we recorded a series of 4120 cases, which had been diagnosed with suspicious mammographic findings (i.e. microcalcifications, architectural distortions, masses) and underwent stereotactic biopsy with the B.L.E.S. excisional system.

The specimens were sent to the Pathology Laboratory of the Athens Medical School and we correlated the histological results with the radiological indications for biopsy.

Such correlations provided interesting results regarding the percentage of the malignant nature of the findings, the age group allocation of the malignancies, their histological type and the mammographic appearance of the several entities.

## Results:

18%(n=741) of the specimens were malignant, whereas 82%(n=3379) were benign and a breast surgery has been avoided(**figure 1**). 52% (n=385) of the malignancies proved to be DCIS and the 32%(n=237) were invasive ductal carcinoma(**figure 2**). 63%(n=1998) of the suspicious microcalcifications were benign, 20%(n=643) proved to be DCIS, 6%(n=190) invasive ductal carcinoma and 11%(n=349) atypical lesions(**figure 3**). Concerning the age group allocation of the malignancies, their peak appeared between 50 and 60 years old (30%, n=222), whereas the fewest malignant specimens were recorded at the ages less than 40 years old (13%, n=96)(**figures 4a, 4b**).



The stereotactic table and the BLES biopsy system of our Breast Unit



The patient positioning on the stereotactic table and the specimen sampling of the BLES procedure (from right to left)

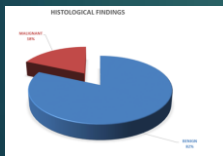


Figure 1

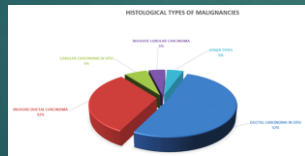


Figure 2

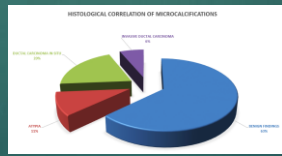


Figure 3

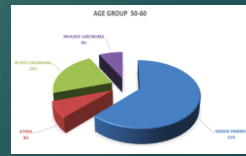


Figure 4a

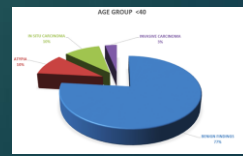


Figure 4b

## Conclusion:

B.L.E.S. is a minimally invasive biopsy method, which can provide reliable preoperative histological information about suspicious mammographic findings and thus, it may diminish significantly the unnecessary breast surgeries