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Introduction of the “Grid-seal”; a simple device to make the life of the Histopathologist easier

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Introduction: A large proportion of the average histopathologist’s time is spent on taking microscopic measurements of tumours, distances to resection margins and performing mitotic counts. Mitotic counts are now calculated per mm²/2 mm². This requires performing a calculation based on the field diameter of the individual microscope. In the above context, it would be largely beneficial if the pathologist can have an imprint of a 1mm² grid on the glass slide as and when required.

Methodology: A grid composed of 1mm² squares was designed as a stamp, so that the imprint of the grid can be made on the glass slide as and when required. Each square of the grid-imprint then measures 1 mm in length and 1 mm² in area irrespective of the power at which the slide is viewed and the field diameter of the microscope. Intellectual rights for the “Grid seal” as an industrial design was applied through the University Business Linkage Cell, University of Colombo.

Results: The grid can be used to measure the distances to the nearest 1 mm. This function is useful and accurate in measuring distances to resection margins in excision specimens and to measure the size of a lesion. Mitotic counts can be performed within 10 squares of the grid and then be divided by 10 or 5 to get the count for 1 mm² or 2 mm² as required. Additionally, the grid can be useful when screening cervical smears and counting cells when performing Ki67 index counts in slides stained by this immunostain.

Discussion and conclusion: The advantages of the “Grid-seal” would be that it is cheap and can be used as and when required, without interfering with the visibility of images. We hope that this device would be a useful tool to increase the efficiency and accuracy of measurements done at the microscope.

Keywords: grid, histopathology

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