Malignant Small Cell Neoplasia: Cytopathological Puzzle or an Intriguing Scientific Window?

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Malignant small cell neoplasia has always been considered as a great challenge for pathologists, cytopathologists and clinicians. Although defined by the size (diameter up to approximately three times that of a small mature lymphocyte) and morphology (single hyperchromatic nucleus having finely granular chromatin with scant cytoplasm), this group of tumors are quite heterogeneous in the cell origin, biology, and consequently prognosis and therapeutic response.

All the great subgroups of malignant neoplasia, such as carcinomas, sarcomas, or lymphomas can have small cell morphology. Some peculiarities in the morphology and use of ancillary techniques are helpful in classifying these tumors correctly. If it is barely challenging to classify them in tissues, in cytology this difficult is even greater.

In order to broaden the discussion of a topic in our view so pertinent, it is with pleasure that we present this special issue entitled *Malignant Small Cell Neoplasia: Cytopathological Puzzle or an Intriguing Scientific Window?*

Many of the topics discussed in this volume involve themes of great repercussion in medicine due to their

high prevalence for some tumors and extreme aggressiveness for other cancers. Lung small cell carcinoma is still a puzzling malignancy that is currently being improved in terms of interpretation and therapeutics. Likewise, pediatric small blue round cell tumors reserve intriguing biological characteristics in terms of prognosis that merits special and constant attention. Other organs, such as breast and thyroid, also display small cell carcinomas that are not so familiar to many professionals in the field. Similarly, sarcomas of small cells are another type of cancer of Ewing family sarcomas that justify a continuum investigation due to the complexity of this tumor. And what about small cell malignancy metastases in cavitary effusions? It is one of the most interesting and appealing chapters in diagnostic cytopathology.

We sincerely hope that this special volume of *Acta Cytologica* will bring you the double opportunity to retrain knowledge and stimulate research in a clear allusion to the windows that these readings inspire us.

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