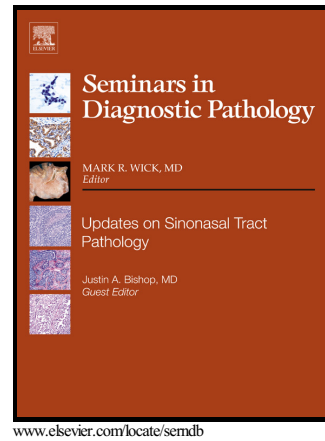


Author's Accepted Manuscript

Pediatric Soft Tissue Pathology: A Happy Morpho-Molecular Union

Maureen O'Sullivan



PII: S0740-2570(16)30067-3

DOI: <http://dx.doi.org/10.1053/j.semdp.2016.08.008>

Reference: YSDIA50467

To appear in: *Seminars in Diagnostic Pathology*

Cite this article as: Maureen O'Sullivan, Pediatric Soft Tissue Pathology: A Happy Morpho-Molecular Union, *Seminars in Diagnostic Pathology*, <http://dx.doi.org/10.1053/j.semdp.2016.08.008>

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting galley proof before it is published in its final citable form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

Pediatric Soft Tissue Pathology: A Happy Morpho-Molecular Union.

Maureen O'Sullivan, MD

National Children's Research Centre, Crumlin Dublin, Ireland

Maureen.osullivan@tcd.ie

Introduction:

It is my honor to discuss pediatric soft tissue tumor pathology in the Festschrift dedicated to my mentor, Pepper Dehner. No other pediatric pathologist has authored more soft tissue-related publications. To summarise pediatric soft tissue tumor pathology into just 10 pages would do neither this phenomenally interesting subject, nor the multitudinous, seminal contributions of Pepper Dehner to the field, justice. Rather than providing an exhaustive historical report here of all pediatric soft tissue neoplasms from the histological perspective, especially as this has been extensively dealt with, most recently through a full 2012 volume of *Pediatric and Developmental Pathology* dedicated to Soft Tissue Pathology as well as at intervals before then, in the detailed reviews of 'Soft tissue Tumors in the first year of Life' (1), 'Pathologic Evaluation of Pediatric Soft tissue Tumors' (2) and the fascinating 'Evolution of the Diagnosis and Understanding of Primitive and Embryonic Neoplasms in Children: Living through and Epoch' (3), I have instead selected a limited number of entities for discussion. These are specifically chosen to illustrate some of the unique features of pediatric soft tissue tumors, to elucidate the rationale for current best tumor categorisation, and to highlight emerging findings in relation to the diverse biologic bases of oncogenesis, but also to discuss where we are with our understanding of what constitutes the embryonal or dysontogenetic tumor and its cell of origin, and why indeed these tumors should arise almost exclusively in such young patients. Therapeutic insights from our enhanced understanding of oncobiology will be alluded to briefly in the context of the increasing and diversifying role of the pediatric pathologist in patient care in the multi-disciplinary clinical setting.

- *Morphology, still the bedrock of pediatric soft tissue diagnosis in the molecular era:*

It is an interesting time-point to reflect on how the role of the pediatric surgical pathologist has evolved from the foundation of our specialty, through years of precise morphologic detailing of specific entities by our founding fathers (notably including Pepper), incorporating also initially fine structural observations by electron microscopy, then the emerging immunohistochemical profiles, and most recently, molecular features, to fine-tune diagnoses. There can be no doubt that molecular diagnostics could only ever have developed in a meaningful way on the very solid foundations of morphology-based diagnostics. Our accrued understanding of disease entities, their pathogenesis, biology and clinical profile, has rested heavily upon morphological features at the light microscopic level, with molecular interrogation of the tissues simply representing a deeper analysis of tumor composition, as the relevant technologies emerge. Up to a point, one might justifiably claim that what the talented and experienced eye could detect, or at least suspect by microscopy, is gradually being borne out at a molecular level.

- *Childhood Cancers Are Different*

Download English Version:

<https://daneshyari.com/en/article/5716749>

Download Persian Version:

<https://daneshyari.com/article/5716749>

[Daneshyari.com](https://daneshyari.com)