

A CLOSER EVALUATION OF MALIGNANT SMALL ROUND CELL TUMORS: A 5-YEAR REVIEW IN A TERTIARY PEDIATRIC HOSPITAL IN THE PHILIPPINES.

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INTRODUCTION

Malignant Small Round Cell Tumors (MSRCT) are neoplasms with a unique similarity, a monotonous population of small, round cells with high nuclear to cytoplasmic ratio. Immunohistochemistry (IHC), coupled with hematoxylin and eosin stain, can accurately classify and diagnose MSRCT. Establishing a panel of IHC based on the most common tumors per body region will lessen turnaround time, prepare patient's relative for additional expenses, and proper allocation of laboratory budget.

OBJECTIVES

This study aims to recommend a panel of IHC based on the most common malignant tumors per body region.

METHODS

A 5-year retrospective and descriptive study of MSRCT in patients aged 1 day to 18 years old at PCMC.

RESULTS

This study included 268 cases and the most common locations were **head and neck(31.34%), abdomen(25%), and brain(18.28%). Rhabdomyosarcoma**, the most common tumor in the head and neck, was positive for **myogenin and desmin. Wilms Tumor**, the most common tumor in the abdomen, was positive for **WT-1 and CD99. Medulloblastoma**, the most common tumor in the brain, was positive for **synaptophysin and GFAP**.

CONCLUSION AND RECOMMENDATION

The application of IHC is an integral part in classifying MSRCT.

Recommended IHC Based On The Most Common Neoplasm Per Body Region		
Body Region	Common MSRCT	Recommended IHC
Head and Neck	Lymphoma, Rhabdomyosarcoma, LCH	LCA, Myogenin, Desmin, CD1a, S-100
Thorax	Lymphoma, Neuroblastoma	LCA, Synaptophysin, Chromogranin
Abdomen	Wilms Tumor, Neuroblastoma, Lymphoma	WT-1, Synaptophysin, Chromogranin, LCA
Pelvis	Rhabdomyosarcoma, Lymphoma	Myogenin, Desmin, LCA
Extremities	PNET/ES, Rhabdomyosarcoma, Lymphoma	CD99, Myogenin, Desmin, LCA
Back	Lymphoma, Rhabdomyosarcoma	LCA, Myogenin, Desmin
Skin Biopsies	Lymphoma, LCH	LCA, CD1a, S-100
Brain	Medulloblastoma, Ependymoma, Germinoma, Rhabdoid Tumor	GFAP, Synaptophysin, EMA, Ki-67, SALL4, INI-1

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