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NEURONAL AUTOANTIBODIES ASSOCIATED WITH PARANEOPLASTIC SYNDROME INFORMATION SHEET

INTRODUCTION

Paraneoplastic syndromes are a rare group of nervous system disorders caused by an exuberant immune response to tumour tissue. The target tumour antigens are common to both tumour cells and normal neuronal tissues. The immune response and autoantibody development can lead to a spectrum of nervous system disorders, which are important in their own right and because they point to a high likelihood of an underlying cancer and sometimes improve with tumour removal

NEURONAL ANTIBODIES AND THEIR ASSOCIATIONS

NEURONAL ANTIBODY	TUMOUR ASSOCIATION	NERVOUS SYSTEM DISORDER
ANNA-1 (Hu)	Small cell lung cancer - 80% Neuroblastoma, prostate cancers	Encephalomyelitis Cerebral degeneration Sensory and autonomic neuropathy
ANNA-2 (Ri)	Breast cancer - 50% Uterine and ovarian cancers Lung and bladder cancers	Cerebral degeneration Ataxia Opsoclonus-myoclonus
PCA-1 (Yo)	Breast, ovarian and uterine cancers - 80% Lung cancer	Cerebral degeneration Sensory and motor neuropathy
PCA-2	Small cell lung cancer	Encephalomyelitis Cerebral degeneration Sensory and motor neuropathy Autonomic neuropathy
Ma-1	Lung cancer	Limbic encephalitis Cerebral degeneration
Ma-2	Testicular germ cell teratomas Small cell lung cancer	Limbic encephalitis Cerebral degeneration
CV-2	Small cell lung cancer Thymoma, gynaecological cancer	Limbic encephalitis Cerebral degeneration Sensory and motor neuropathy
AMPHIPHYSIN	Small cell lung cancer Breast cancer	Limbic encephalitis Encephalomyelitis Stiff person syndrome

TEST REQUESTING

The antibody tests are usually performed on serum samples but may be requested on CSF. Antibodies to ANNA-1, ANNA-2, PCA-1, PCA-2, Ma-1, Ma-2, CV-2 and Amphiphysin are tested by indirect immunofluorescence and confirmed by an immunoblot. They can be ordered as neuronal antibodies. The expected turnaround time is approximately 1 week.

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