

INTERNATIONAL NEUROBLASTOMA RISK GROUP STAGING SYSTEM (INRGSS)

The International Neuroblastoma Risk Group was formed in 2004 and comprised investigators with expertise in neuroblastoma from Australasia, China, Europe, Japan and North America, supported by two charities: the William Guy Forbeck and Little Heroes Cancer Research Foundations.

There have been many staging systems which have made comparison of results of treatment difficult. The most prevalent system until now is the International Neuroblastoma Staging System (INSS). In this, the tumour stage was influenced by the result of operation, an outcome in turn influenced by the surgeon.

INRGSS bases the stage on imaging (Computerised Tomography or Magnetic Resonance Imaging) of the tumour before operation and uses the concept of Surgical Risk Factors (SRF) developed by the European Neuroblastoma Study Group in 1995. SRF exist when the tumour surrounds or invades a vital structure.

The European Study showed that the effectiveness of operation was higher and the risk of operative complication was lower if SRF were not detected on the pre-operative imaging. More recent analysis revealed that the presence of SRF and operation complication have an adverse effect on survival.

INRGSS uses the same definitions for metastatic disease (disease that has spread from the primary tumour) as INSS but uses only two stages for localised disease: L1 when SRF are absent and L2 when SRF are present on pre-operation imaging.

Approximate comparison of INRGSS with INSS staging definitions:

INRGSS		INSS
Stage		Stage
L1	=	1 and 2
L2	=	3
M	=	4
MS	=	4S

The new staging system, used in conjunction with a new risk classification system, is based on analysis of clinical data from 8,800 children. The expectation is that this will allow a more precise matching of the risk of therapy with the risk of disease. The adoption of these definitions worldwide will allow more accurate comparison of treatment strategies.

The Neuroblastoma Society
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