





## THE NEED TO REVISE THE DEFINITION OF COMPLETE RESECTION

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Reporting the classic definition of a complete resection is an integral part of the assessment of surgery for NSCLC, with the prognostic impact of an R1 resection being long recognised. In 2005 the proposal for an "Uncertain" R(un) was made, although this remained untested [1]. It was ten years before publications emerged to test whether the recategorization of the R factor was prognostic. In addition to analysis of the IASLC's 8<sup>th</sup> Edition Lung Cancer Staging Database [2], a number of institutional studies have now been published [3-7]. Studies have confirmed the value of R(un), with the impact being greater in patients with positive lymph node involvement.

Limited Node Assessment is the dominant reason for allocation of R(un) status in these studies. There are studies investigating the impact of compliance with lymph node dissection (fully compliant meaning the 6 station minimum as recommended by the 8<sup>th</sup> edition R Classification; partially complaint is some nodes assessed by less than the 6-station minimum; whereas non compliant indicates no nodes sampled) [4,8]. However, the results are inconsistent.

The other criteria for R(un) previously proposed include: a positive status of the highest lymph node station, carcinoma in situ at the bronchial resection margin, and positive pleural lavage cytology. The R Factor Sub-Committee has proposed revisions for the 9<sup>th</sup> Edition TNM [9]. The logical distinction between R0 being complete resection, R1 microscopic margin positive and R2 macroscopic tumour remaining is unchanged. However, extra criteria are required for the assignment of R0, and the R(un) categories are refined.

R0 will be defined as having an adequate margin, and 6 or greater lymph node stations assessed, and negative highest lymph node station status. For the "uncertain" cases, the proposal is a split between R0(un) and R1(un). This is a logical split, currently based on expert opinion. R0(un) is defined as having an adequate microscopic tissue margin, but either the highest lymph node station is positive, or there has been a limited node assessment. R1(un), however, is defined as those cases with adequate tissue margins but with carcinoma in situ at the bronchial resection margin, or positive lavage cytology. The definition of R1 is also changed, with patients with macroscopic complete resection but a malignant pleural effusion or nodules,

or extracapsular extension of involved nodes being added to cases with microscopic tumour at the surgical margin as criteria for assignment of R1 status. R2 status remains as cases where macroscopic tumour remains at any site after resection.

Given that these proposals are intuitive and/or based on a review of a relatively small number of studies, examining the "uncertain" criteria, onus is placed on a large body of data collected systematically through the IASLC Lung Cancer Staging Project. Firstly, participation is encouraged. Secondly, clarification of recommended methods of surgical and pathological assessment is required, which will be addressed in a forthcoming White Paper from the R Factor Sub-Committee of the Staging and Prognostic Factors Committee.

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