



CRITICAL APPRAISAL

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Spread through airspaces (STAS) is defined as the presence of tumour cells within the airspaces in the lung parenchyma beyond the main tumour edge.¹

There remains controversy over whether STAS is a true pathological feature, with some advocating that these small islands of cells could be largely explained by mechanical forces associated with tissue handling, in many instances likely representing a mechanical artefact,² including dissemination along the knife blade at cut-up, although recent papers argue against this.^{3,4} However, there is sufficient published data showing prognostic significance when STAS is present, that most pathologists accept STAS as a true pathological feature.⁵⁻⁸ Indeed, it was first described in metastatic colorectal adenocarcinoma in the lungs as “aerogenous spread with floating cancer cell clusters (ASFC)”.⁹ The bulk of publications relate to adenocarcinoma, but STAS may also be seen in squamous cell carcinomas¹⁰⁻¹² and pleomorphic carcinomas.¹³

However, it remains vital that pathologists do not over diagnose STAS and mistake it for artefact² and also be aware that mechanical forces may exacerbate the dissociation of tumour cells from the main tumour mass.¹⁴ Also, the definition of STAS needs to be agreed and refined internationally to ensure good reproducibility, and its usage in patient management requires more data especially in relation to diagnosis on frozen section.¹⁵⁻¹⁷

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