

## Grading Histopathology Features of Graft-Versus-Host Disease in Animal Models; A Systematic Review

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**Abstract :** Graft-versus-host disease (GvHD) is a common complication of allogeneic hematopoietic stem cell transplantation that can lead to significant morbidity and mortality. Histopathological examination of affected tissues is an essential tool for diagnosing and grading GvHD in animal models, which are used to study disease mechanisms and evaluate new therapies. In this systematic review, we identified and analyzed original research articles in PubMed, Scopus, Web of Science, and Google Scholar that described grading systems for GvHD in animal models based on histopathological features. We found that several grading systems have been developed, which vary in the tissues and criteria they assess, the severity scoring scales they use, and the level of detail they provide. Skin, liver, and gut are the most commonly evaluated tissues, but lung and thymus are also included in some systems. Our analysis highlights the need for standardized criteria and consistent use of grading systems to enable comparisons between studies and facilitate the translation of preclinical findings to clinical practice.

**Keywords :** graft-versus-host disease, GvHD, animal model, histopathology, grading system

**Conference Title :** ICO 2024 : International Conference on Oncology

**Conference Location :** Montreal, Canada

**Conference Dates :** May 23-24, 2024