

This is the peer-reviewed accepted Editorial of:

Reporting guidelines for manuscripts on tumor prognosis. Schulman FY, Roccabianca P, Avallone G, Bertram CA, Chalkley M, Chambers JK, Donovan TA, Foster RA, Meuten D, Porcellato I, Priestnall SL, Rasotto R, Uchida K, Webster JD, Wood GA, Caswell JL. *Vet Pathol.* 2022 May;59(3):397-398.

The on-line version can be found at: doi: [10.1177/03009858221082207](https://doi.org/10.1177/03009858221082207).

Reporting guidelines for manuscripts on tumor prognosis.

Schulman FY, Roccabianca P, Avallone G, Bertram CA, Chalkley M, Chambers JK, Donovan TA, Foster RA, Meuten D, Porcellato I, Priestnall SL, Rasotto R, Uchida K, Webster JD, Wood GA, Caswell JL. *Vet Pathol.* 2022 May;59(3):397-398.

While veterinary medicine has been around for millennia, veterinary oncology is a relatively recent discipline that started to emerge in the 1960s.¹ It has blossomed over the decades since, leading to the development of subspecialties, including medical oncology, radiation oncology, and surgical oncology. These active areas of interest in veterinary medicine have resulted in productive research and a flood of published papers on prognostic markers that guide current practices in clinical oncology and surgical pathology. Unfortunately, without standardized guidelines for reporting of these studies, many of these papers are missing the necessary information to allow (1) replication of the study methods and confirmation of the results by others, (2) comparison with other studies, (3) proper evaluation of the accuracy of the conclusions, or (4) assessment of the applicability of the studied marker(s) to prognosis in routine diagnostic settings. Potential problems with studies on prognostic markers include study population bias, poor study design, nonreproducible or incorrect assay methods, and incorrect statistical analysis. For example, studies in veterinary oncology are often based on cases seen at referral institutions or universities, which may lead to a bias toward more severe disease and owners willing to undertake advanced and prolonged treatments, resulting in skewed data that might not be applicable to primary practice cases. Other common issues include failure to measure clinically important end points, such as clinical outcome, and problems arising from analysis of cases with different treatment protocols. Differences in assay methods, such as different antibody clones from different manufacturers, which are not always specifically reported, can affect the assay results. Incorrect statistical analysis, which can be due to too few cases, improper censoring, or applying the wrong statistical test, can affect conclusions about the significance of the study findings. Poor study reporting has consequences. Poorly conducted studies and incorrectly analyzed data can lead to erroneous conclusions, which in turn can lead to disseminated misinformation, result in incorrect application to routine diagnostics with direct impact on patient care, and instigate additional studies that lack a proper foundation. To address these types of issues in human medicine, development of guidelines for reporting of prognostic markers was recommended at the US National Cancer Institute and European Organization for Research and Treatment of Cancer (NCI-EORTC) First International Meeting on Cancer Diagnostics in July 2000. This led to the formation of the Statistics Subcommittee of the NCI-EORTC Working Group on Cancer Diagnostics and the publication of Reporting recommendations for tumour MARKer prognostic studies (REMARK) in 2005,² which has been widely adopted in human medicine. The REMARK guidelines are the basis for a new checklist of reporting guidelines for manuscripts on tumor prognosis in *Veterinary Pathology*: https://journals.sagepub.com/pb-assets/cmscontent/VET/VetPathChecklist_ReportingGuidelines_TumorPrognosisManuscripts.docx. This checklist is designed 1082207VETXXX10.1177/03009858221082207Veterinary PathologySchulman et alresearch-article20221Heska Corporation, Loveland, CO, USA²University of Milan, Milan, Italy³University of Bologna, Bologna, Italy⁴University of Veterinary Medicine Vienna, Vienna, Austria⁵IDEXX Laboratories, Inc., Westbrook, ME, USA⁶The University of Tokyo, Tokyo, Japan⁷The Schwarzman Animal Medical Center, New York, NY, USA⁸University of Guelph, Guelph, ON, Canada⁹NC State University, Raleigh, NC, USA¹⁰University of Perugia, Perugia, Italy¹¹The Royal Veterinary College, Hatfield, UK¹²Histopathology Consultant, Verona, Italy¹³Genentech, San Francisco, CA, USA

Corresponding Author: F. Yvonne Schulman, Heska

Corporation, 3760 Rocky Mountain Avenue, Loveland, CO 80538, USA. Email: schulmanfy@comcast.net

Reporting guidelines for manuscripts on tumor prognosis

F. Yvonne Schulman¹, Paola Roccabianca², Giancarlo Avallone³, Christof A. Bertram⁴, Mark Chalkley⁵, James K. Chambers⁶, Taryn A. Donovan⁷, Robert A. Foster⁸, Donald Meuten⁹, Ilaria Porcellato¹⁰, Simon L. Priestnall¹¹, Roberta Rasotto¹², Kazuyuki Uchida⁶, Joshua D. Webster¹³, Geoffrey A. Wood⁸, and Jeff L. Caswell⁸

Keywords: neoplasia, observational study design, oncology, pathology, prognostic markers, reporting guidelines, scientific publishing, surgical pathology, veterinary

398 Veterinary Pathology 59(3) to assist authors in properly describing how their study was conducted. It may not be possible to report on each item in the checklist for every study, and the checklist only provides guide-lines for a standardized approach, but each paper should be clear about how the study was conducted and what is and is not known in the study so that readers can assess the methods, data, and conclusions of the study. While adding a checklist to the submission process may seem like an additional burden to place on authors, it is our hope that this 10-point checklist will help reduce the overall publication burden by reducing time for peer review and revisions, facilitate an effective review process, and improve the quality and impact of published articles. We anticipate that this checklist, like the research it is designed to document, will evolve with the development of new techniques and types of biomarkers. We hope this approach will be adopted by other veterinary journals and result in optimal study design and improved reporting in published articles, with the final aim of overall improvement in veterinary oncologic clinical research and patient care.

Declaration of Conflicting Interests The author(s) declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding The author(s) declared the following potential conflicts of interest with respect to the research, authorship, and/or publication of this article: Some authors of this editorial are editors or editorial board members of Veterinary Pathology.

ORCID iDsF.

Yvonne Schulman <https://orcid.org/0000-0002-7454-8517>

Paola Roccabianca <https://orcid.org/0000-0002-3672-4612>

Giancarlo Avallone <https://orcid.org/0000-0002-5203-7679>

Christof A. Bertram <https://orcid.org/0000-0002-2402-9997>

Mark Chalkley <https://orcid.org/0000-0003-2187-1860>

James K. Chambers <https://orcid.org/0000-0001-5273-7221>

Taryn A. Donovan <https://orcid.org/0000-0001-5740-9550>

Simon L. Priestnall <https://orcid.org/0000-0002-6027-1879>

Jeff L. Caswell <https://orcid.org/0000-0002-1991-3219>

References

1. McGehee B. A look back through the years: a photo journal history of the Veterinary Cancer Society. <http://vetcancersociety.org/wp-content/uploads/2021/03/FINAL-VCS-History-Book.pdf>.

2. McShane LM, Atman DG, Sauerbrei W, et al. REporting recommenda-tions for tumour MARKer prognostic studies (REMARK). Br J Cancer. 2005;93(4):387–391