



# A study of the new five tiered prostate cancer Gleason grading system in a nationwide population cohort in Sweden

Jing Zhang<sup>1,2</sup>, Chin-Lee Wu<sup>2</sup>

<sup>1</sup>Department of Pathology, Changhai Hospital, The Second Military Medical University, Shanghai 200433, China; <sup>2</sup>Department of Pathology and Urology, Massachusetts General Hospital, Harvard Medical University, Boston, MA 02114, USA

*Correspondence to:* Chin-Lee Wu. Department of Pathology and Urology, Massachusetts General Hospital, Harvard Medical University, Warren building 105, 55 Fruit St., Boston, MA 02114, USA. Email: CWU2@MGH.HARVARD.EDU.

*Comment on:* Loeb S, Folkvaljon Y, Robinson D, *et al.* Evaluation of the 2015 Gleason Grade Groups in a Nationwide Population-based Cohort. *Eur Urol* 2016;69:1135-41.

Submitted Jun 02, 2016. Accepted for publication Jun 07, 2016.

doi: 10.21037/tcr.2016.06.23

**View this article at:** <http://dx.doi.org/10.21037/tcr.2016.06.23>

Recommendations by the International Society of Urologic Pathology (ISUP) and 2016 World Health Organization (WHO) blue book propose the use of a five-tiered prostate cancer (PCa) grading system (1,2). The five Gleason grade groupings (GGGs) ranging from 1 to 5 are defined as Gleason scores 6, 3+4, 4+3, 8, and >8, respectively (2). This new grading system beginning with grade group 1 has the potential benefit of reducing anxiety in patients and may contribute to a decrease in the overtreatment of low risk PCa detected by prostate specific antigen (PSA) screening (3). The new GGGs (2,3) has not been validated in a population-based setting before the study by Loeb *et al.* (4). In their study, the authors examined the performance of the new GGGs in men with PCa from a nationwide population-based cohort in Sweden. The authors studied the newly proposed GGGs in 4,325 men undergoing radical prostatectomy (RP) and 1,555 treated with radiation therapy in the national PCa register of Sweden with a mean follow-up of 4.6 years. They showed that the new GGGs was able to predict biochemical recurrence (BCR) after RP and radiation therapy with same accuracy as the previous Gleason classifications, but could potentially avoid overtreatment of low-risk PCa. We eagerly await further results from this group to confirm the prognostic accuracy of the GGGs with longer term oncologic endpoints, and assessment of GGGs in a prospective and the multi-center setting.

## Acknowledgments

*Funding:* None.

## Footnote

*Provenance and Peer Review:* This article was commissioned and reviewed by the Section Editor Hong-chao He MD, PhD (Department of Urology, Shanghai Ruijin Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai, China).

*Conflicts of Interest:* Both authors have completed the ICMJE uniform disclosure form (available at <http://dx.doi.org/10.21037/tcr.2016.06.23>).

[org/10.21037/tcr.2016.06.23](http://dx.doi.org/10.21037/tcr.2016.06.23)). The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

*Open Access Statement:* This is an Open Access article distributed in accordance with the Creative Commons Attribution-NonCommercial-NoDerivs 4.0 International License (CC BY-NC-ND 4.0), which permits the non-commercial replication and distribution of the article with the strict proviso that no changes or edits are made and the original work is properly cited (including links to both the formal publication through the relevant DOI and the license). See: <https://creativecommons.org/licenses/by-nc-nd/4.0/>.

## References

1. Moch H, Humphrey PA, Ulbright TM, *et al.* WHO Classification of Tumours of the Urinary System and Male Genital Organs. Fourth edition. Lyon, France: International Agency for Research on Cancer, 2016:154.
2. Pierorazio PM, Walsh PC, Partin AW, *et al.* Prognostic Gleason grade grouping: data based on the modified Gleason scoring system. *BJU Int* 2013;111:753-60.
3. Epstein JI, Zelefsky MJ, Sjoberg DD, *et al.* A Contemporary Prostate Cancer Grading System: A Validated Alternative to the Gleason Score. *Eur Urol* 2016;69:428-35.
4. Loeb S, Folkvaljon Y, Robinson D, *et al.* Evaluation of the 2015 Gleason Grade Groups in a Nationwide Population-based Cohort. *Eur Urol* 2016;69:1135-41.

**Cite this article as:** Zhang J, Wu CL. A study of the new five tiered prostate cancer Gleason grading system in a nationwide population cohort in Sweden. *Transl Cancer Res* 2016;5(3):233. doi: 10.21037/tcr.2016.06.23