

This is an Open Access document downloaded from ORCA, Cardiff University's institutional repository: <https://orca.cardiff.ac.uk/id/eprint/123818/>

This is the author's version of a work that was submitted to / accepted for publication.

Citation for final published version:

Shi, Z., Wee, L., Foley, K., Spezi, Emiliano , Whybra, P., Crosby, T., de Mey, J. Pablo, Van Soest, J. and Dekker, A. 2018. External validation of radiation-induced dyspnea models on esophageal cancer radiotherapy patients. *Radiotherapy and Oncology* 127 , S168-S168. 10.1016/S0167-8140(18)30628-5

Publishers page: [https://doi.org/10.1016/S0167-8140\(18\)30628-5](https://doi.org/10.1016/S0167-8140(18)30628-5)

Please note:

Changes made as a result of publishing processes such as copy-editing, formatting and page numbers may not be reflected in this version. For the definitive version of this publication, please refer to the published source. You are advised to consult the publisher's version if you wish to cite this paper.

This version is being made available in accordance with publisher policies. See <http://orca.cf.ac.uk/policies.html> for usage policies. Copyright and moral rights for publications made available in ORCA are retained by the copyright holders.



Supplementary - External Validation of Radiation-Induced Dyspnea Models on Esophageal Cancer Radiotherapy Patients

Zhenwei Shi ¹, Kieran Foley ⁴, Juan Pablo de Mey ², Emiliano Spezi ³, Philip Whybra ³, Tom Crosby ⁴, Johan van Soest ¹, Andre Dekker ¹ and Leonard Wee ¹

¹ Department of Radiation Oncology (MAASTRO Clinic), GROW – School for Oncology and Development Biology, Maastricht University Medical Centre, The Netherlands; ² Faculty of Health Medicine and Life Sciences (FHML), Maastricht University, The Netherlands; ³ School of Engineering, Cardiff University, Cardiff, UK; ⁴ Velindre Cancer Centre, Cardiff, UK;

Table 1: The performance assessment of the validated dyspnea model 1 and model 2 on the external validation cohorts V1 and V2.

	External validation cohort (V1)	External validation cohort (V2)
Incidence	11%	11%
AUC	0.68 (95% CI: 0.55-0.76)	0.70 (95% CI: 0.58-0.77)
Accuracy	0.54 (95% CI: 0.47-0.61)	0.88 (95% CI: 0.84-0.92)
Sensitivity	0.70	0.32
Specificity	0.52	0.95
PPV	0.15	0.45
NPV	0.93	0.92

AUC area under curve; CI confidence interval; PPV positive predictive value; NPV negative predictive value.