

Title: Prediction Models for Radiation-Induced Neurocognitive Decline in Adult Patients with Primary or Secondary Brain Tumors: A Systematic Review

Journal name: Journal of Neuro-Oncology

Authors: Fariba Tohidinezhad, Dario Di Perri, Catharina M.L. Zegers, Jeanette Dijkstra, Monique Anten, Andre Dekker, Wouter Van Elmpt, Daniëlle Eekers, Alberto Traverso

*** Corresponding author:** Alberto Traverso, Department of Radiation Oncology (Maastrro Clinic), School for Oncology and Developmental Biology (GROW), Maastricht University Medical Center, Doctor Tanslaan 12, 6229 ET, Maastricht, Netherlands. ORCID: 0000-0001-6183-4429. Electronic address: alberto.traverso@maastro.nl.

	Domain	Results	Search Term
1	Radiotherapy	791,915	Radiotherapy[mh] OR Radiat*[tiab] OR Radiotherap*[tiab] OR Irradiat*[tiab] OR Radiosurg*[tiab]
2	Brain	2,294,669	Brain*[tiab] OR Brain[mh] OR Cerebr*[tiab] OR Crani*[tiab] OR Hemispher*[tiab] OR Inter-crani*[tiab] OR Intercrani*[tiab] OR Intracrani*[tiab] OR Intra-crani*[tiab] OR Skull*[tiab] OR Brainstem[tiab] OR "Posterior Fossa"[tiab]
3	Prediction Models	6,449,509	(Validat* OR Predict* OR Rule* OR Prognos* OR Forecast* OR Multivariate OR Univariate) OR (Predict* AND (Outcome* OR Risk* OR Model*)) OR ((History OR Variable* OR Criteria OR Scor* OR Characteristic* OR Finding* OR Factor*) AND (Predict* OR Model* OR Decision* OR Identif* OR Prognos*)) OR (Decision* AND (Model* OR Clinical* OR Logistic Models[mh])) OR (Prognostic AND (History OR Variable* OR Criteria OR Scor* OR Characteristic* OR Finding* OR Factor* OR Model*)) OR Artificial Intelligence[mh] OR Deep Learning[mh] OR Machine Learning[mh] OR Support Vector Machine[mh] OR Decision Trees[mh] OR Proportional Hazards Models[mh] OR Neural Network[mh] OR "Random Forest*" OR "Naive Bayes" OR "Bayes Classification" OR "Bayesian Network*" OR "Logit Model*" OR "Probit Model*" OR "Artificial Intelligence" OR "Deep Learning*" OR "Machine Learning*" OR "Support Vector Machine*" OR "Decision Tree*" OR "Cox Hazard" OR "Cox Proportional Hazard*" OR "Cox Regression" OR "Neural Network*"

4	Neurocognitive Impairment	4,134,805	"Neurocognitive Disorders"[mh] OR "Cognitive Dysfunction"[mh] OR "Cognition Disorders"[mh] OR "Memory Disorders"[mh] OR "Mental Disorders"[mh] OR Amnesia[mh] OR Depression[mh] OR Fatigue[mh] OR Dementia[mh] OR Delirium[mh] OR Neuropsychology[mh] OR Attention[mh] OR Memory[mh] OR "Executive Function"[mh] OR "Problem Solving"[mh] OR "Verbal Learning"[mh] OR "Mental Status and Dementia Tests"[mh] OR "Psychological Tests"[mh] OR "Neuropsychological Tests"[mh] OR "Memory and Learning Tests"[mh] OR "Speech Articulation Tests"[mh] OR "Word Association Tests"[mh] OR "Neurologic Examination"[mh] OR "Wechsler Memory Scale"[mh] OR "Trail Making Test"[mh] OR Hopkins Verbal Learning Test[tiab] OR HVLT[tiab] OR Hopkins Verbal Learning Test Revised[tiab] OR HVLT-R[tiab] OR COWA[tiab] OR Controlled Oral Word Association[tiab] OR Pegboard[tiab] OR Digit span[tiab] OR Digit symbol[tiab] OR Stroop[tiab] OR Neurocognit*[tiab] OR Cognit*[tiab] OR Neuropsycholog*[tiab] OR Neurotoxicit*[tiab] OR Intellectual[tiab] OR Memry[tiab] OR Mental[tiab] OR Amnesia[tiab] OR Dementia[tiab] OR Attention[tiab] OR Executive Function[tiab] OR Problem Solving[tiab] OR Verbal Learning[tiab] OR Word Association Tests[tiab] OR Epileps*[tiab] OR Seizure[tiab] OR Gait[tiab] OR Dysphasia[tiab] OR Headache[tiab] OR Delirium[tiab] OR Concentration[tiab]
5	Final term	3,817	#1 AND #2 AND #3 AND #4
6	English filter	3,580	