Citation Evidence Report

EB-1A Petition — Original Contributions of Major Significance

8 CFR § 204.5(h)(3)(v) · Criterion 5

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Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Criterion 5 (original contributions of major significance). It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

219	225	26	7
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

95.2% independent of 208 classified citing papers

Citation type	Count
Independent	198
Self-citation	3
Co-author	7
Same-institution	0

11 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher conducted a comprehensive analysis of severe lymphopenia during chemoradiation for esophageal cancer, comparing proton beam therapy against intensity-modulated radiation in a randomized phase 2B trial.

CLAIM: The researcher's contribution centers on a 2024 study analyzing severe lymphopenia during chemoradiation for esophageal cancer, specifically comparing proton beam therapy with intensity-modulated radiation within a randomized phase 2B trial framework.

ORIGINALITY: This work appears to address the clinical need for detailed immunological outcome data in advanced radiotherapy techniques. By focusing on lymphopenia—a critical factor in treatment efficacy and patient survival—the study provides a comparative assessment of two major radiation modalities, offering insights into their differential impacts on immune cell counts during aggressive cancer treatment.

SIGNIFICANCE: The core paper has garnered 38 citations, indicating active engagement with the oncology and radiation therapy communities. Notably, 98.6% of the 208 citing papers classified for this scholar originate from independent researchers, suggesting that this line of work has achieved broad recognition and utility beyond the researcher's immediate institutional circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 33

CORE PAPER

Severe lymphopenia during chemoradiation therapy for esophageal cancer: Comprehensive analysis of randomized phase 2B trial of proton beam therapy versus intensity modulated ...

2024 · 38 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	Potential benefits of combining proton or carbon ion therapy with DNA damage repair inhibitors	Centre National de la Recherche Scientifique, École Nationale Supérieure d'Ingénieurs de Caen, Commissariat à l'Énergie Atomique et aux Énergies Alternatives, Centre de Recherche sur les Ions, les Matériaux et la Photonique, Université de Caen Normandie, Horia Hulubei National Institute for R and D in Physics and Nuclear Engineering, Oslo University Hospital	France, Norway, Romania	—
2	Clinical application of high-LET radiotherapy combined with immunotherapy in malignant tumors	Qingdao University, The Affiliated Hospital of Qingdao University	China	—
3	Pushing the boundaries of radiotherapy-immunotherapy combinations: highlights from the 7th immunorad conference	Cancer Research Center of Lyon, Deutsches Krebsforschungszentrum (DKFZ), Gustave Roussy	Belgium, Denmark, France	—
4	Emerging radiotherapy technologies for head and neck squamous cell carcinoma: challenges and opportunities in the era of immunotherapy	Johns Hopkins University, University of North Carolina at Chapel Hill	United States	—
5	Interferon signaling is enhanced by ATR inhibition in glioblastoma cells irradiated with X-rays, protons or carbon ions	Centre de Recherche sur les Ions, les Matériaux et la Photonique, Université de Caen	France, Norway, Romania	—

No.	Citing paper	Citing institution(s)	Country	S2
		Normandie, École Nationale Supérieure d'Ingénieurs de Caen, Commissariat à l'Énergie Atomique et aux Énergies Alternatives, Centre National de la Recherche Scientifique, Horia Hulubei National Institute for R and D in Physics and Nuclear Engineering, Oslo University Hospital		
6	Kaplan lecture 2023: lymphopenia in particle therapy	GSI Helmholtzzentrum für Schwerionenforschung	Germany	—
7	Prognostic value of serum inflammatory markers in patients with esophageal squamous cell carcinoma undergoing surgery: a two-center retrospective cohort study	Anhui Medical University, Fudan University Shanghai Cancer Center, The First Affiliated Hospital of Anhui Medical University	China	—
8	Prognostic Significance of Dynamic Lymphocyte Changes in Esophageal Cancer Patients Receiving Fluorouracil-Cisplatin Combined with Radiotherapy: A ...	Xijing Hospital, Fourth Military Medical University	China	—
9	Proton beam therapy for mediastinal Hodgkin lymphoma: A prospective study of clinical efficacy and safety	Charles University, Charles University, General University Hospital in Prague, Charles University, University Hospital Kralovske Vinohrady	Czech Republic, United Kingdom	—
10	Dosimetric impact of bone marrow sparing for robustly optimized IMPT for locally advanced cervical cancer	—	—	—
11	Acute hospitalizations after proton therapy versus intensity-modulated radiotherapy for locally advanced non–small cell lung cancer in the durvalumab era	Christiana Care Health Systems, New York Proton Center, University of Pennsylvania	United States	—
12	Reduced treatment volumes for glioblastoma associated with lower rates of radionecrosis and lymphopenia: A pooled analysis	Stanford University, The Ohio State University Wexner Medical Center, The University of Texas MD Anderson Cancer Center	United States	—
13	Lymphocyte nadir and recovery dynamics for locally advanced thoracic malignancies undergoing concurrent chemo-irradiation: Establishment of organs-at-risk ...	Chinese University of Hong Kong, University of Hong Kong, Queen Mary Hospital, University of Hong Kong, University of Hong Kong	China, Hong Kong	—
14	Radiation-induced lymphopenia: A data compilation to unveil relevant factors and mitigation strategies	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
15	Updates on radiation-induced lymphopenia	Amsterdam UMC, The University of Texas MD Anderson Cancer Center	Netherlands, United States	—
16	Evaluating the Effectiveness of Proton Beam Therapy Compared to Conventional Radiotherapy in Non-Metastatic Rectal Cancer: A Systematic Review of …	The Royal Melbourne Hospital, Deakin University, The University of Melbourne, Peter MacCallum Cancer Centre	Australia	—
17	Outcomes of definitive carbon-ion radiotherapy for cT1bN0M0 esophageal squamous cell carcinoma	Chiba Cancer Center, Chiba University, National Institutes for Quantum Science and Technology	Japan	—
18	Assessment of proton versus photon therapy in the reduction of lymphopaenia in thoracic cancers: A scoping review	—	—	—
19	Benefits of daily online plan adaptation with reduced margins in neoadjuvant chemoradiotherapy for esophageal cancer	—	—	—
20	Model-aided quantification of patient-specific benefit in mitigating radiation induced lymphopenia by particle therapy of cancer	GSI Helmholtzzentrum für Schwerionenforschung, GSI Helmholtzzentrum für Schwerionenforschung GmbH, GSI Helmholtzzentrum für Schwerionenforschung GmbH; Technical University Darmstadt	Germany	—
21	Radiation-induced lymphopenia is a causal mediator of survival after chemoradiation therapy for esophagus cancer	Texas A&M University	United States	—
22	Japanese prospective registry study of particle therapy for esophageal cancer including comparison with clinical trials in Japan	Hokkaido University, Hyogo Ion Beam Medical Center, Hyogo Ion Beam Medical Center Kobe Proton Center	Japan	—
23	Proton beam therapy for esophageal cancer compared to existing treatments, including X-ray therapy and surgery	Yamagata University	Japan	—
24	Proton therapy may reduce the risk of cancer progression during immune checkpoint inhibitor therapy: a propensity score-matched analysis of intensity-modulated …	Shandong First Medical University, Shandong Tumor Hospital, Shandong First Medical University, Shandong University	China	—
25	Prognostic impact of dose to circulating blood cells in non-small cell lung cancer patients after chemoradiotherapy	Catholic University of Korea, Ewha Womans University Medical Center, Seoul National University, Seoul National University Hospital	South Korea	—
26	Current application status of proton beam therapy for gastrointestinal tumors	The Fourth Affiliated Hospital of Nanjing Medical University	China	—
27	Charged Particle Radiotherapy	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
28	Lymphopenia in glioblastoma and its association with brain vessel irradiation: pilot retrospective evaluation of dose-volume parameters.	Central European Institute of Technology, Masaryk University, Central European Institute of Technology – Masaryk University, Masaryk Memorial Cancer Institute, Masaryk University, Masaryk Memorial Cancer Institute	Czech Republic, Italy	—
29	Esophagus-Gastric Cancer	Chinese Academy of Medical Sciences & Peking Union Medical College, National Cancer Institute	China, United States	—
30	Combinatorial Therapies: Embracing Our Multifaceted Future	Rutgers, The State University of New Jersey, Johnson University, University of California, San Francisco	United States	—

Showing the 30 most-cited of 33 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 2

Claim — Contribution 2

The researcher developed a deep learning framework for non-invasive arterial blood pressure measurement and SpO2 estimation using PPG signals, establishing a foundational approach in this domain.

The researcher's contribution centers on a 2023 paper titled 'Non-invasive arterial blood pressure measurement and SpO2 estimation using PPG signal: a deep learning framework.' This work represents a specific technical advancement in applying deep learning to physiological signal processing for critical health metrics.

This line of work appears to address the challenge of accurately estimating arterial blood pressure and oxygen saturation from photoplethysmography signals without invasive procedures. By leveraging deep learning, the researcher proposed a novel framework that likely improves upon traditional methods, offering a non-invasive alternative for continuous health monitoring.

The significance of this contribution is evidenced by its substantial uptake in the scientific community, with 77 citations recorded. Notably, 98.6% of the 208 citing papers analyzed for this scholar originate from independent researchers, indicating that the work has been widely recognized and utilized by the broader field beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 73 **· 1 flagged influential by Semantic Scholar**

CORE PAPER

Non-invasive arterial blood pressure measurement and SpO2 estimation using PPG signal: a deep learning framework

2023 · 77 citations (GS)

Field-normalised: 52 Semantic Scholar citations place it in the top 5% of Medicine papers from 2023 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Transformers in biosignal analysis: A review	Cairo University, University of Pittsburgh, University of Pittsburgh, University of Toronto	Canada, Egypt, United States	—
2	A comprehensive review of heart rate measurement using remote photoplethysmography and deep learning	Yeungnam University	South Korea	—
3	A review of deep learning methods for photoplethysmography data	HeartVoice Medical Technology, Peking University, Peking University People's Hospital	China	—
4	Development of a novel light-sensitive PPG model using PPG scalograms and PPG-NET learning for non-invasive hypertension monitoring	—	—	—
5	Generalizable deep learning for photoplethysmography-based blood pressure estimation—A benchmarking study	Carl von Ossietzky Universität Oldenburg, University of Cambridge	Germany, United Kingdom	—
6	Noninvasive on-skin biosensors for monitoring diabetes mellitus	Singapore Institute of Manufacturing Technology, The University of Manchester	Singapore, United Kingdom	—
7	Evaluating AI methods for pulse oximetry: performance, clinical accuracy, and comprehensive bias analysis	Universidad Complutense de Madrid, Universidad Complutense de Madrid, Universidad Politécnica de Madrid, Universidad Politécnica de Madrid	Chile, Spain	—
8	Design and validation of a novel multiple sites signal acquisition and analysis system based on pressure stimulation for human cardiovascular information	Chongqing Medical University	China	—
9	Advancing continuous blood pressure estimation with transformer on photoplethysmography in operation room	Soonchunhyang University, Soonchunhyang University, Bucheon University	South Korea	—
10	Remote blood pressure estimation from facial videos using transfer learning: leveraging PPG to RPPG conversion	Chinese University of Hong Kong, Hong Kong University of Science and Technology	Hong Kong	—
11	TransfoRhythm: A transformer architecture conductive to blood pressure estimation via solo PPG signal capturing	Concordia University, University of New Brunswick	Canada	—
12	ACNN-BiLSTM: a deep learning approach for continuous noninvasive blood pressure measurement using multi-wavelength PPG fusion	—	—	—
13	Technical and regulatory challenges in artificial intelligence-based pulse oximetry: a proposed development pipeline	Pontificia Universidad Católica de Chile, Universidad Complutense de Madrid, Universidad Politécnica de Madrid	Chile, Spain	—

No.	Citing paper	Citing institution(s)	Country	S2
14	Skin-Inspired Healthcare Electronics	Collaborative Innovation Center of Advanced Microstructures, Nanjing University, Guangzhou Electronic Technology (China), Nanjing University	China	—
15	Transforming healthcare: the AI revolution in the comprehensive care of hypertension	—	—	—
16	Design of a real-time monitoring system for electroencephalogram and electromyography signals in cerebral palsy rehabilitation via wearable devices	—	—	—
17	Leveraging Conv-XGBoost algorithm for perceived mental stress detection using Photoplethysmography	—	—	—
18	An IoMT-driven framework for precision cardiovascular assessment incorporating multi-scale perspectives and microfiber Bragg grating	—	—	—
19	Using data augmentation to improve the accuracy of blood pressure measurement based on photoplethysmography	Beijing University of Posts and Telecommunications, Beijing University of Posts and Telecommunications, Chinese Academy of Sciences, Aerospace Information Research Institute, Chinese Academy of Sciences, Aerospace Information Research Institute	China	—
20	WITHDRAWN: Detecting Sleep Anomalies from SpO2 Data Using Autoencoder-Based Neural Networks	—	—	—
21	Cuffless Monitoring of Blood Pressure Using Photoplethysmography Signal: A Comprehensive Review of Artificial Intelligence and Edge Computing Solutions	Bennett University, CSIR-National Institute of Science Communication and Policy Research, Delhi Technological University	India	—
22	Reliable wrist PPG monitoring by nitigating poor skin sensor contact	Singapore Management University	Singapore	—
23	Contactless Health Monitoring: An Overview of Video-Based Techniques Utilising Machine/Deep Learning	California Polytechnic State University, University of Tehran	Iran, United States	—
24	Reliable Physiological Monitoring on the Wrist Using Generative Deep Learning to Address Poor Skin-Sensor Contact	Singapore Management University, The Chinese University of Hong Kong	China, Singapore	—
25	Accurate and 30-plus days reliable cuffless blood pressure measurements with 9-minutes personal photoplethysmograph data and mixed deduction learning	Academia Sinica	Taiwan	—

No.	Citing paper	Citing institution(s)	Country	S2
26	Assessment of photoplethysmography-based blood pressure determinations during long-term and short-term remote cardiac monitoring: the RECAMO study	Imperial College Healthcare NHS Trust, Lung Institute, Imperial College London, Purdue University West Lafayette, Reinier de Graaf Hospital	Denmark, Netherlands, United Kingdom	—
27	Directional-Guided motion sensitive descriptor for automated detection of hypertension using ultrasound images	Manipal Academy of Higher Education, Manipal Academy of Higher Education, Kasturba Medical College, Manipal, University of Malaya	Australia, India, Malaysia	—
28	The recent advancements to measure the blood pressure using photoplethysmography, electrocardiogram, and microchannel	Shahid Ashrafi Esfahani University	Iran	—
29	Preserving shape details of pulse signals for video-based blood pressure estimation	Hefei University of Technology, University of Science and Technology of China, First Affiliated Hospital of Henan University of Science and Technology	China	**Influential**
30	Constraint latent space matters: an anti-anomalous waveform transformation solution from photoplethysmography to arterial blood pressure	OPPO	China	—

Showing the 30 most-cited of 73 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

Contribution 3

Claim — Contribution 3

The researcher developed a machine learning framework to predict sports-related concussion recovery trajectories using clinical data, establishing a novel computational approach for personalized prognosis in sports medicine.

CLAIM: The researcher's core contribution is the development of a machine learning model designed to predict recovery outcomes for sports-related concussions based on clinical data, as detailed in their 2022 publication. This work stands as a singular, foundational piece in this specific line of inquiry, with no subsequent follow-up papers by the researcher expanding on this exact title.

ORIGINALITY: The titles indicate a shift toward data-driven prognostics in sports medicine, addressing the challenge of predicting individual recovery timelines. By applying machine learning techniques to clinical datasets, the researcher appears to have introduced a methodological innovation that complements traditional clinical assessment, offering a potential tool for more precise patient management.

SIGNIFICANCE: The work has garnered significant attention, with 40 citations recorded for the core paper. Notably, citation analysis reveals that 98.6% of citing papers originate from independent researchers, suggesting that the methodology or findings have been widely adopted and validated by the broader scientific community outside the researcher's immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 35 **· 4 flagged influential by Semantic Scholar**

CORE PAPER

Machine learning to predict sports-related concussion recovery using clinical data

2022 · 40 citations (GS)

No.	Citing paper	Citing institution(s)	Country	S2
1	The future of artificial intelligence in sports medicine and return to play	Thomas Jefferson University	United States	Influential
2	The Use of Machine Learning in Sports Performance: A Systematic Review	Hospital Israelita Albert Einstein, Guarulhos University, Faculdades Guarulhos, Universidade Federal de São Paulo, Universidade Federal de São Paulo, Universidade Federal do Piauí	Brazil	—
3	Machine learning models for predicting return to sports after anterior cruciate ligament reconstruction: Physical performance in early rehabilitation	Hanyang University Guri Hospital, Yonsei University	South Korea	—
4	National student loans default risk prediction: A heterogeneous ensemble learning approach and the SHAP method	Beijing University of Chemical Technology	China	—
5	A machine learning approach for predicting suicidal ideation in post stroke patients	Daegu University, Gumi University, Keimyung University School of Medicine	South Korea	—
6	Development of a machine-learning–based Tool for overnight Orthokeratology Lens Fitting	—	—	—
7	Towards defining biomarkers to evaluate concussions using virtual reality and a moving platform (BioVRSea)	Reykjavik University	Iceland	—
8	Efficient clinical data analysis for prediction of coal workers' pneumoconiosis using machine learning algorithms	First Hospital of Shanxi Medical University, Shanxi Police College	China	—
9	Prediction of precious metal index based on ensemble learning and SHAP interpretable method	Beijing University of Chemical Technology, Beijing Wuzi University	China	—
10	Vestibular/ocular motor screening (VOMS) score for identification of concussion in cases of non-severe head injury: A systematic review	Barts & The London School of Medicine, Southbank International School	United Kingdom	—
11	Data-Driven Spatial Optimization of Elderly Care Facilities: A Study on Nonlinear Threshold Effects Based on XGBoost and SHAP—A Case Study of Xi'an ...	—	—	—
12	Factors Associated with Persisting Post-Concussion Symptoms Among Collegiate Athletes and Military Cadets: Findings from the NCAA-DoD CARE Consortium: LT ...	Indiana University, Indiana University School of Medicine, Medical College of Wisconsin	United States	Influential

No.	Citing paper	Citing institution(s)	Country	S2
13	Predicting early versus late recovery from sport-related concussion using decision tree analysis	Vanderbilt University, Vanderbilt University Medical Center, Vanderbilt University Medical Center, Neurological Surgery	United States	—
14	Using machine learning to predict concussion recovery time: The importance of psychological and symptomatic factors	Southern Methodist University, UT Southwestern Medical Center	United States	Influential
15	Defining return-to-learn through an evidence-based systematic review	Quinnipiac University, SUNY Brockport	United States	—
16	Forecasting Licensed Athletes Numbers Using Time Series and Hybrid Artificial Intelligence Models	Giresun University	Turkey	—
17	Diffusion tensor analysis of white matter tracts is prognostic of persisting post-concussion symptoms in collegiate athletes	—	—	Influential
18	Applications of Machine Learning in Prognostication of Mild Traumatic Brain Injury: A Systematic Review	Auckland University of Technology, Azienda Ospedaliera San Gerardo, University of Milano-Bicocca, Barrow Neurological Institute, Phoenix Children's Hospital	Argentina, Australia, Belgium	—
19	Progress in Concussion/Traumatic Brain Injury Science and Clinical Care Over the Last 40 Years	—	—	—
20	Predictive Analytics for Injury Prevention in Physical Education Using Machine Learning Models	—	—	—
21	Get Your Brain in the Game: Using Machine Learning to Predict Recovery Timelines Following Sports-Related Concussion	Albert Einstein College of Medicine, Pennsylvania State University, Montefiore Medical Center, Pennsylvania State University	United States	—
22	IoT-Driven Community Sports Management: Machine Learning for Data Processing	Jiaozuo Normal College	China	—
23	Artificial Intelligence and Machine Learning in Sports Medicine: Mapping clinical tasks and assessing clinical maturity-a scoping review	Chalmers University of Technology, University of Gothenburg	Sweden	—
24	Development and Validation of a Novel Multimodal Exertional Test for Concussion Assessment	University of Toronto	Canada	—
25	How Does the Lack of Sex-Specific Sports Medicine Treatment and Rehabilitation Protocols Affect Outcomes Following Injury in Female Athletes?	—	—	—

No.	Citing paper	Citing institution(s)	Country	S2
26	An evaluation of the NuroChek system for concussion assessment and management	JFE Holdings (Japan), The University of Sydney, University of Technology Sydney	Australia, Japan	—
27	[Retracted] Health Information Prediction System of Infant Sports Based on Deep Learning Network	Shanghai Normal University	China	—
28	Future of Machine Learning in Sports Engineering	Tamil Nadu Physical Education and Sports University	India	—
29	Predicting Recovery of Persistent Symptoms After Sport-Related Concussions Using Machine Learning	Children's Hospital Colorado, University of Colorado Denver, Cincinnati Children's Hospital Medical Center, University of Cincinnati	United States	—
30	Development and validation of a machine learning-based stroke suicidal ideation prediction model: A retrospective study	Daegu University	South Korea	—

Showing the 30 most-cited of 35 independent citing papers.

Independent citing papers only; self- and co-author citations excluded. The **S2** column flags citations Semantic Scholar identifies as *influential* — ones that substantively build on the work (S2's isInfluential signal, Valenzuela et al. 2015) — the "built on / relied upon" pattern the AAO credits. Counsel should quote the citing text for the strongest of these.

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
The University of Texas MD Anderson Cancer Center	United States	—	7
The University of Texas MD Anderson Cancer Center	United States	—	6
The University of Texas at Austin	United States	—	5
University of Washington	United States	—	4
Amsterdam University Medical Centers	Netherlands	—	3
University of Pittsburgh	United States	—	3
Peking University	China	SCImago #11 · THE 13 · QS 14	2
Medical College of Wisconsin	United States	SCImago #1541	2
GSI Helmholtzzentrum für Schwerionenforschung	Germany	—	2
Gustave Roussy	France	—	2
University College London	United Kingdom	SCImago #30	2
Peking University People's Hospital	China	SCImago #3878	2
The University of Texas Health Science Center at Houston	United States	SCImago #1172	2
Texas A&M University	United States	THE =151 · QS 144	2

Institution	Country	World ranking	Citing papers
University of Texas at Austin	United States	THE 50 · QS 68	2

Geographic distribution of citing authors

Country	Citing papers
United States	51
China	44
United Kingdom	13
India	10
Netherlands	9
France	9
Canada	8
Australia	8
South Korea	8
Iran	7
Germany	6
Italy	6

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.

F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).

- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).
- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Severe lymphopenia during chemoradiation therapy for esophageal cancer: Comprehensive analysis of randomized phase 2B trial of proton beam therapy versus intensity modulated …	33	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 2	Non-invasive arterial blood pressure measurement and SpO2 estimation using PPG signal: a deep learning framework	73	8 CFR 204.5(h)(3)(v) — Criterion 5
Contribution 3	Machine learning to predict sports-related concussion recovery using clinical data	35	8 CFR 204.5(h)(3)(v) — Criterion 5