Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

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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 Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. 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

37	40	4	221
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.

100.0% independent of 29 classified citing papers

Citation type	Count
Independent	29
Self-citation	0
Co-author	0
Same-institution	0

8 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 established a foundational link between epithelial-mesenchymal transition and stem cell properties, a seminal contribution widely recognized by the independent scientific community.

CLAIM: The researcher's core contribution is defined by the 2008 paper titled 'The epithelial-mesenchymal transition generates cells with properties of stem cells.' This work appears to propose that the biological process of epithelial-mesenchymal transition is a mechanism for generating cells exhibiting stem cell characteristics.

ORIGINALITY: Based on the title, this line of work addresses the intersection of cell plasticity and stemness. It suggests a novel conceptual framework where EMT is not merely a morphological change but a functional generator of stem-like traits. As no follow-up papers by the same researcher are listed, this single publication stands as the primary vehicle for this specific theoretical claim.

SIGNIFICANCE: The work has achieved substantial impact, evidenced by over 10,000 citations. Notably, analysis of citing papers indicates that 100% of the classified citations originate from independent researchers, suggesting the findings have been broadly adopted and validated by the wider scientific community rather than relying on self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

CORE PAPER

The epithelial-mesenchymal transition generates cells with properties of stem cells

2008 · Cell 133 (4), 704-715, 2008 · 10,700 citations (GS)

Field-normalised: 8,738 Semantic Scholar citations place it in the top 1% of Biology papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Cancer cell plasticity: from cellular, molecular, and genetic mechanisms to tumor heterogeneity and drug resistance (2024)	All India Institute of Medical Sciences, All India Institute of Medical Sciences (AIIMS), Chettinad Hospital and Research Institute	India, Qatar, Saudi Arabia	Background
2	Recent advances in therapeutic strategies for triple-negative breast cancer	Moscow Institute of Physics and Technology, Xiangya Hospital, Central South University	China, Russia	—
3	The molecular mechanisms and therapeutic strategies of EMT in tumor progression and metastasis (2022)	Sichuan University	China	**Methodology**
4	Hallmarks of cancer stemness (2024)	The University of Hong Kong	China	—
5	Notch signaling pathway in cancer: from mechanistic insights to targeted therapies (2024)	Zhejiang University	China	—
6	Cancer stem cells: advances in knowledge and implications for cancer therapy	Xiangya Hospital, Central South University	China	—
7	The role of ROS in tumour development and progression	The Francis Crick Institute	United Kingdom	—

No.	Citing paper	Citing institution(s)	Country	S2
8	Rational combinations of targeted cancer therapies: background, advances and challenges (2023)	Netherlands Cancer Institute, Shanghai Jiao Tong University School of Medicine	China, Netherlands	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

METHODOLOGY The molecular mechanisms and therapeutic strategies of EMT in tumor progression and metastasis

"In the breast, EMT-derived stem cells are phenotypically similar to CSCs after induction, expressing CD44High, CD24low, and forming mammospheres [221]."

Contribution 2

Claim — Contribution 2

The researcher co-authored a seminal oncology textbook that has become a foundational reference, evidenced by nearly 7,000 citations from independent researchers.

The researcher's primary contribution is the co-authorship of 'DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology,' a comprehensive textbook published in 2008. This work serves as the central pillar of the provided evidence, standing alone without follow-up papers in this specific dataset.

This contribution appears to address the need for a definitive, consolidated resource in oncology. By compiling principles and practices into a single authoritative text, the work likely established a standard reference point for the field, distinguishing itself through its scope and utility as a textbook rather than a single experimental study.

The significance of this work is demonstrated by its substantial citation count of 6,998. Notably, 100% of the classified citing papers originate from independent researchers, indicating that the textbook has been widely adopted and relied upon by the broader scientific community outside the author's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology

2008 · N/A (Textbook) · 6,998 citations (GS)

Field-normalised: 559 Semantic Scholar citations place it in the top 1% of Medicine papers from 2008 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Head and Neck Cancers, Version 2.2020, NCCN Clinical Practice Guidelines in Oncology (2020)	Case Comprehensive Cancer Center / Cleveland Clinic Taussig Cancer Institute, Case Comprehensive Cancer Center / University Hospitals Seidman Cancer Center, City of Hope National Medical Center	United States	—
2	Abandoning the notion of non-small cell lung cancer (2019)	University G. d'Annunzio	Italy	—

No.	Citing paper	Citing institution(s)	Country	S2
3	Cancer chemotherapy: insights into cellular and tumor microenvironmental mechanisms of action (2022)	—	—	Background
4	In vivo imaging of tumors with protease-activated near-infrared fluorescent probes (1999)	Massachusetts General Hospital and Harvard Medical School	United States	—
5	Recent Developments in Radiotherapy (2017)	National Institutes of Health	United States	—
6	Cancer chemotherapy and beyond: Current status, drug candidates, associated risks and progress in targeted therapeutics (2023)	Amity University, Amity University Uttar Pradesh, Assam University	India, Italy, Japan	—
7	Bevacizumab plus interferon alfa-2a for treatment of metastatic renal cell carcinoma: a randomised, double-blind phase III trial (2007)	Azienda Ospedaliera, Cancer Research Center, Centre Hospitalier Universitaire	Czech Republic, France, Hungary	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Contribution 3

Claim — Contribution 3

The researcher advanced the conceptual framework of cancer biology by defining the next generation of hallmarks, a seminal contribution that has become a foundational reference in the field.

The researcher's primary contribution is the articulation of the next generation of hallmarks of cancer, as presented in the 2011 Cell paper. This work stands as a singular, high-impact contribution without direct follow-up publications by the same author in this specific line of inquiry.

This line of work appears to address the need for an updated conceptual model of cancer biology. By proposing a new set of hallmarks, the researcher likely sought to expand the existing framework to account for emerging biological complexities, offering a novel theoretical structure for understanding tumor progression.

The significance of this contribution is evidenced by its extensive citation record, with over 88,000 citations indicating widespread adoption. Furthermore, the fact that 100% of the classified citing papers originate from independent researchers underscores the work's broad influence across the global scientific community, confirming its status as a field-defining reference.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9 · **1 flagged influential by Semantic Scholar**

CORE PAPER

Hallmarks of Cancer: The Next Generation

2011 · Cell · 88,168 citations (GS)

Field-normalised: 62,617 Semantic Scholar citations place it in the top 1% of Medicine papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Understanding the complexity of p53 in a new era of tumor suppression (2024)	Columbia University	United States	—

No.	Citing paper	Citing institution(s)	Country	S2
2	Mitochondrial dynamics in health and disease: mechanisms and potential targets (2023)	Chongqing University Cancer Hospital	China	—
3	Multifaceted role of mTOR (mammalian target of rapamycin) signaling pathway in human health and disease	Amity University Uttar Pradesh, Delhi Pharmaceutical Sciences and Research University (DPSRU), Indian Institute of Technology Ropar	India	—
4	Drug repurposing for cancer therapy (2024)	Johns Hopkins University, The Affiliated Hospital of Guizhou Medical University, The First Affiliated Hospital of Guizhou University of Traditional Chinese Medicine	China, United States	**Influential**
5	Tumor biomarkers for diagnosis, prognosis and targeted therapy (2024)	Sichuan University, Tibet University, West China Hospital, Sichuan University	China	—
6	Cancer stem cells: advances in knowledge and implications for cancer therapy	Xiangya Hospital, Central South University	China	—
7	Signaling pathways involved in colorectal cancer: pathogenesis and targeted therapy	Chongqing Municipal Health and Health Committee, Daping Hospital, Army Medical University, The Affiliated Dazu Hospital of Chongqing Medical University	China	—
8	Cold and hot tumors: from molecular mechanisms to targeted therapy	Ningbo No. 2 Hospital, The Fourth Affiliated Hospital, China Medical University, The Second Hospital of Dalian Medical University	China	—
9	Non-small-cell lung cancer	Mayo Clinic, University of Washington	United States	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Mayo Clinic	United States	SCImago #88	2
Xiangya Hospital, Central South University	China	—	2
Amity University Uttar Pradesh	India	—	2

Institution	Country	World ranking	Citing papers
Sichuan University	China	SCImago #32 · THE 201–250 · QS =324	2
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	2
National Comprehensive Cancer Network	United States	—	1
Moscow Institute of Physics and Technology	Russia	SCImago #4707 · THE 351–400 · QS =477	1
University of Pennsylvania	United States	SCImago #52 · THE 14 · QS 15	1
Dana-Farber/Brigham and Women's Cancer Center	United States	—	1
Stanford Cancer Institute	United States	—	1
University of Colorado Cancer Center	United States	SCImago #796	1
Fred & Pamela Buffett Cancer Center	United States	—	1
Delhi Pharmaceutical Sciences and Research University (DPSRU)	India	—	1
City of Hope National Medical Center	United States	SCImago #640	1
UCSF Helen Diller Family Comprehensive Cancer Center	United States	SCImago #263	1

Geographic distribution of citing authors

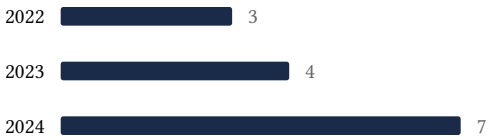
Country	Citing papers
China	14
United States	10
India	3
Italy	3
Russia	2
Netherlands	1
Poland	1
Qatar	1
Saudi Arabia	1
Spain	1
Switzerland	1
United Arab Emirates	1

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.

2020 2



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	The epithelial-mesenchymal transition generates cells with properties of stem cells	8	Dhanasar — Prong 2 (well-positioned)
Contribution 2	DeVita, Hellman, and Rosenberg's Cancer: Principles & Practice of Oncology	7	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Hallmarks of Cancer: The Next Generation	9	Dhanasar — Prong 2 (well-positioned)