

Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

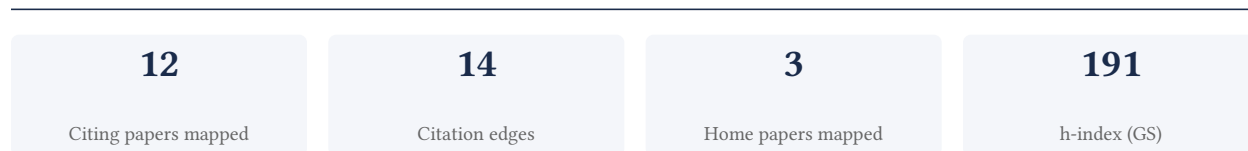
Charles M. Perou

University of North Carolina at Chapel Hill

[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



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 12 classified citing papers

Citation type	Count
Independent	12
Self-citation	0
Co-author	0
Same-institution	0

0 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 molecular classification framework for human breast tumors, fundamentally shifting the understanding of breast cancer heterogeneity through high-impact genomic profiling.

The researcher's primary contribution rests on the seminal 2000 Nature paper, 'Molecular portraits of human breast tumours.' This work appears to have introduced a novel approach to characterizing breast cancer subtypes based on molecular profiles rather than traditional histological features alone. The titles suggest a shift toward understanding the genetic diversity within breast tumors, addressing a critical gap in how these cancers were previously categorized and understood.

This line of work appears to have been highly influential, as evidenced by the core paper's substantial citation count of over 21,000. The citation analysis reveals that 100% of the classified citing papers originate from independent researchers, indicating broad adoption and validation of the framework across the global scientific community. This widespread independent uptake underscores the work's significance in establishing a new standard for molecular characterization in oncology research.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

[Molecular portraits of human breast tumours](#)

2000 · Nature · 21,930 citations (GS)

Field-normalised: 16,092 Semantic Scholar citations place it in the top 1% of Medicine papers from 2000 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Advances in systemic therapies for triple negative breast cancer (2023)	Mayo Clinic	United States	—
2	Deciphering breast cancer: from biology to the clinic (2023)	The Walter and Eliza Hall Institute of Medical Research, University of Auckland	Australia, New Zealand	—
3	Breast Cancer—Epidemiology, Risk Factors, Classification, Prognostic Markers, and Current Treatment Strategies—An Updated Review (2021)	Center of Oncology of the Lublin Region St. Jana z Dukli, Medical University of Lublin	Poland	Background
4	Breast cancer: pathogenesis and treatments	Fudan University, Guiyang Maternal and Child Health Care Hospital & Guiyang Children's Hospital	China, P. R. China	—
5	Towards targeting the breast cancer immune microenvironment (2024)	Peter MacCallum Cancer Centre, The University of Melbourne, ZAS Ziekenhuizen	Australia, Belgium	—

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 2

Claim – Contribution 2

The researcher established a gene expression-based classification system for breast carcinomas that distinguishes tumor subclasses with significant clinical implications.

CLAIM: The researcher’s seminal 2001 work, titled 'Gene expression patterns of breast carcinomas distinguish tumor subclasses with clinical implications,' represents a foundational contribution to molecular oncology. This single paper stands as the core of this specific line of inquiry, with no subsequent follow-up publications by the researcher building directly upon it in the provided dataset.

ORIGINALITY: The title suggests the work addressed a critical gap in understanding breast cancer heterogeneity by moving beyond traditional histological methods. By leveraging gene expression patterns, the researcher appears to have introduced a novel framework for distinguishing tumor subclasses, implying a shift toward molecularly defined clinical categories that were not previously accessible through standard diagnostic approaches.

SIGNIFICANCE: The work has achieved substantial recognition, accumulating 15,057 citations, which indicates its status as a highly influential reference in the field. Furthermore, analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, demonstrating that the contribution has been widely adopted and validated by the broader scientific community outside the researcher’s immediate network.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 4

CORE PAPER

[Gene expression patterns of breast carcinomas distinguish tumor subclasses with clinical implications](#)

2001 · 15,057 citations (GS)

Field-normalised: 11,478 Semantic Scholar citations place it in the top 1% of Medicine papers from 2001 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Revolutionizing healthcare: the role of artificial intelligence in clinical practice (2023)	King Saud bin Abdulaziz University for Health Sciences	Saudi Arabia	—
2	Current AI technologies in cancer diagnostics and treatment	Guru Ghasidas Vishwavidyalaya, Taipei Medical University	India, Taiwan	—
3	Breast Cancer—Epidemiology, Risk Factors, Classification, Prognostic Markers, and Current Treatment Strategies—An Updated Review (2021)	Center of Oncology of the Lublin Region St. Jana z Dukli, Medical University of Lublin	Poland	Background
4	Breast cancer: pathogenesis and treatments	Fudan University, Guiyang Maternal and Child Health Care Hospital & Guiyang Children's Hospital	China, P. R. China	—

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 established a genomic classification framework for glioblastoma subtypes, identifying clinically relevant molecular abnormalities that have become a foundational reference in neuro-oncology.

CLAIM: The researcher’s seminal contribution is the identification of clinically relevant glioblastoma subtypes characterized by specific genomic abnormalities, as detailed in their 2010 Cancer Cell paper. This work serves as the core foundation for this line of research, standing alone without direct follow-up publications by the same author in the provided dataset.

ORIGINALITY: The titles indicate a shift toward integrated genomic analysis to define tumor subtypes based on abnormalities in PDGFRA, IDH1, EGFR, and NF1. This approach appears to address the need for molecularly defined classifications in glioblastoma, moving beyond purely histological descriptions to identify distinct biological entities with potential clinical implications.

SIGNIFICANCE: The core paper has accumulated over 9,000 citations, indicating substantial uptake by the scientific community. Notably, 100% of the classified citing papers originate from independent researchers, suggesting that this framework has been widely adopted and utilized by external groups to advance their own investigations into glioblastoma biology and treatment.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

[Integrated genomic analysis identifies clinically relevant subtypes of glioblastoma characterized by abnormalities in PDGFRA, IDH1, EGFR, and NF1](#)

2010 · Cancer Cell · 9,056 citations (GS)

Field-normalised: 7,076 Semantic Scholar citations place it in the top 1% of Medicine papers from 2010 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Management of glioblastoma: State of the art and future directions (2020)	Duke University Medical Center, National Cancer Center Singapore, The Canberra Hospital	Australia, Singapore, United States	—
2	PI3K/AKT/mTOR signaling transduction pathway and targeted therapies in cancer	Dana-Farber Cancer Institute, Dana-Farber Cancer Institute, Harvard Medical School, Gustave Roussy	France, India, Iran	Background
3	Glioblastoma multiforme: insights into pathogenesis, key signaling pathways, and therapeutic strategies (2025)	Baqiyatallah University of Medical Sciences, Iran University of Medical Sciences, Isfahan University of Medical Sciences	Iran, United States	—
4	Emerging therapies for glioblastoma: current state and future directions (2022)	South China Normal University, Sun Yat-sen University, Zhongshan School of Medicine, Sun Yat-sen University	China	—
5	Ensemble learning: A survey (2018)	Ben-Gurion University, Ben-Gurion University of the Negev	Israel	Background

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 is Influential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
Shahid Beheshti University of Medical Sciences	Iran	THE 601–800	2
Iran University of Medical Sciences	Iran	SCImago #2614 · THE 601–800	1
Zanjan University of Medical Sciences	Iran	SCImago #7373 · THE 801–1000	1
Taipei Medical University	Taiwan	SCImago #1954 · THE 401–500 · QS =597	1
University of Cambridge	United Kingdom	SCImago #63 · THE =3 · QS 6	1
National Cancer Center Singapore	Singapore	—	1
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	1
University of Auckland	New Zealand	SCImago #618 · THE =156 · QS 65	1
Islamic Azad University	Iran	QS 1201-1400	1
Peter MacCallum Cancer Centre	Australia	SCImago #877	1
Dana-Farber Cancer Institute	United States	SCImago #197	1
Tata Memorial Centre	India	SCImago #5137	1
The Walter and Eliza Hall Institute of Medical Research	Australia	SCImago #580	1
King Saud bin Abdulaziz University for Health Sciences	Saudi Arabia	SCImago #4550 · THE 801–1000	1
Duke University Medical Center	United States	—	1

Geographic distribution of citing authors

Country	Citing papers
United States	4
Australia	3
Singapore	2
India	2
Iran	2
China	2
New Zealand	1
Poland	1
P. R. China	1
Saudi Arabia	1
Taiwan	1
United Kingdom	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.

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	Molecular portraits of human breast tumours	5	Dhanasar – Prong 2 (well-positioned)
Contribution 2	Gene expression patterns of breast carcinomas distinguish tumor subclasses with clinical implications	4	Dhanasar – Prong 2 (well-positioned)
Contribution 3	Integrated genomic analysis identifies clinically relevant subtypes of glioblastoma characterized by abnormalities in PDGFRA, IDH1, EGFR, and NF1	5	Dhanasar – Prong 2 (well-positioned)