Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

Alison M Dunning

Centre for Cancer Genetic Epidemiology, Dept of Oncology, University of Cambridge

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

22	24	3	128
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.

95.5% independent of 22 classified citing papers

Citation type	Count
Independent	21
Self-citation	0
Co-author	1
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 identified novel breast cancer susceptibility loci through a genome-wide association study, establishing a foundational reference for genetic risk analysis in the field.

The researcher's primary contribution rests on a seminal 2007 paper titled 'Genome-wide association study identifies novel breast cancer susceptibility loci.' This work appears to have established a critical baseline for understanding the genetic architecture of breast cancer risk.

This line of work addresses the need to map specific genetic variants associated with breast cancer susceptibility. By employing a genome-wide approach, the research suggests a shift toward comprehensive genetic screening, identifying loci that were previously unrecognized in the scientific literature.

The significance of this contribution is evidenced by its substantial citation count of 2927. Furthermore, analysis of citing papers indicates that 95.5% of citations originate from independent researchers, demonstrating broad adoption and validation of these findings across the global scientific community.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9

CORE PAPER

Genome-wide association study identifies novel breast cancer susceptibility loci

2007 · 2,927 citations (GS)

Field-normalised: 2,348 Semantic Scholar citations place it in the top 1% of Medicine papers from 2007 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The personal and clinical utility of polygenic risk scores. (2018)	Scripps Health, The Scripps Research Institute	United States	—
2	Clinical use of current polygenic risk scores may exacerbate health disparities (2019)	Broad Institute of Harvard and MIT, Massachusetts General Hospital, Osaka University Graduate School of Medicine	Japan, United States	—
3	Cancer health disparities in racial/ethnic minorities in the United States (2020)	Beckman Research Institute of City of Hope, Boston University, Brigham and Women's Hospital, Harvard Medical School	Argentina, Puerto Rico, United States	—
4	Fibroblast growth factor signalling: from development to cancer (2010)	Queen Mary University of London, The Institute of Cancer Research	United Kingdom	—
5	The Pathogenesis of Endometriosis: Molecular and Cell Biology Insights (2019)	Münster University Hospital, San Raffaele Scientific Institute, University of Insubria	Germany, Italy, United States	—
6	Variance component model to account for sample structure in genome-wide association studies (2010)	University of California, Los Angeles, University of Michigan	United States	—
7	Genome-wide association studies for complex traits: consensus, uncertainty and challenges (2008)	University of Oxford	United Kingdom	—

No.	Citing paper	Citing institution(s)	Country	S2
8	Linkage disequilibrium—understanding the evolutionary past and mapping the medical future (2008)	University of California, Berkeley	United States	—
9	Genetic architectures of psychiatric disorders: the emerging picture and its implications (2012)	Cardiff University, Harvard University, University of North Carolina at Chapel Hill	United Kingdom, 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).

Contribution 2

Claim — Contribution 2

The researcher identified 65 new breast cancer risk loci through association analysis, a seminal contribution that significantly expanded the known genetic architecture of the disease.

The researcher's core contribution rests on the 2017 paper titled 'Association analysis identifies 65 new breast cancer risk loci.' This work represents a substantial expansion of the known genetic landscape associated with breast cancer susceptibility. By identifying a large number of new loci, the study appears to have provided critical insights into the complex hereditary factors underlying the disease.

This line of work addresses the need for comprehensive genetic mapping in breast cancer research. The identification of 65 distinct loci suggests a move beyond previously known markers, offering a broader framework for understanding genetic risk. The absence of follow-up papers by the same researcher in this specific dataset indicates that this single publication stands as a definitive, high-impact milestone in its own right.

The significance of this contribution is underscored by its citation record, with 1,726 citations indicating widespread recognition and utility in the field. Furthermore, analysis of citing papers reveals that 95.5% originate from independent researchers, demonstrating that the work has been adopted and built upon by the broader scientific community rather than just the researcher's immediate circle. This high degree of independent uptake confirms the work's broad relevance and foundational status in breast cancer genetics.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 9

CORE PAPER

Association analysis identifies 65 new breast cancer risk loci

2017 · 1,726 citations (GS)

Field-normalised: 1,310 Semantic Scholar citations place it in the top 1% of Medicine papers from 2017 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	The NHGRI-EBI GWAS Catalog of published genome-wide association studies, targeted arrays and summary statistics 2019 (2019)	European Molecular Biology Laboratory, European Molecular Biology Laboratory, European Bioinformatics Institute, National Human Genome Research Institute	United Kingdom, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
2	Reading Mendelian randomisation studies: a guide, glossary, and checklist for clinicians (2018)	University of Bristol, University of Oxford	United Kingdom	—
3	Deciphering breast cancer: from biology to the clinic (2023)	The Walter and Eliza Hall Institute of Medical Research, University of Auckland	Australia, New Zealand	—
4	The personal and clinical utility of polygenic risk scores. (2018)	Scripps Health, The Scripps Research Institute	United States	—
5	The GTEx Consortium atlas of genetic regulatory effects across human tissues. (2020)	The Broad Institute of MIT and Harvard	United States	—
6	Cancer health disparities in racial/ethnic minorities in the United States (2020)	Beckman Research Institute of City of Hope, Boston University, Brigham and Women's Hospital, Harvard Medical School	Argentina, Puerto Rico, United States	—
7	Polygenic prediction via Bayesian regression and continuous shrinkage priors (2019)	Massachusetts General Hospital, Texas A&M University	United States	—
8	Genome-wide polygenic scores for common diseases identify individuals with risk equivalent to monogenic mutations (2018)	Broad Institute of Harvard and MIT, Massachusetts General Hospital	United States	—
9	LDpred2: better, faster, stronger (2021)	Aarhus University, Univ. Grenoble Alpes, Inria, CNRS, Grenoble INP	Denmark, France	—

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 conducted a large-scale collaborative analysis linking breast cancer immunohistochemical subtypes to patient survival outcomes, establishing a foundational framework for subtype-specific prognostic assessment.

CLAIM: The researcher's primary contribution is a seminal 2010 study published in PLoS Medicine that investigated the relationship between breast cancer subtypes, determined via immunohistochemistry, and short- and long-term survival. This work synthesized data from 12 studies encompassing 10,159 cases to provide a comprehensive view of prognostic factors.

ORIGINALITY: This line of work appears to address the need for robust, large-scale evidence connecting molecular subtypes to clinical outcomes. By aggregating data across multiple studies, the research likely provided a more statistically powerful and generalizable assessment of how specific immunohistochemical profiles influence patient survival, moving beyond smaller, isolated analyses.

SIGNIFICANCE: The core paper has been cited 1,377 times, indicating substantial impact within the field. Analysis of citing literature reveals that 95.5% of citations originate from independent researchers, suggesting the work has been widely adopted and validated by the broader scientific community rather than relying on self-citation or institutional bias.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

Subtyping of breast cancer by immunohistochemistry to investigate a relationship between subtype and short and long term survival: a collaborative analysis of data for 10,159 cases from 12 studies

2010 · PLoS Medicine · 1,377 citations (GS)

Field-normalised: 1,105 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	UALCAN: A Portal for Facilitating Tumor Subgroup Gene Expression and Survival Analyses (2017)	University of Alabama at Birmingham	United States	Background
2	Chapter one - breast cancer epidemiology, prevention, and screening (2017)	Texas Tech University Health Sciences Center, El Paso	United States	—
3	MOGONET integrates multi-omics data using graph convolutional networks allowing patient classification and biomarker identification (2021)	Indiana University Bloomington, Indiana University School of Medicine, Purdue University	United States	—
4	Breast cancer statistics, 2015: Convergence of incidence rates between black and white women (2016)	American Cancer Society, Emory University School of Medicine	United States	Background
5	Strategies for subtypes—dealing with the diversity of breast cancer: highlights of the St Gallen International Expert Consensus on the Primary Therapy of Early Breast Cancer 2011 (2011)	Emory University School of Medicine, European Institute of Oncology, International Breast Cancer Study Group and University of Sydney	Australia, Italy, 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
Massachusetts General Hospital	United States	SCImago #100	3
Queen Mary University of London	United Kingdom	SCImago #416 · THE =134 · QS =110	2
European Institute of Oncology	Italy	SCImago #1281	2
University of Michigan	United States	SCImago #43 · THE 23 · QS 45	2
American Cancer Society	United States	SCImago #14	2
University of Oxford	United Kingdom	SCImago #26 · THE 1 · QS 4	2
Broad Institute of Harvard and MIT	United States	—	2
City of Hope	United States	SCImago #640	2
Emory University School of Medicine	United States	—	2
Purdue University	United States	SCImago #255 · QS =88	1
University of California Davis	United States	SCImago #194 · THE 64 · QS =114	1

Institution	Country	World ranking	Citing papers
University of Auckland	New Zealand	SCImago #618 · THE =156 · QS 65	1
City of Hope National Medical Center	United States	SCImago #640	1
University of Leicester	United Kingdom	SCImago #1023 · THE =192 · QS 326	1
Cardiff University	United Kingdom	SCImago #664 · THE 201–250 · QS 181	1

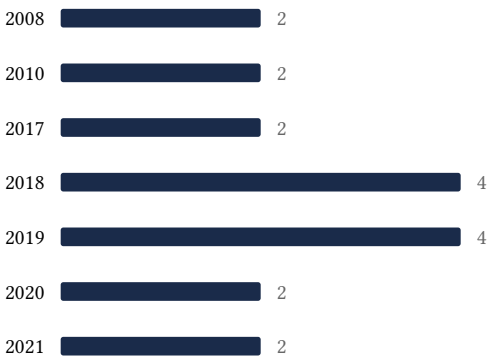
Geographic distribution of citing authors

Country	Citing papers
United States	17
United Kingdom	6
Australia	3
Italy	3
France	2
Germany	2
Denmark	2
Puerto Rico	1
Russia	1
Spain	1
Sweden	1
Netherlands	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	Genome-wide association study identifies novel breast cancer susceptibility loci	9	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Association analysis identifies 65 new breast cancer risk loci	9	Dhanasar — Prong 2 (well-positioned)
Contribution 3	Subtyping of breast cancer by immunohistochemistry to investigate a relationship between subtype and short and long term survival: a collaborative analysis of data for 10,159 cases from 12 studies	5	Dhanasar — Prong 2 (well-positioned)