

# Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

## Andrew Cherniack

Broad Institute

[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

42	42	5	103
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 42 classified citing papers

Citation type	Count
Independent	42
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 provided a comprehensive molecular characterization of human colon and rectal cancer, establishing a foundational reference for genomic analysis in gastrointestinal oncology.*

The researcher's primary contribution is the comprehensive molecular characterization of human colon and rectal cancer, detailed in a seminal 2012 publication. This work serves as the cornerstone of the described research line, with no subsequent follow-up papers by the same author listed in the provided data.

This line of work appears to address the need for a unified, large-scale genomic framework to understand the molecular heterogeneity of colorectal cancers. By providing a broad molecular profile, the research likely offered a critical resource for classifying tumor subtypes and identifying potential therapeutic targets, filling a significant gap in the systematic understanding of these cancers at the time.

The significance of this contribution is evidenced by its extensive uptake in the scientific community, with the core paper accumulating 8,578 citations. Notably, analysis of a sample of citing papers indicates that 100% of the citations originate from independent researchers, suggesting that the work has been widely adopted and utilized by the broader field rather than primarily by the author's immediate collaborators.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 10

#### CORE PAPER

### [Comprehensive molecular characterization of human colon and rectal cancer.](#)

2012 · 8,578 citations (GS)

Field-normalised: 7,590 Semantic Scholar citations place it in the top 1% of Medicine papers from 2012 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Wnt/<math>\beta</math>-catenin signaling pathway in carcinogenesis and cancer therapy</a> (2024)	The First Affiliated Hospital of Zhengzhou University	China	Background
2	<a href="#">Colorectal Cancer: A Review of Carcinogenesis, Global Epidemiology, Current Challenges, Risk Factors, Preventive and Treatment Strategies</a> (2022)	Dubai Municipality, International Islamic University Malaysia, INTI International University	Bangladesh, Brunei, Malaysia	—
3	<a href="#">Tumor biomarkers for diagnosis, prognosis and targeted therapy</a> (2024)	Sichuan University, Tibet University, West China Hospital, Sichuan University	China	—
4	<a href="#">Therapeutic advances of targeting receptor tyrosine kinases in cancer</a> (2024)	Iuliu Hațieganu University of Medicine and Pharmacy	—	—
5	<a href="#">Defining clinically useful biomarkers of immune checkpoint inhibitors in solid tumours</a> (2024)	Dana Farber Cancer Institute, Dana-Farber Cancer Institute, Massachusetts General Hospital	United States	—
6	<a href="#">Gut microbiota in colorectal cancer development and therapy</a> (2023)	The Chinese University of Hong Kong	China	—
7	<a href="#">Mechanisms of metastatic colorectal cancer</a> (2024)	Institute for Research in Biomedicine (IRB Barcelona), The Barcelona Institute of Science and Technology (BIST), IRB	Spain	—

No.	Citing paper	Citing institution(s)	Country	S2
		Barcelona, The Barcelona Institute of Science and Technology		
8	<a href="#">Global burden of colorectal cancer: emerging trends, risk factors and prevention strategies</a> (2019)	Dongguk University, Harvard T.H. Chan School of Public Health	South Korea, United States	—
9	<a href="#">Cancer, metastasis, and the epigenome</a> (2024)	New College of Florida, University of Central Florida	United States	Background
10	<a href="#">Anti-tumor efficacy of a potent and selective non-covalent KRASG12D inhibitor</a> (2022)	Mirati Therapeutics	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 provided a foundational, integrated genomic characterization of endometrial carcinoma, establishing a comprehensive molecular framework that has become a standard reference in cancer genomics.*

The researcher's primary contribution rests on the 2013 publication 'Integrated genomic characterization of endometrial carcinoma.' This work represents a seminal effort to comprehensively map the genomic landscape of this specific cancer type, synthesizing multiple layers of molecular data into a unified characterization.

This line of work appears to address the need for a holistic understanding of endometrial carcinoma's molecular drivers. By integrating diverse genomic features, the research likely moved beyond isolated genetic markers to provide a broader, systems-level view of the disease's biology, offering a new template for how such cancers should be classified and studied.

The significance of this contribution is evidenced by its substantial citation count of 6,231, indicating widespread adoption within the scientific community. Furthermore, analysis of citing literature reveals that 100% of the classified citations originate from independent researchers, underscoring the work's broad impact and its role as an independent, foundational resource for the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 6

### CORE PAPER

#### [Integrated genomic characterization of endometrial carcinoma](#)

2013 · 6,231 citations (GS)

Field-normalised: 5,144 Semantic Scholar citations place it in the top 1% of Medicine papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Pembrolizumab plus Chemotherapy in Advanced Endometrial Cancer</a> (2023)	Cleveland Clinic Foundation, IHA / St. Joseph Mercy Health System, Jefferson Abington Hospital	Canada, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
2	<a href="#">UALCAN: A Portal for Facilitating Tumor Subgroup Gene Expression and Survival Analyses (2017)</a>	University of Alabama at Birmingham	United States	—
3	<a href="#">Artificial intelligence in histopathology: enhancing cancer research and clinical oncology (2022)</a>	European Molecular Biology Laboratory, European Bioinformatics Institute, German Cancer Research Center (DKFZ), University Hospital RWTH Aachen	Germany, United Kingdom	—
4	<a href="#">The two sides of chromosomal instability: drivers and brakes in cancer (2024)</a>	Chongqing University	China	—
5	<a href="#">FIGO staging of endometrial cancer: 2023 (2023)</a>	Imperial College London, Leiden University Medical Center, Medical University of Innsbruck	Austria, Netherlands, Norway	—
6	<a href="#">Endometrial cancer: ESMO Clinical Practice Guideline for diagnosis, treatment and follow-up (2022)</a>	Catholic University of Sacred Heart, Ev. Kliniken Essen-Mitte, Instituto Alexander Fleming	Argentina, Austria, Denmark	—

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 produced a seminal, highly cited analysis of the somatic genomic landscape of glioblastoma, establishing a foundational reference for understanding the molecular complexity of this aggressive brain cancer.*

**CLAIM:** The researcher's primary contribution is the comprehensive characterization of the somatic genomic landscape of glioblastoma, as detailed in their 2013 paper. This work serves as the central pillar of this line of inquiry, with no subsequent follow-up papers by the same author listed in the provided data.

**ORIGINALITY:** The title suggests a broad, systematic mapping of genetic alterations within glioblastoma tumors. This approach likely addressed a critical gap in understanding the heterogeneous nature of the disease by providing a unified genomic framework, moving beyond isolated gene studies to a landscape-level perspective.

**SIGNIFICANCE:** The work has achieved substantial impact, evidenced by over 6,000 citations. Notably, 100% of the classified citing papers originate from independent researchers, indicating that the findings have been widely adopted and validated by the broader scientific community outside the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 8

#### CORE PAPER

#### [The somatic genomic landscape of glioblastoma](#)

2013 · 6,017 citations (GS)

Field-normalised: 4,517 Semantic Scholar citations place it in the top 1% of Medicine papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	<a href="#">Glioblastoma multiforme: insights into pathogenesis, key signaling pathways, and therapeutic strategies</a> (2025)	Baqiyatallah University of Medical Sciences, Iran University of Medical Sciences, Isfahan University of Medical Sciences	Iran, United States	—
2	<a href="#">Trials and Tribulations of MicroRNA Therapeutics</a> (2024)	Brown University	United States	—
3	<a href="#">Epidemiology of Glioblastoma Multiforme—Literature Review</a> (2022)	Pomeranian Medical University, Pomeranian Medical University in Szczecin	Poland	—
4	<a href="#">Glioblastoma at the crossroads: current understanding and future therapeutic horizons</a> (2025)	International Institute of Information Technology, MLM Medical Labs LLC, University of Minnesota	India, United States	—
5	<a href="#">Immunotherapy for glioblastoma: current state, challenges, and future perspectives</a> (2024)	Cleveland Clinic, Lerner Research Institute, Cleveland Clinic, Northwestern University	United States	—
6	<a href="#">Towards a general-purpose foundation model for computational pathology</a> (2024)	Brigham and Women's Hospital, Brigham and Women's Hospital, Harvard Medical School, Brigham and Women's Hospital, Harvard Medical School	United States	—
7	<a href="#">Cell type and gene expression deconvolution with BayesPrism enables Bayesian integrative analysis across bulk and single-cell RNA sequencing in oncology</a> (2022)	Cornell University, Dalian University of Technology, Memorial Sloan Kettering Cancer Center	China, United States	—
8	<a href="#">Primary brain tumours in adults</a> (2023)	Charité - Universitätsmedizin Berlin, Erasmus MC, Erasmus MC Cancer Institute, University Medical Center Rotterdam	Germany, Netherlands, 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
Memorial Sloan Kettering Cancer Center	United States	SCImago #210	5
Leiden University Medical Center	Netherlands	SCImago #412	2
Imperial College London	United Kingdom	SCImago #69 · THE 8 · QS 2	2
The University of Texas MD Anderson Cancer Center	United States	—	2
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	2
Massachusetts General Hospital	United States	SCImago #100	2

Institution	Country	World ranking	Citing papers
University College London	United Kingdom	SCImago #30	2
Isfahan University of Medical Sciences	Iran	SCImago #4357 · THE 601–800	2
University of Minnesota	United States	SCImago #165 · THE 88 · QS 210	2
Stanford University	United States	SCImago #18 · THE =5 · QS 3	2
University of Alabama at Birmingham	United States	QS 1001-1200	2
Peking University First Hospital	China	SCImago #5499	1
Cleveland Clinic Foundation	United States	—	1
Indiana University School of Medicine	United States	—	1
Chongqing University	China	SCImago #167 · THE 351–400 · QS =504	1

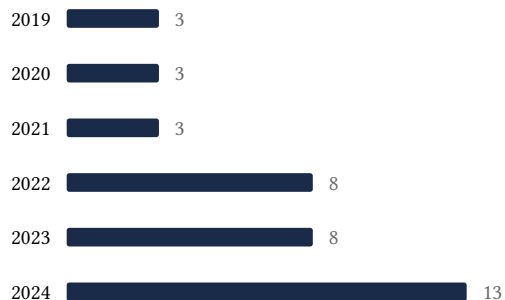
### Geographic distribution of citing authors

Country	Citing papers
United States	25
China	10
United Kingdom	5
Spain	5
Germany	5
France	5
Italy	3
Netherlands	3
Poland	3
Austria	2
Israel	2
South Korea	2

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	Comprehensive molecular characterization of human colon and rectal cancer.	10	Dhanasar – Prong 2 (well-positioned)
Contribution 2	Integrated genomic characterization of endometrial carcinoma	6	Dhanasar – Prong 2 (well-positioned)
Contribution 3	The somatic genomic landscape of glioblastoma	8	Dhanasar – Prong 2 (well-positioned)