

## Your abstract submission has been received

Print this page

**You have submitted the following abstract to the ASRM 2025 Scientific Congress & Expo. Receipt of this notice does not guarantee that your submission was complete or free of errors.**

---

### **IS THERE A DIFFERENCE IN SEMEN QUALITY BETWEEN SICKLE TRAIT CARRIERS AND NON-CARRIERS?**

**Atoosa Ghofranian, M.D.**<sup>1</sup>, Carlos Hernandez-Nieto, MD<sup>2</sup>, Morgan Baird, MPH<sup>2</sup>, Alison Zerbib, BA<sup>2</sup>, Julia Thaler, BA<sup>2</sup>, Joseph A. Lee, BA<sup>3</sup>, Matthew A. Lederman, M.D.<sup>2</sup>, Alan B. Copperman, M.D.<sup>4</sup> and Natan Bar-Chama, M.D.<sup>2</sup>, (1)Icahn School of Medicine at Mount Sinai, New York, NY, (2)Reproductive Medicine Associates of New York, New York, NY, (3)RMANY || US Fertility, New York, NY, (4)Icahn School of Medicine at Mount Sinai / Reproductive Medicine Associates of New York, New York, NY

**Title:**

IS THERE A DIFFERENCE IN SEMEN QUALITY BETWEEN SICKLE TRAIT CARRIERS AND NON-CARRIERS?

**Submitter's E-mail Address:**

atoosagmd@gmail.com

**Preferred Presentation Type:**

Oral or Poster

**Study Type:**

Retrospective Cohort Study (includes comparator groups)

**Category - Subcategory(ies):**

**Reproductive Urology:** Genetics

**Funding:**

NA

**\* Submission of an abstract for consideration for presentation implies that the presenting author & associated co-authors have legal and ethical rights to submit and present this work. Plagiarism and submitting work that an author has no rights to, will result in an investigation and penalty.**

**\* I verify that I am in compliance with HIPAA standards to protect the privacy of the patients discussed in my presentation(s). I either have received written authorization from the patient, have removed any identifiable images or patient records from my presentation, or my presentation does not pertain to patient treatment.**

**Permissions - Prior Publication or Presentation**

This abstract contains original work, not published or presented previously at a meeting of another national or international scientific organization prior to this meeting and has not been submitted for publication at the time of this submission.

**ACCME Disclosure**

Nothing to disclose. No off-label or otherwise non-approved product use.

**Did this abstract require approval by a local Institutional Review Board (IRB) or equivalent?**

This abstract has been approved by a local Institutional Review Board (IRB) or equivalent.

**This data will be submitted for separate scientific abstract and video presentations. The two presentations are NOT identical.**  
Agree

**Not applying for an award**

**Abstract Text:**

**OBJECTIVE:** Sickle cell disease (SCD) is a genetic disorder characterized by abnormal hemoglobin (Hgb S), which causes red blood cells to become sickle shaped. Men with SCD have been shown to have reduced sperm density, motility, and morphology, likely due to hypoxia and hormonal changes. In contrast, the relationship between sickle cell trait (SCT) and male fertility remains largely unexplored. This study assessed the relationship between men with SCT and semen quality.

**MATERIALS AND METHODS:** This retrospective cohort study analyzed semen parameters of men with SCT presenting to a fertility center between 2007–2025. SCT carriers were compared to directed sperm donors (DSD) and age-matched men from the general infertile population. Men with abnormal hemoglobin electrophoresis were excluded. Primary outcome: total sperm count (millions). Secondary outcomes: semen volume (mL), motility (%), and Kruger morphology (%). Comparative analyses used chi-square and Kruskal-Wallis tests. Multivariate logistic regression, adjusting for age, abstinence, and year, assessed the association between SCT and semen quality.

**RESULTS:** A total of 136 males with SCT, 408 males from the general infertile population, and 109 DSDs were included in the analysis. The median (IQR) age (years) was significantly different between groups (SCT: 44.8 (39.8 - 49.0), general infertility: 44.9 (39.8 - 49.0), DSD: 36.8 (34.0 - 41.6);  $p < 0.0001$ ). Median length of ejaculatory abstinence was similar between the groups (3 days). Total sperm count (TSC) was significantly different across groups (SCT: 114.5 (39.4-217.5), general infertility:148.1 (74.3-239.0), DSD: 147.6 (54.0-256.2);  $p < 0.02$ ). Morphology was significantly different across groups ( $p < 0.0001$ ), while volume ( $p = 0.78$ ) and motility ( $p = 0.13$ ) were similar. After adjusting for days of abstinence, there was no difference in the proportion of patients with abnormal volume, total sperm count, motility, or morphology among the SCT, general infertility, and DSD groups (Table 1).

**CONCLUSIONS:** Men with SCT can be reassured that their reproductive potential is not adversely affected. Initial differences in sperm count and morphology did not persist after adjusting for confounders, indicating SCT is not independently associated with impaired semen quality.

**IMPACT STATEMENT:** Sickle cell trait does not appear to relate to semen quality, providing reassurance to male carriers and emphasizing the importance of informed reproductive counseling in addressing potential concerns about fertility.

% Abnormal	SCT	OR (95% CI)	General Infertility	OR (95% CI)	DSD	OR (95% CI)
Volume	14.7	0.81 (0.41-1.63)	16.4	0.92 (0.52-1.62)	17.4	Ref
TSC	24.3	1.42 (0.76-2.67)	11.8	0.58 (0.33-1.05)	18.4	Ref
Motility	9.6	3.49 (0.96-12.7)	2.5	0.89 (0.24-3.29)	2.8	Ref

Morphology	52.9	1.34 (0.80-2.23)	36.0	0.70 (0.45-1.07)	45.0	Ref
------------	------	------------------	------	------------------	------	-----

### First Presenting Author

#### **Presenting Author**

---

Atoosa Ghofranian, M.D.

**Email:** atoosagmd@gmail.com -- Will not be published

Icahn School of Medicine at Mount Sinai  
Obstetrics, Gynecology, and Reproductive Science  
1176 Fifth Ave, Klingenstein Pavilion  
9th Floor  
New York NY 10029  
USA

Within the past 2 years, have you or your spouse/partner had any potential COI?

No

Signature: Atoosa Ghofranian, M.D.

#### **CV Upload:**

 CV 2021.pdf

### Second Author

---

Carlos Hernandez-Nieto, MD

**Email:** chernandez@rmany.com -- Will not be published

Reproductive Medicine Associates of New York  
635 Madison Ave 10th Fl  
New York NY 10022-1009  
USA

Within the past 2 years, have you or your spouse/partner had any potential COI?

No

Signature: Carlos Hernandez-Nieto



**CV Upload:**

 CHN CV Apr24.docx

Third Author

---

Morgan Baird, MPH

**Email:** mbaird@rmaofny.com -- Will not be published

Reproductive Medicine Associates of New York  
635 Madison Avenue  
10th Fl.  
New York NY 10022-1009  
USA

Within the past 2 years, have you or your spouse/partner had any potential COI?

No

Signature: Morgan Baird, MPH

Fourth Author

---

Alison Zerbib, BA

**Email:** azerbib@rmany.com -- Will not be published

Reproductive Medicine Associates of New York  
635 Madison Ave 10th Fl  
New York NY 10022-1009  
USA

Within the past 2 years, have you or your spouse/partner had any potential COI?

No

Signature: Alison Zerbib, BA

Fifth Author

---

Julia Thaler, BA

**Email:** JThaler@rmaofny.com -- Will not be published

Reproductive Medicine Associates of New York  
635 Madison Ave 10th Fl  
New York NY 10022-1009  
USA

Within the past 2 years, have you or your spouse/partner had any potential COI?

No

Signature: Julia Thaler, BA

Sixth Author

---

Joseph A. Lee, BA

**Email:** jlee@rmany.com -- Will not be published

RMANY || US Fertility  
Director of Research Ops  
635 Madison Ave.  
New York NY 10022  
USA

Biographical Sketch Early success, marked by his first publication in CELL at Harvard Medical School, inspired Joseph to continue his research endeavors in reproductive endocrinology and infertility. Joseph has been with Reproductive Medicine Associates of New York since 2011. Joseph has authored over 400 peer-reviewed abstracts & manuscripts. Passionate about development, he cultivates relationship with investors & entrepreneurs to advance reproductive endocrinology & infertility care.

Within the past 2 years, have you or your spouse/partner had any potential COI?

No

Signature: Joseph Adam Lee



**CV Upload:**

 Joseph Lee CV.docx

Seventh Author

---

Matthew A. Lederman, M.D.

**Email:** mlederman@rmany.com -- Will not be published

Reproductive Medicine Associates of New York  
 635 Madison Ave 10th Fl  
 New York NY 10022-1009  
 USA

Within the past 2 years, have you or your spouse/partner had any potential COI?

No

Signature: Matthew A. Lederman

### Eighth Author

---

Alan B. Copperman, M.D.

**Email:** acopperman@rmany.com -- Will not be published

Icahn School of Medicine at Mount Sinai / Reproductive Medicine Associates of New York  
 Department of Obstetrics, Gynecology, and Reproductive Science  
 New York NY  
 USA

Within the past 2 years, have you or your spouse/partner had any potential COI?

Yes

Organization Name	Relationship Type	Who has this Relationship?	
Progyny	Company Officer Relationship Began - Friday, August 25, 2017 Relationship Ended - Thursday, June 1, 2023 Paid Consultant Relationship Began - Relationship Ended - Direct Stockholder Relationship Began - Friday, August 25, 2017 Relationship Ended - Friday, November 1, 2024	Self	

Signature: Alan B Copperman

**CV Upload:**

 [Alan B. Copperman M.D. - CV \(March 2024\).docx](#)

Ninth Author

Natan Bar-Chama, M.D.

**Email:** nbarchama@gmail.com -- Will not be published

Reproductive Medicine Associates of New York  
635 Madison Ave  
Fl 10  
New York NY 10022-1009  
USA

Within the past 2 years, have you or your spouse/partner had any potential COI?

Yes

Organization Name	Relationship Type	Who has this Relationship?
genentech/ roche Pharmaceuticals	Grant Recipient Relationship Began - Sunday, August 13, 2023	Self

Organization Name	Relationship Type	Who has this Relationship?
	Relationship Ended - Honoraria Relationship Began - Sunday, June 11, 2023 Relationship Ended -	
WINFertility	Paid Consultant Relationship Began - Sunday, January 1, 2023 Relationship Ended -	Self

Signature: natan bar-chama



**If necessary, you can make changes to your abstract submission until Wednesday, April 30, 2025 at 4:00 pm (EDT).**

To access your submission in the future, use the link to your user portal from one of the automatic confirmation emails that were sent to you during the submission.

Or point your browser to <https://asrm.confex.com/asrm/2025/gateway.cgi>

You will be prompted to login with your ASRM account prior to accessing the user portal. If you do not yet have an ASRM account, the screen

will redirect you to the site where you can register for a new account. When registering for a new ASRM account:

- Please use the email address that is associated with the submission and your first and last name as they appear on the submission when creating this account.
- An ASRM account for login must be completed before you can access the user portal.

Any changes that you make will be reflected instantly in what is seen by the reviewers. You DO NOT need to go through all of the submission steps in order to change one thing. If you want to change the title, for example, just click "Title" in the abstract control panel and submit the new title.

When you have completed your submission, you may close this browser window.

If you would like to submit another abstract, click [here](#).

[Tell us what you think of the abstract submission process](#)

[Home Page](#)