



Assignment of CPT 92229 to OPPS APC 5733 (Level 3 Minor Procedures)

Advisory Panel on Hospital Outpatient Payment

August 21-22, 2023

Michael Abramoff, MD, PhD
Seth Rainford, MBA
Juli Goldstein, MHS

Summary:

- The service described by CPT 92229 represents a major advance in health equity and reaches underserved Medicare beneficiaries with diabetes.
- **Description of the Service:** CPT Code 92229 describes a complete diagnostic service using rigorously validated, FDA De Novo authorized autonomous AI, for use at the point-of-care, including image acquisition, AI driven quality feedback, analysis, and individualized per patient results, which has been proven in independent studies to improve health equity at lower cost.
- **Description of the Issue:** Since its creation, in 2021, 2022, and CY2023 OPPTS, CMS assigned CPT 92229 to APC 5733 (Level 3 Minor Procedures) with a status indicator of 'S' "to ensure patient access to the test" (85 FR 85960).
- The 2024 OPPTS proposed rule downgrades CPT 92229 to APC 5732 (Level 2, Minor Procedures) with a significantly lower payment rate of \$37.05, a change from the current APC 5733 with a payment rate of \$58.13. Proposed change is a 36% reduction, compounded by DRA cap & health equity concerns
- Request panel recommend CMS not downgrade CPT 92229 from APC 5733 (payment rate \$58.13) to APC 5732 (payment rate \$37.05)
- **Rationale:** 1) Unequal treatment within the same code family; 2) Underlining data for decision reflect a miniscule number of claims from a handful of facilities; 3) Downgrading CPT 92229 will result in reversing the trajectory of improving health equity and access to care.
- **Potential Consequence of Not Making Change:** If finalized at the lower APC, Medicare beneficiaries will not have equitable access to this proven sight saving diagnostics service that reduces overall costs to the program.



Digital Diagnostics LumineticsCore Service (CPT 92229)



Each diagnostic exam includes:

Skilled clinical provider who engages in:

- Patient education and information
- In office dilation
- Patient positioning
- Imaging equipment
- A minimum of 2 images per eye (unilateral or bilateral)
- Image quality feedback and recommendations for re-testing
- Single, per patient autonomous AI diagnostic interpretation and report
- Report storage in PACs system
- Communication of report findings to ordering provider

CMS previously recognized similarity in the total resource costs across CPT 92325 and CPT 92229; however, CPT 92325 is assigned to APC 5734, level 4 minor procedures, with a payment rate of \$123.02.

"[...]the total resource costs would be similar across these two codes."

Diabetes is a Major, Growing Problem in the US^{1,2}

Diabetic retinopathy is the most frequent cause of blindness and vision loss in the US. In most cases, there are no early symptoms; vision loss is irreparable. Early detection is key to preventing disease progression requiring costly treatments.

Health Disparities in Diabetes⁵

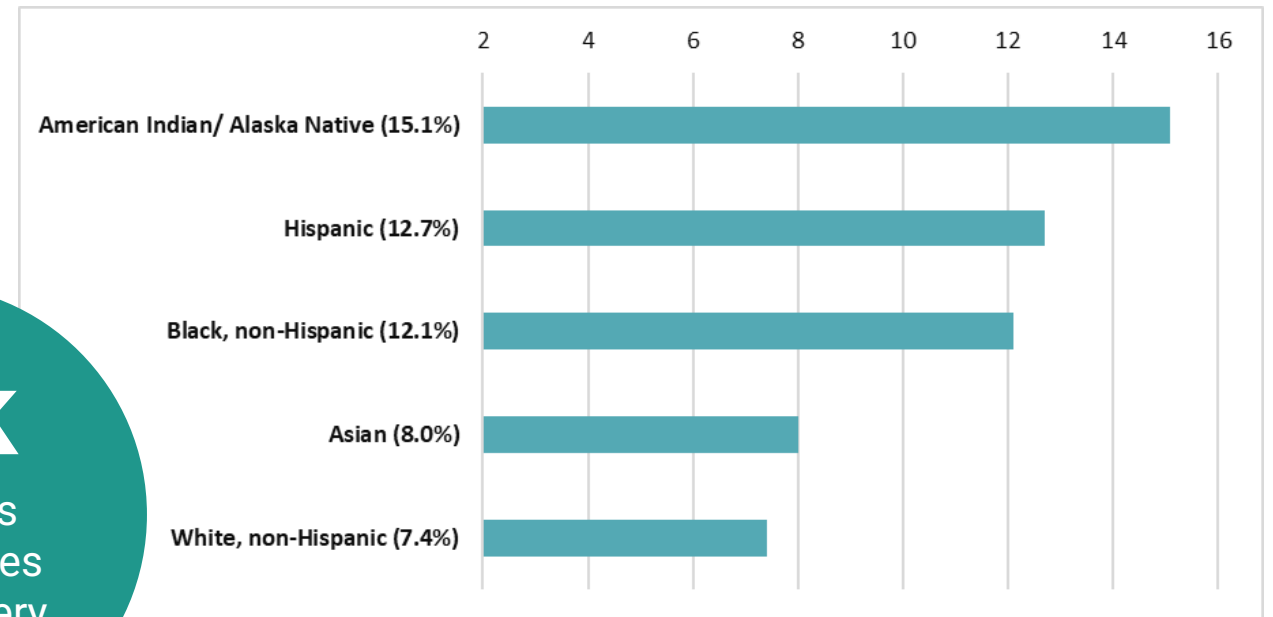


Photo: <https://preventblindness.org/diabetes-related-retinopathy/>

34.2
million
people have
diabetes^{3,4}

85%
Adults living
with diabetes
do not get
annual eye
exam⁶

60k
Americans
with diabetes
go blind every
year^{7,8}

Diabetes Care Volume 42, March 2019

427



Eye Care Utilization Among Insured People With Diabetes in the U.S., 2010–2014

Diabetes Care 2019;42:427–433 | <https://doi.org/10.2337/dc18-0828>

Stephen R. Benoit,¹ Bonnielin Swenor,²
Linda S. Geiss,¹ Edward W. Gregg,¹ and
Jinan B. Saaddine¹



1 Vision Health Initiative. <https://www.cdc.gov/visionhealth/basics/ced/index.html> Accessed June 18, 2020

2 National Eye Institute. <https://www.nei.nih.gov/learn-about-eye-health/resources-for-health-educators/eye-health-data-and-statistics/diabetic-retinopathy-data-and-statistics> Accessed June 18, 2020

3 CDC Infographics. A Snapshot: Diabetes in the United States. <https://www.cdc.gov/diabetes/library/socialmedia/infographics/diabetes.html> Accessed June 18, 2020

4 County level distribution of diagnosed diabetes among US adults aged 20 or older, 2013. <https://www.cdc.gov/diabetes/pdfs/library/diabetesreportcard2017-508.pdf>. Accessed June 18, 2020.

5 U.S. Centers for Disease Control, "Addressing Health Disparities in Diabetes," 2017 *Diabetes Score Card* (2017) available at <https://www.cdc.gov/diabetes/disparities.html>

6 Benoit SR, Swenor B, Geiss LS, Gregg EW, Saaddine JB. Eye Care Utilization Among Insured People With Diabetes in the U.S., 2010–2014. *Diabetes Care*. 2019;42(3):427–433.

7. Varma R, Vajaranant TS, Burkemper B, Wu S, Torres M, Hsu C, Choudhury F, McKean-Cowdin R. Visual Impairment and Blindness in Adults in the United States: Demographic and Geographic Variations From 2015 to 2050. *JAMA Ophthalmol* 2016;134:802–809

8. Bourne RRA, Jonas JB, Bron AM, Cicinelli J. Prevalence and causes of vision loss in high-income countries and in Eastern and Central Europe in 2015: magnitude, temporal trends and projections. *The British journal of ophthalmology* 2018;102:575–585

9. Lundeen EA, Wittenborn J, Benoit SR, Saaddine J. Disparities in Receipt of Eye Exams Among Medicare Part B Fee-for-Service Beneficiaries with Diabetes — United States, 2017. *MMWR Morb Mortal Wkly Rep* 2019;68:1020–1023.

Black and Hispanic Americans, less likely to receive recommended diabetic eye exams.⁹

Scientific Evidence from RCTs Shows Autonomous AI is Improving Health Equity Among Minority Populations



Publications



Search...

Diabetes

diabetes

Current

Browse

Info & About

Podcasts

Sul

Volume 72, Issue
Supplement_1

June 2023



OR: HEALTH CARE DELIVERY—QUALITY IMPROVEMENT | JUNE 20 2023

261-OR: Autonomous Artificial Intelligence (AI) Testing for Diabetic Eye Disease (DED) Closes Care Gap and Improves Health Equity on a Systems Level FREE

T.Y. ALVIN LIU; JANE HUANG; HAROLD LEHMANN; RISA M. WOLF; ROOMASA CHANNA; MICHAEL D. ABRAMOFF

Check for updates

Diabetes 2023;72(Supplement_1):261-OR

<https://doi.org/10.2337/db23-261-OR>

Split-Screen

Share

Cite

Get Permissions

We aimed to examine the change in adherence to annual diabetic eye disease (DED) testing in an integrated healthcare system (Johns Hopkins Community Physicians 30+ community based primary care clinics) before and after deployment of autonomous artificial intelligence (AI). Adherence to annual DED testing is defined as completed evaluation by either a human ophthalmologist or provider...

Scientific Evidence from RCTs Shows Autonomous AI is Improving Health Equity Among Minority Populations



Publications



Search...

Diabetes



American
Diabetes
Association

Publications



Search...

Diabetes

Volume 72, Issue 1
Supplement_1

June 2023



Current

Browse

Info & About

Podcasts

Sub

Volume 72, Issue
Supplement_1

June 2023



OR: COMPLICATIONS—RETINOPATHY | JUNE 20 2023

110-OR: Autonomous Artificial Intelligence Diabetic Eye Exams to Mitigate Disparities in Screening Completion FREE

ANUM ZEHRU; LEE A. BROMBERGER; BERNARD PAN; ALIYAH SHEHADEH; DHURVA PATEL; ELIZABETH A. BROWN; ROOMASA CHANNA; T.Y. ALVIN LIU; HAROLD LEHMANN; MICHAEL D. ABRAMOFF; RISA M. WOLF



Diabetes 2023;72(Supplement_1):110-OR

<https://doi.org/10.2337/db23-110-OR>



Split-Screen



Share



Cite



Get Permissions

Diabetic retinopathy (DR) is a complication of diabetes that can result in vision loss, but early detection and treatment through screening can prevent this. Few individuals with diabetes meet recommended DR screening guidelines, and racial/ethnic minority youth are less likely to undergo recommended screening. We sought to determine if implementing point-of-care (POC) autonomous

Scientific Evidence from RCTs Shows Autonomous AI is Improving Health Equity Among Minority Populations



Publications



Search...

Diabetes



American
Diabetes
Association

Publications



Search...

Diabetes

Volume 72, Issue
Supplement_1

June 2023



diabetes

Volume 72, Issue
Supplement_1

June 2023



ARVO JOURNALS

Search...

All Journals



Advanced
Search

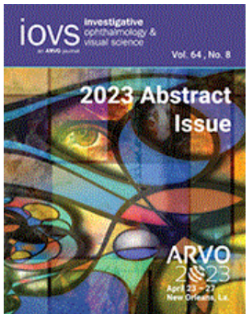
iovs
an ARVO journal
investigative
ophthalmology &
visual science

ISSUES

TOPICS

FOR AUTHORS

ABOUT



June 2023

Volume 64, Issue 8



ISSUE



OPEN ACCESS

ARVO Annual Meeting Abstract | June 2023

Autonomous artificial intelligence exams are associated with higher adherence to diabetic retinopathy testing in an integrated healthcare system

Jane Huang; Jiangxia Wang; Roomasa Channa; Risa Wolf; Michael David Abramoff; T. Y. Alvin Liu

+ Author Affiliations & Notes

Investigative Ophthalmology & Visual Science June 2023, Vol.64, 212. doi:

Scientific Evidence from RCTs Shows Autonomous AI is Improving Health Equity Among Minority Populations



Publications



Search...

Diabetes



American
Diabetes
Association

Publications



Search...

Diabetes

Volume 72, Issue
Supplement_1
June 2023

diabetes

Volume 72, Issue
Supplement_1
June 2023



ARVO JOURNALS

Search...

All Journals



Advanced
Search

iovs
an ARVO journal
investigative
ophthalmology &
visual science

ISSUES TOPICS FOR AUTHORS ABOUT

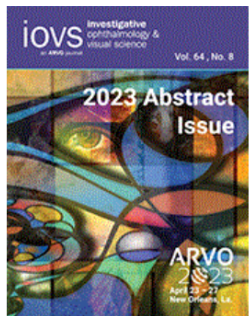
ARVO JOURNALS

Search...

All Journals



Advanced
Search



June 2023
Volume 64, Issue 8

ISSUE

OPEN ACCESS

ARVO Annual Meeting Abstract

Autonomous artificial intelligence (AI) increases health equity for patients who are more at risk for poor visual outcomes due to diabetic eye disease (DED)

Jane Huang

+ Author Affiliations & Notes

Investigative Ophthalmology & Visual Science



June 2023
Volume 64, Issue 8

ISSUE

OPEN ACCESS

ARVO Annual Meeting Abstract | June 2023

Autonomous artificial intelligence (AI) increases health equity for patients who are more at risk for poor visual outcomes due to diabetic eye disease (DED)

Ariel Leong; Jiangxia Wang; Risa Wolf; Roomasa Channa; Michael David Abramoff; Harold Lehmann; T. Y. Alvin Liu

+ Author Affiliations & Notes

Investigative Ophthalmology & Visual Science June 2023, Vol.64, 243. doi:

Scientific Evidence from RCTs Shows Autonomous AI is Improving Health Equity Among Minority Populations



Publications



Search...

The increase in overall adherence rate at AI sites was significantly greater than at non-AI sites ($p < 0.001$). For Black patients... the difference [in adherence] became significant ($p < 0.001$) in 2021 due to increased adherence at the AI sites (58%) vs non-AI sites (38%).



American Diabetes Association

Publications



Search...

Volume 72, Issue Supplement_1
June 2023

diabetes

Volume 72, Issue Supplement_1
June 2023



ARVO JOURNALS

Search...

All Journals



Advanced Search

iovs investigative ophthalmology & visual science
an ARVO journal

ISSUES TOPICS FOR AUTHORS ABOUT

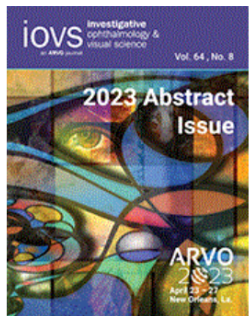
ARVO JOURNALS

Search...

All Journals



Advanced Search



June 2023
Volume 64, Issue 8

ISSUE

OPEN ACCESS

ARVO Annual Meeting Abstract

Autonomous artificial intelligence (AI) increases health equity for patients who are more at risk for poor visual outcomes due to diabetic eye disease (DED)

Jane Huo

+ Author Affiliations & Notes

Investigative Ophthalmology & Visual Science



June 2023
Volume 64, Issue 8

ISSUE

OPEN ACCESS

ARVO Annual Meeting Abstract | June 2023

Autonomous artificial intelligence (AI) increases health equity for patients who are more at risk for poor visual outcomes due to diabetic eye disease (DED)

Ariel Leong; Jiangxia Wang; Risa Wolf; Roomasa Channa; Michael David Abramoff; Harold Lehmann; T. Y. Alvin Liu

+ Author Affiliations & Notes

Investigative Ophthalmology & Visual Science June 2023, Vol.64, 243. doi:

Recommendation: CMS not Downgrade CPT 92229 from APC 5733 (Payment Rate \$58.13) to APC 5732 (Payment Rate \$37.05)

- Recommendation: CMS not Downgrade CPT 92229 from APC 5733 (Payment Rate \$58.13) to APC 5732 (Payment Rate \$37.05)
- CPT 92229 and CPT 92227 are in the same code family:
 1. Both services have the same goal: To prevent blindness from diabetes through a diabetic eye exam.
 2. CPT 92229 is a complex, complete point-of-care service cleared by the FDA using rigorous criteria for autonomous AI: Being downgraded to APC 5732, with a payment rate of \$37.05
 3. CPT 92227 is a remote reading service with non-clinician readers with unknown accuracy and no regulatory oversight: Being upgraded to APC 5733, with a payment rate of \$58.13
- CMS has recognized in its payment rules that there are similarities in resource costs between CPT 92229 and CPT 92325 (86 FR 64996 through 66031)
 1. CPT 92325 is assigned to APC 5734, payment rate of \$123.02
- Claims statistics may not be straightforward to support downgrade in APC assignment:
 1. Geometric mean calculation used miniscule number of claims (174 unique claims from an exceptionally small number of hospital systems) compared with a broader dataset. Data represents <0.05% of APC 5733, well below 2% threshold.
 2. 2021 claims had high variability, because of inconsistent carrier pricing in 2021 leading to variable charges documented.
 3. Commissioned independent actuarial analysis for the geometric mean of the costs in CY 2022 and have requested a meeting with CMS to review the potential discrepancy in the claims data. Findings include 2022 claims represent only a handful of facilities.
- **Maintain CMS policy of improving access and addressing health equity:** The diagnostics service delivered by LumineticsCore (CPT 92229) represents a major advance in health equity, and there is independent peer reviewed research documenting improvement in outcomes for underserved populations through technological innovation.

Potential Consequence of Downgrading CPT 92229 from APC 5733 to APC 5732

- » We estimate that access to this sight saving service would have far reaching impacts across all Medicare beneficiaries with diabetes if CMS proceeds with downgrading CPT 92229 to the lower APC 5732 with payment rate \$37.05 from the prior assignment to APC 5733 with payment rate \$58.13
- » If finalized, the policy would undermine the advances that CMS has made in providing equitable access to Medicare beneficiaries and risk access to this sight saving service that has the potential to “improve outcomes and reduce overall costs to the program”.



Thank you

