

SUPPLEMENTARY MATERIALS

Geographic atrophy and factors associated with disease progression among Medicare Advantage enrollees

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SUPPLEMENTARY FIGURE 1 Kaplan-Meier Curve Showing Progression to GA With Subfoveal Involvement

SUPPLEMENTARY FIGURE 2 Kaplan-Meier Curves Showing Fall-Related Injury in GA and Non-GA Cohorts

SUPPLEMENTARY TABLE 1 Diagnosis Codes for Clinical Outcomes and Comorbidities

SUPPLEMENTARY TABLE 2 Codes for Diagnostic Imaging

SUPPLEMENTARY TABLE 3 Baseline Variables Used in Matching

SUPPLEMENTARY TABLE 4 Treatments Received During Post-Index Period

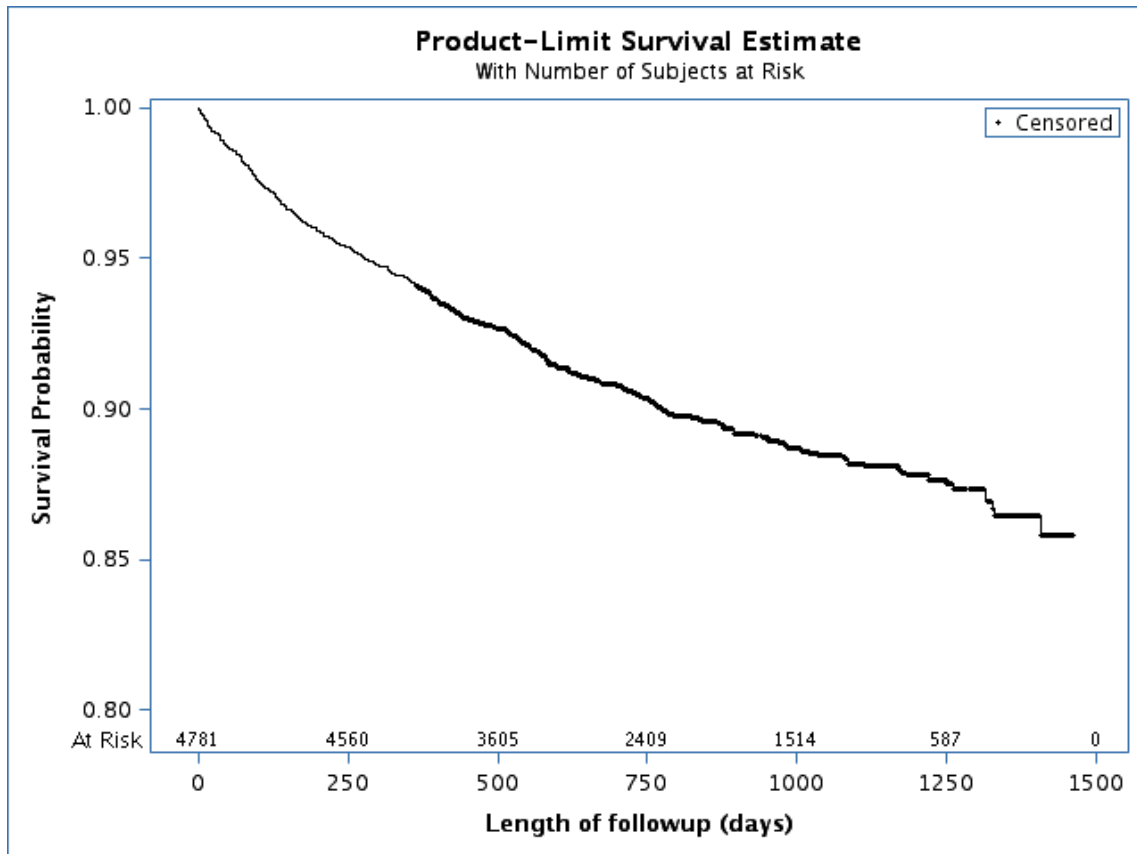
SUPPLEMENTARY TABLE 5 Clinical Comorbidities and Outcomes During Post-Index Period

SUPPLEMENTARY TABLE 6 Factors Associated With Progression From GA Without Subfoveal Involvement to GA With Subfoveal Involvement

SUPPLEMENTARY TABLE 7 Factors Associated With Progression to Blindness

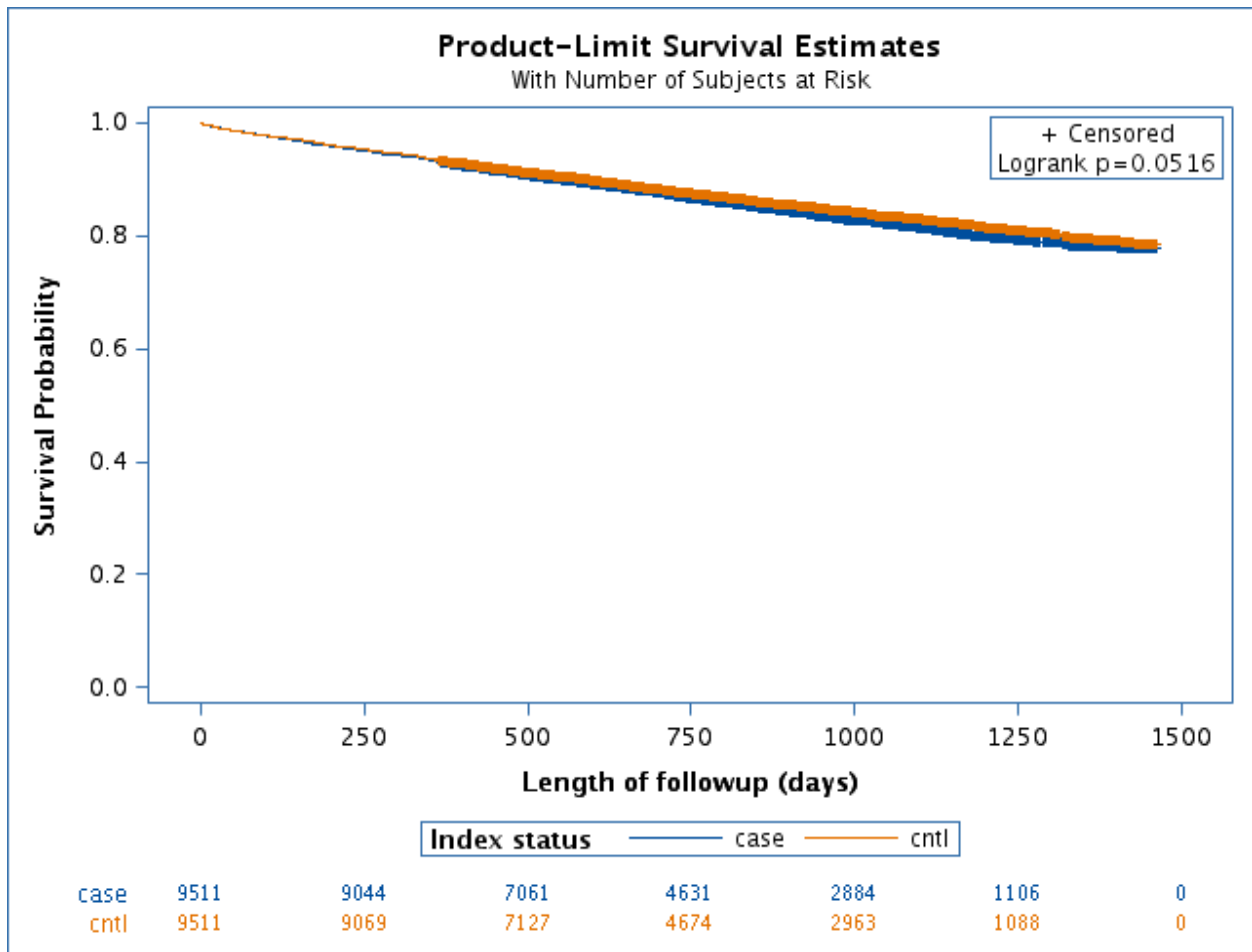
SUPPLEMENTARY TABLE 8 All-Cause HCRU During Post-Index Period

Supplementary Figure 1: Kaplan-Meier curve showing progression to GA with subfoveal involvement



Patients having GA without subfoveal involvement at index ($n = 4,781$) were included in this analysis. The plot has been adjusted to highlight only the survival probabilities between 0.8 and 1.0.

Supplementary Figure 2: Kaplan-Meier curves showing fall-related injury in GA and non-GA cohorts.



Supplementary table 1. Diagnosis Codes for Clinical Outcomes and Comorbidities.

ICD-10-CM Code	Description
Dry AMD	
Dry (nonexudative) AMD, early stage	H35.31x1
Dry (nonexudative) AMD, intermediate dry stage	H35.31x2
Dry (nonexudative) AMD, advanced atrophic without subfoveal involvement (GA without SFI)	H35.31x3
Dry (nonexudative) AMD, advanced atrophic with subfoveal involvement (GA with SFI)	H35.31x4
Wet AMD	
Wet (exudative) AMD, with active choroidal neovascularization	H35.32x1
Wet (exudative) AMD, with inactive choroidal neovascularization	H35.32x2
Wet (exudative) AMD, inactive scar	H35.32x3
Ophthalmic conditions	
Wet Age-Related Macular Degeneration	H35.32x
Glaucoma	H40.x, H42
Diabetic Retinopathy	E10.31x-E10.35x, E11.31x-E11.35x, E13.31-E13.35x
Cataract	H25.x, H26.x, H28
Visual Impairment or Blindness	H54.x
Fall-related injuries	
Falls	W00.xxxx–W19.xxxx and R29.6
Fractures	S02.x, S12.x, S22.x, S32.x, S42.x, S52.x, S62.x, S72.x, S82.x, S92.x
Dislocations	S03.x, S13.x, S23.x, S33.x, S43.x, S53.x, S63.x, S73.x, S83.x, S93.x
Head Injuries	S00.x-S09.x, except for S00.x6, S00.x7 and S01.x5
Comorbidities	
Depression	F43.21, F94.8, F43.22, F43.23, F43.29, F43.24, F43.25, F43.8, F43.20, F06.30, F30.10, F30.11, F30.12, F30.13, F30.2, F30.3, F30.4, F32.9, F32.0, F32.1, F32.2, F32.3, F32.4, F32.5, F33.9, F33.0, F33.1, F33.2, F33.3, F33.41, F33.42, F31.10, F31.11, F31.12, F31.13, F31.2, F31.73, F31.74, F31.30, F31.31, F31.32, F31.4, F31.5, F31.75, F31.76, F31.60, F31.61, F31.62, F31.63, F31.64, F31.77, F31.78, F31.9, F30.8, F32.89, F31.81, F39, F34.81, F34.89, F34.1, F05, F04, F02.80, F02.81,

	F03.90, F03.91, F06.0, F06.8, F07.0, F07.81, F48.2, F07.89, F09, G30.9, G31.01, G31.09, G31.1, G31.83, R41.81
Anxiety Disorders	F40.x, F41.x
Osteoarthritis	M15.0x, M15.1x, M15.2x, M15.3x, M15.8x, M15.9x, M16.xx- M19.xx
Uveitis	H20.011, H20.012, H20.013, H20.021, H20.022, H20.023, H20.11, H20.12, H20.13, H43.89, H43.89, H30.21, H30.22, H30.23, H30.021, H30.022, H30.023,
	H30.031, H30.032, H30.033, H30.91, H30.92, H30.93, H44.011, H44.012, H44.013, H44.001, H44.002, H44.003, H44.011, H44.012, H44.013, H44.021, H44.022, H44.023, H44.111, H44.112, H44.113, H20.031, H20.032, H20.033,
	A18.54, B00.51, B02.32, H20.041, H20.042, H20.043
Ocular surface diseases	
Dry eye syndrome	H04.12x
Blepharitis	H01.00x, H01.01x, H01.02x
Allergies	H01.11x, H10.011, H10.012, H10.013, H10.10, H10.11, H10.12, H10.13, H10.45, H11.431, H11.432, H11.433, L29.8x, H04.201, H04.202, H04.203
Meibomian gland dysfunction	H02.88
Keratitis	H16.x
Conjunctivitis	H10.xx, except for H10.10, H10.11, H10.12, H10.13, H10.45
Chemical or thermal burns	T26.xx
Sjogren's Syndrome	M35.01

Note values of x in 6th position of AMD diagnosis code: 1= right eye, 2= left eye, 3= bilateral, 9= unspecified eye.

Supplementary Table 2. Codes for diagnostic imaging

Imaging modality	CPT Code
Optical Coherence Tomography (OCT)	92134
Fundus Photography	92250
Fluorescein Angiography (FA)	92235
Indocyanine-green angiography (ICG)	92240
FA & ICF (at same time)	92242

Supplementary table 3. Baseline Variables Used in Matching

Variable	Before Matching			After Matching		
	Full (unmatched) sample			Matched sample		
	GA Cohort	Non-GA Cohort	Standardized difference	GA Cohort	Non-GA Cohort	Standardized difference
N	9,519	574,783	.	9,511	9,511	
Demographic Characteristics						
Age on index date, mean (SD)	82.29 (±7.45)	74.91 (±6.66)	1.05	82.27 (±7.42)	82.34 (±7.64)	0.01
Index year and month counter, mean (SD)	17.36 (±10.71)	18.08 (±10.78)	0.07	17.36 (±10.71)	17.46 (±10.71)	0.01
Sex						
Female	6,144 (64.5%)	326,540 (56.8%)	0.16	6,136 (64.5%)	6,062 (63.7%)	0.02
Race						
White	8,894 (93.4%)	456,900 (79.5%)	0.42	8,886 (93.4%)	8,860 (93.2%)	0.01
Black	192 (2.0%)	70,211 (12.2%)	0.41	192 (2.0%)	204 (2.1%)	0.01
Other	248 (2.6%)	26,214 (4.6%)	0.11	248 (2.6%)	262 (2.8%)	0.01
Unknown	-	-	-	185 (1.9%)	185 (1.9%)	0.00
Geographic location						
Northeast	300 (3.2%)	15,609 (2.7%)	0.03	299 (3.1%)	336 (3.5%)	0.02
Mid West	2,373 (24.9%)	108,293 (18.8%)	0.15	2,366 (24.9%)	2,387 (25.1%)	0.01
South	5,472 (57.5%)	380,171 (66.1%)	0.18	5,472 (57.5%)	5,410 (56.9%)	0.01
West	1,374 (14.4%)	70,710 (12.3%)	0.06	1,374 (14.4%)	1,378 (14.5%)	0.00
Population Density						
Urban	5,573 (58.5%)	359,383 (62.5%)	0.08	5,566 (58.5%)	5,483 (57.6%)	0.02

Variable	Before Matching			After Matching		
	Full (unmatched) sample			Matched sample		
	GA Cohort	Non-GA Cohort	Standardized difference	GA Cohort	Non-GA Cohort	Standardized difference
Suburban	2,560 (26.9%)	145,395 (25.3%)	0.04	2,559 (26.9%)	2,633 (27.7%)	0.02
Rural	1,170 (12.3%)	54,752 (9.5%)	0.09	1,170 (12.3%)	1,192 (12.5%)	0.01
Unknown	-	-	-	216 (2.3%)	203 (2.1%)	0.01
Low income subsidy status (Yes)	2,127 (22.3%)	126,135 (21.9%)	0.01	2,121 (22.3%)	2,156 (22.7%)	0.01
Dual eligibility status (Yes)	1,665 (17.5%)	95,906 (16.7%)	0.02	1,659 (17.4%)	1,641 (17.3%)	0.01
Clinical Characteristics						
Baseline Frailty Score						
Robust (CFI < 0.15)	3,544 (37.2%)	246,866 (42.9%)	0.12	3,544 (37.3%)	3,407 (35.8%)	0.03
Prefrail (0.15 - 0.24)	4,767 (50.1%)	278,108 (48.4%)	0.03	4,765 (50.1%)	4,851 (51.0%)	0.02
Mildly frail (0.25 - 0.34)	1,022 (10.7%)	43,195 (7.5%)	0.11	1,017 (10.7%)	1,073 (11.3%)	0.02
Moderate to severely frail (≥ 0.36)	186 (2.0%)	6,614 (1.2%)	0.07	185 (1.9%)	180 (1.9%)	0.01
Elixhauser conditions						
Alcohol Abuse	108 (1.1%)	9,338 (1.6%)	0.04	108 (1.1%)	106 (1.1%)	0.00
Blood Loss Anemia	139 (1.5%)	6,406 (1.1%)	0.03	138 (1.5%)	143 (1.5%)	0.00
Cardiac Arrhythmia	2,406 (25.3%)	115,945 (20.2%)	0.12	2,403 (25.3%)	2,524 (26.5%)	0.03
Congestive Heart Failure	1,436 (15.1%)	75,264 (13.1%)	0.06	1,432 (15.1%)	1,483 (15.6%)	0.02
Coagulopathy	340 (3.6%)	22,165 (3.9%)	0.02	340 (3.6%)	362 (3.8%)	0.01

Variable	Before Matching			After Matching		
	Full (unmatched) sample			Matched sample		
	GA Cohort	Non-GA Cohort	Standardized difference	GA Cohort	Non-GA Cohort	Standardized difference
COPD	1,962 (20.6%)	117,771 (20.5%)	0.00	1,959 (20.6%)	2,000 (21.0%)	0.01
Deficiency Anemia	520 (5.5%)	30,251 (5.3%)	0.01	518 (5.4%)	543 (5.7%)	0.01
Depression	1,266 (13.3%)	81,709 (14.2%)	0.03	1,261 (13.3%)	1,314 (13.8%)	0.02
Diabetes Mellitus Complicated	1,548 (16.3%)	109,044 (19.0%)	0.07	1,548 (16.3%)	1,582 (16.6%)	0.01
Diabetes Mellitus Uncomplicated	1,780 (18.7%)	121,570 (21.2%)	0.06	1,780 (18.7%)	1,806 (19.0%)	0.01
Drug Abuse	182 (1.9%)	19,133 (3.3%)	0.09	182 (1.9%)	178 (1.9%)	0.00
Fluid Electro Disorder	901 (9.5%)	48,480 (8.4%)	0.04	900 (9.5%)	896 (9.4%)	0.00
HIV Aids	<11 (<0.1%)	726 (0.1%)	0.03	<11 (<0.1%)	<11 (<0.1%)	0.00
Hypertension Complicated	1,779 (18.7%)	100,293 (17.4%)	0.03	1,777 (18.7%)	1,818 (19.1%)	0.01
Hypertension Uncomplicated	6,217 (65.3%)	387,038 (67.3%)	0.04	6,212 (65.3%)	6,264 (65.9%)	0.01
Hypothyroidism	2,041 (21.4%)	106,534 (18.5%)	0.07	2,040 (21.4%)	2,064 (21.7%)	0.01
Liver Failure	173 (1.8%)	16,786 (2.9%)	0.07	173 (1.8%)	172 (1.8%)	0.00
Lymphoma	66 (0.7%)	5,064 (0.9%)	0.02	66 (0.7%)	54 (0.6%)	0.02
Metastatic Cancer	82 (0.9%)	7,148 (1.2%)	0.04	82 (0.9%)	80 (0.8%)	0.00
Obesity	793 (8.3%)	80,541 (14.0%)	0.18	793 (8.3%)	801 (8.4%)	0.00
Other Neuro Disorder	535 (5.6%)	30,638 (5.3%)	0.01	534 (5.6%)	541 (5.7%)	0.00
Paralysis	74 (0.8%)	4,482 (0.8%)	0.00	74 (0.8%)	77 (0.8%)	0.00
Psychoses	39 (0.4%)	2,814 (0.5%)	0.01	37 (0.4%)	45 (0.5%)	0.01
Peptic Ulcer Disease No Bleed	71 (0.7%)	3,575 (0.6%)	0.02	70 (0.7%)	73 (0.8%)	0.00

Variable	Before Matching			After Matching		
	Full (unmatched) sample			Matched sample		
	GA Cohort	Non-GA Cohort	Standardized difference	GA Cohort	Non-GA Cohort	Standardized difference
Pulmonary Circulatory Disorder	419 (4.4%)	23,308 (4.1%)	0.02	417 (4.4%)	418 (4.4%)	0.00
Peripheral Vascular Disease	1,801 (18.9%)	108,615 (18.9%)	0.00	1,799 (18.9%)	1,878 (19.7%)	0.02
RA Collagen Disease	421 (4.4%)	30,743 (5.3%)	0.04	421 (4.4%)	395 (4.2%)	0.01
Renal Failure	2,064 (21.7%)	113,393 (19.7%)	0.05	2,061 (21.7%)	2,159 (22.7%)	0.03
Solid Tumor No Metastasis	671 (7.0%)	49,616 (8.6%)	0.06	671 (7.1%)	681 (7.2%)	0.00
Valvular Disease	1,007 (10.6%)	49,518 (8.6%)	0.07	1,005 (10.6%)	1,015 (10.7%)	0.00
Weight Loss	277 (2.9%)	14,131 (2.5%)	0.03	276 (2.9%)	299 (3.1%)	0.01
Baseline comorbidities						
Anxiety disorders	1,809 (19.0%)	113,817 (19.8%)	0.02	1,807 (19.0%)	1,817 (19.1%)	0.00
Osteoarthritis	3,431 (36.0%)	211,417 (36.8%)	0.02	3,426 (36.0%)	3,542 (37.2%)	0.03
Uveitis	29 (0.3%)	988 (0.2%)	0.03	29 (0.3%)	23 (0.2%)	0.01
Dry eye syndrome	601 (6.3%)	25,085 (4.4%)	0.09	599 (6.3%)	627 (6.6%)	0.01
Blepharitis	151 (1.6%)	5,885 (1.0%)	0.05	151 (1.6%)	137 (1.4%)	0.01
Allergies	287 (3.0%)	17,191 (3.0%)	0.00	287 (3.0%)	309 (3.2%)	0.01
Meibomian gland dysfunction	24 (0.3%)	1,323 (0.2%)	0.00	24 (0.3%)	24 (0.3%)	0.00
Keratitis	219 (2.3%)	8,850 (1.5%)	0.06	219 (2.3%)	268 (2.8%)	0.03
Conjunctivitis	147 (1.5%)	8,087 (1.4%)	0.01	147 (1.5%)	168 (1.8%)	0.02
Sjögren's Syndrome	11 (0.1%)	897 (0.2%)	0.01	11 (0.1%)	12 (0.1%)	0.00
Healthcare Resources Use						
Baseline hospital episodes						
0	8,050 (84.6%)	490,104 (85.3%)	0.02	8,045 (84.6%)	7,981 (83.9%)	0.02

Variable	Before Matching			After Matching		
	Full (unmatched) sample			Matched sample		
	GA Cohort	Non-GA Cohort	Standardized difference	GA Cohort	Non-GA Cohort	Standardized difference
1	1,142 (12.0%)	64,803 (11.3%)	0.02	1,140 (12.0%)	1,207 (12.7%)	0.02
>1	327 (3.4%)	19,876 (3.5%)	0.00	326 (3.4%)	323 (3.4%)	0.002
Baseline inpatient length of stay (days)						
0	8,050 (84.6%)	490,104 (85.3%)	0.02	8,045 (84.6%)	7,981 (83.9%)	0.02
1 to 5	718 (7.5%)	43,698 (7.6%)	0.00	718 (7.5%)	749 (7.9%)	0.01
>5	751 (7.9%)	40,981 (7.1%)	0.03	748 (7.9%)	781 (8.2%)	0.01
Baseline Emergency department visits						
0	6,721 (70.6%)	415,209 (72.2%)	0.04	6,715 (70.6%)	6,641 (69.8%)	0.02
1	1,328 (14.0%)	78,862 (13.7%)	0.01	1,328 (14.0%)	1,370 (14.4%)	0.01
>1	1,470 (15.4%)	80,712 (14.0%)	0.04	1,468 (15.4%)	1,500 (15.8%)	0.01
Baseline physician office visits						
0 to 4	3,389 (35.6%)	150,501 (26.2%)	0.21	3,382 (35.6%)	3,298 (34.7%)	0.02
5 to 7	2,209 (23.2%)	137,893 (24.0%)	0.02	2,209 (23.2%)	2,207 (23.2%)	0.00
8 to 12	2,207 (23.2%)	153,500 (26.7%)	0.08	2,207 (23.2%)	2,239 (23.5%)	0.01
>12	1,714 (18.0%)	132,889 (23.1%)	0.13	1,713 (18.0%)	1,767 (18.6%)	0.02

SD, standard deviation; AMD, age-related macular degeneration; COPD, Chronic Obstructive Pulmonary Disease; HVI, Human Immunodeficiency Virus; AIDS, Acquired Immunodeficiency Syndrome; RA, Rheumatoid Arthritis.

Supplementary table 4. Treatments received during post-index period.

Treatment	GA Cohort	Non-GA Cohort	P-value
N	9,511	9,511	
Anti-VEGF, n (%)			
Bevacizumab	961 (10.1%)	159 (1.7%)	<.0001
Ranibizumab	215 (2.3%)	53 (0.6%)	<.0001
Aflibercept	455 (4.8%)	109 (1.1%)	<.0001
Brolucizumab	11 (0.1%)	<11 (<0.1%)	0.013
Laser therapy, n (%)	464 (4.9%)	169 (1.8%)	<.0001
Mental Health Conditions Treatments			
Typical Antipsychotics, n (%)	37 (0.4%)	42 (0.4%)	0.573
Atypical Antipsychotics, n (%)	300 (3.2%)	309 (3.3%)	0.711
Antidepressants			
Selective serotonin reuptake inhibitors, n (%)	1,838 (19.3%)	1,851 (19.5%)	0.812
Serotonin and norepinephrine reuptake inhibitors, n (%)	523 (5.5%)	499 (5.3%)	0.440
Tricyclic Antidepressants, n (%)	175 (1.8%)	198 (2.1%)	0.229
Anti-anxiety Treatments, n (%)			
Benzodiazepines	1,741 (18.3%)	1,720 (18.1%)	0.693
Non- benzodiazepines	506 (5.3%)	462 (4.9%)	0.147
Diabetes Treatments, n (%)			
Oral anti-diabetics	1,574 (16.6%)	1,691 (17.8%)	0.025
Injectable anti-diabetics	104 (1.1%)	102 (1.1%)	0.889
Insulins	470 (4.9%)	441 (4.6%)	0.325

VEGF, vascular endothelial growth factor.

Oral anti-diabetics- Sulfonylureas, Biguanides (Metformin), Thiazolidinediones, Alpha-glucosidase inhibitors, Meglitinides, Dipeptidyl-peptidase 4 (DPP-4) inhibitors, Sodium-glucose co-transporter 2 (SGLT2) inhibitors.

Injectable anti-diabetics- Amylin mimetics, Incretin mimetics (GLP-1 analogs).

Supplementary table 5. Clinical comorbidities and outcomes during post-index period.

Clinical Outcome	GA Patients	Non-GA Patients	P-value
N	9,511	9,511	
Prevalence measures**, n (%)			
Depression	2,123 (22.3%)	2,145 (22.6%)	0.702
Anxiety disorders	1,948 (20.5%)	1,865 (19.6%)	0.133
Wet AMD	2,805 (29.5%)	392 (4.1%)	<.0001
Incidence measures, n (%)			
Fall-related **¥	1,393 (14.6%)	1,303 (13.7%)	0.061
Wet AMD [€]	1,725 (22.4%)	133 (1.5%)	<.0001

Clinical Outcome	GA Patients	Non-GA Patients	P-value
Incidence rate of fall-related injuries per 1000 person years [¥]			
Individuals contributing events	1,393	1,303	-
Total Events	1,393	1,303	-
Individuals contributing person time	9,512	9,512	-
Total person time (years)	18,645.9	18,945.8	-
Crude incidence rate (per 1000 person year)	74.7	68.8	-
95% confidence interval	70.84 (78.7)	65.1 (72.6)	NS
Incidence of mental health conditions [£] , n (%)	2,274 (23.4%)	2,144 (22.0%)	0.023
Depression [€]			
Individuals contributing events	1,384	1,232	-
Total Events	1,384	1,232	-
Individuals contributing person time	7,615	7,550	-
Total person time (years)	15,983.9	15,941.4	-
Crude incidence rate (per 1000 person year)	86.6	77.3	-
95% confidence interval	82.08 (91.3)	73.0 (81.7)	0.004
Anxiety disorders [€]			
Individuals contributing events	1,365	1,280	-
Total Events	1,365	1,280	-
Individuals contributing person time	7,705	7,695	-
Total person time (years)	16151.7	16221.7	-
Crude incidence rate (per 1000 person year)	84.5	78.9	-
95% confidence interval	80.09 (89.1)	74.6 (83.4)	NS

AMD, age-related macular degeneration; LCL, lower confidence level; UCL, upper confidence level; NS, not significant.

*For falls, fractures and dislocations identified, only initial encounters for the fall episode were included.

For calculating the crude incidence rates, a variable follow up was used and patients were followed up until they disenrolled from insurance or died or until the end of study period.

**Prevalence measures calculated for all patients, regardless of baseline condition status, using 365 days follow up.

¥ Incidence measures calculated using entire follow up period for each patient, censored at first of: event, end of study, end of post-index insurance coverage.

£ Denominator=distinct patients who had no baseline depression or no baseline anxiety (n GA cohort=9734, n non-GA cohort=9748). Numerator=anyone from denominator who had either a depression or anxiety Dx (or both) in full follow up period.

€ Incidence measures calculated using entire follow up period for each patient who did not have the condition at baseline, censored at first of: event, end of study, end of post-index insurance coverage.

Supplementary Table 6. Factors Associated with Progression from GA Without Subfoveal Involvement to GA With Subfoveal Involvement

Variable	Hazard Ratio	95% confidence limit		P-value
		LCL	UCL	
Age Category (Ref= 65-74)				
75-84	1.015	0.772	1.35	0.9184
≥85	0.977	0.74	1.305	0.8714
Male (Ref= Female)	0.947	0.782	1.144	0.5779
Race (Ref= White)				
Black	1.068	0.549	1.858	0.8304
Other	0.693	0.331	1.262	0.2777
Unknown	0.679	0.241	1.483	0.3934
Population Density (Ref= Urban)				
Suburban	0.774	0.618	0.961	0.0227
Rural	0.766	0.563	1.02	0.0774
Unknown	0.997	0.543	1.669	0.9926
Elixhauser Score (Ref= 0 -1)				
2 - 3	1.200	0.945	1.528	0.1361
4 - 5	1.459	1.116	1.906	0.0056
5+	1.392	1.021	1.889	0.0347
Baseline comorbidities				
Wet AMD	5.702	4.633	6.998	<.0001
Pre-index Anti-VEGF use	0.791	0.605	1.028	0.0827
Healthcare resource use				
Inpatient stay	0.803	0.594	1.071	0.1441
ER visit	0.928	0.749	1.142	0.4841
Telehealth visit	0.761	0.551	1.026	0.0845

AMD, age-related macular degeneration; VEGF, vascular endothelial growth factor.
Note that this model only included the subgroup of patients with GA without SFI at index (n=4,781).

Supplementary Table 7. Factors Associated with Progression to Blindness.

Variable	Hazard Ratio	95% confidence limit		P-value
		LCL	UCL	
Patient group (Ref= Non-GA Patients)				
Patients having GA without subfoveal involvement	6.765	4.981	9.35	<.0001
Patients having GA with subfoveal involvement	12.593	9.432	17.164	<.0001
Age Category (Ref= 65-74)				
75-84	1.027	0.794	1.343	0.8419

Variable	Hazard Ratio	95% confidence limit		P-value
		LCL	UCL	
≥85	1.273	0.988	1.66	0.0674
Male (Ref= Female)	0.893	0.743	1.069	0.2216
Race (Ref= White)				
Black	1.164	0.618	1.978	0.606
Other	0.856	0.455	1.449	0.5952
Unknown	0.938	0.369	1.93	0.8766
Population Density (Ref= Urban)				
Suburban	0.914	0.745	1.114	0.3799
Rural	0.92	0.69	1.206	0.5594
Unknown	0.637	0.289	1.199	0.2075
Elixhauser Score (Ref= 0 -1)				
2 - 3	1.022	0.816	1.28	0.8508
4 - 5	1.182	0.915	1.523	0.1971
5+	1.221	0.92	1.613	0.1634
Baseline comorbidities				
Wet AMD	1.125	0.858	1.454	0.3797
Pre-index Anti-VEGF use	0.995	0.68	1.441	0.9789
Healthcare resource use				
Inpatient stay	1.051	0.809	1.354	0.7068
ED visit	1.031	0.849	1.246	0.7576
Telehealth visit	0.972	0.714	1.294	0.8491

GA, geographic atrophy; Ref, reference level; AMD, age-related macular degeneration; VEGF, vascular endothelial growth factor; ED, emergency department.

Supplementary Table 8. All-cause Healthcare Resource Utilization (HCRU) During Post-index Period.

All-cause HCRU	GA Patients		Non-GA Patients		P-value
N	9511	100%	9511	100%	

All-cause HCRU	GA Patients		Non-GA Patients		P-value
Inpatient Stays, n (%)	1641	17.3%	1624	17.1%	0.744
mean (SD)	0.2	0.6	0.2	0.6	
median	0	-	0	-	0.744
25th, 75th	0	0	0	0	
min, max	0	10	0	8	
Length of Stay (LOS)					
Total LOS during post-index period					
mean (SD)	1.6	5.7	1.6	5.7	
median	0	-	0	-	0.707
25th, 75th	0	0	0	0	
min, max	0	167	0	181	
LOS per hospitalization					
mean (SD)	1.1	3.5	1.1	3.6	
median	0	-	0	-	0.707
25th, 75th	0	0	0	0	
min, max	0	81	0	98	
LOS per hospitalization (patients with IP stay)					
mean (SD)	6.6	6.0	6.5	6.4	
median	5	-	5	-	0.638
25th, 75th	3	8	3	7	
min, max	1	81	1	98	
Emergency Department visits, n (%)					
mean (SD)	3068	32.3%	3045	32.0%	0.721
median	0.8	1.8	0.8	1.8	
25th, 75th	0	-	0	-	0.793
min, max	0	1	0	1	
min, max	0	25	0	27	
Outpatient visits, n (%)					
mean (SD)	9476	99.6%	9408	98.9%	<.0001
median	18.3	15.9	16.7	15.9	
25th, 75th	15	-	13	-	<.0001
min, max	9	23	7	22	
min, max	0	332	0	324	
Telehealth Services, n (%)					
mean (SD)	2103	22.1%	2128	22.4%	0.663
median	0.5	1.3	0.5	1.7	
25th, 75th	0	-	0	-	0.527
min, max	0	0	0	0	
min, max	0	25	0	92	

HCRU, healthcare resource use; GA, geographic atrophy; SD, standard deviation; min, minimum; max, maximum; IP, inpatient.

Note that the study period includes Covid-19 pandemic, so the HCRU could have been lower during 2020 and part of 2021.

