Supplementary Online Content

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This supplementary material has been provided by the authors to give readers additional information about their work.

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eMethods. Supplemental Methods

Details of exclusion criteria
We excluded codes for complex cataracts given they are likely associated with worse visual outcomes. We decided *a priori* to exclude any cases in which 1) there was only one unilateral cataract surgery recorded or 2) there were more than 2 cataract surgery procedures coded for an eye. Patients with no visual acuity (VA) measurements recorded between 20 and 90 days after surgery were also excluded.(Figure 1) This ensured that every patient had postoperative VA measured in both eyes for either the uncorrected or best corrected analysis, or both.

Study variables
The following demographic and clinical variables were extracted: age at surgery, gender, self-reported race, insurance, several prior ophthalmic disease diagnoses based on International Classification of Diseases (ICD)-9 and ICD-10 codes (age-related macular degeneration [AMD], diabetic retinopathy [DR], and glaucoma), laterality of first surgery, cataract surgery type [delayed sequential bilateral cataract surgery (DSBCS) with 15-90 days between surgeries (DSBCS-90), DSBCS with 1-14 day interval (DSBCS-14), or immediate sequential bilateral cataract surgery (ISBCS)] based on Current Procedural Terminology (CPT) codes (eTable 1 in the Supplement), number of days between surgery, presurgical logMAR best-corrected VA (BCVA) from both eyes defined as the last VA checked prior to surgery, postsurgical logMAR uncorrected VA (UCVA) and BCVA from both eyes.

If patients had more than one form of insurance, a hierarchical heuristic was used to prioritize insurers in the following order: Medicare, commercial, Medicaid or other. Date of birth is redacted in the IRIS® Registry for patients 87 years old or older at the time of data release, and as such anyone over 86 years old does not have an age at cataract surgery and is grouped with the individuals in their 9th decade of life.

Surgical Practice Trends
To investigate practice trends among cataract surgeons in the IRIS Registry, we extracted all cataract surgery visits, excluding patients who had unilateral surgery or for whom surgeon data was missing. We separated all surgeries into either DSBCS-90, DSBCS-14, or ISBCS, and then calculated the percentage of surgeons performing each of the procedure types using three categories: low volume surgeon (less than 1 surgery per week), intermediate volume surgeon (between 1 and 10 surgeries per week), and high volume surgeon (more than 10 surgeries per week).

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eTable 1. International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM) and International Classification of Diseases, 10th Revision, Clinical Modification (ICD-10-CM) Codes Used in the Study.

Diagnosis	ICD-9-CM	ICD-10-CM
Age-Related Macular Degeneration	362.50, 362.51, 362.52, 362.57	H35.30*, H35.31*, H35.32*, H35.36*
Diabetic Retinopathy	249.5*, 250.5*, 362.0*	E08.31*, E08.32*, E08.33*, E08.34*, E08.35*, E08.37*, E09.31*, E09.32*, E09.33*, E09.34*, E09.35*, E09.37*, E10.31*, E10.32*, E10.33*, E10.34*, E10.35*, E10.37*, E11.31*, E11.32*, E11.33*, E11.34*, E11.35*, E11.37*, E13.31*, E13.33*, E13.34*, E13.37*
Glaucoma	365.*	H40.*, H44.51

Asterisks (*) indicate wild cards. For example, H35.31* could be H35.31 exactly but also H35.311, H35.312, H35.313, H35.314, etc.

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eTable 2. Baseline Visual Acuity by DSBCS-90, DSBCS-14, and ISBCS Group

		DSBCS-90 (N=882,202)	DSBCS-14 (N=897,469)	ISBCS (N=44,525)
Eye With Worst BCVA	n (%)	848,301 (96.2)	866,493 (96.5)	42,860 (96.3)
	Mean (SD)	0.409 (0.402)	0.394 (0.393)	0.38 (0.453)
	Snellen Equivalent	20/51	20/50	20/48
	DSBCS-90 vs DSBCS-14	0.015 (0.014, 0.017), p<.001		
	DSBCS-90 vs ISBCS	0.029 (0.033, 0.025), p<.001		
	DSBCS-14 vs ISBCS	0.014 (0.010, 0.018), p<.001		
Eye With Best BCVA	n (%)	848,301 (96.2)	866,493 (96.5)	42,860 (96.3)
	Mean (SD)	0.192 (0.21)	0.182 (0.207)	0.146 (0.21)
	Snellen Equivalent	20/31	20/30	20/28
	DSBCS-90 vs DSBCS-14	0.010 (0.010, 0.011), p<.001		
	DSBCS-90 vs ISBCS	0.046 (0.044, 0.048), p<.001		
	DSBCS-14 vs ISBCS	0.036 (0.034, 0.038), p<.001		
First Surgery Eye	n (%)	849,219 (96.3)	867,553 (96.7)	43,089 (96.8)
	Mean (SD)	0.352 (0.374)	0.331 (0.362)	0.263 (0.367)
	Snellen Equivalent	20/45	20/43	20/37
	DSBCS-90 vs DSBCS-14	0.022 (0.021, 0.023), p<.001		
	DSBCS-90 vs ISBCS	0.090 (0.086, 0.093), p<.001		
	DSBCS-14 vs ISBCS	0.068 (0.064, 0.071), p<.001		
Second Surgery Eye	n (%)	863,395 (97.9)	876,113 (97.6)	43,086 (96.8)
	Mean (SD)	0.252 (0.292)	0.247 (0.294)	0.264 (0.377)
	Snellen Equivalent	20/36	20/35	20/37
	DSBCS-90 vs DSBCS-14	0.004 (-0.005, -0.003), p<.001		
	DSBCS-90 vs ISBCS	-0.014 (-0.017, -0.011), p<.001		
	DSBCS-14 vs ISBCS	-0.018 (0.021, -0.015), p<.001		
All Eyes	n	1,712,614	1,743,666	86,175
	Mean (SD)	0.302 (0.339)	0.289 (0.332)	0.263 (0.372)

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	Snellen Equivalent	20/40	20/39	20/37
	DSBCS-90 vs DSBCS-14	0.013 (0.012, 0.014), p<.001		
	DSBCS-90 vs ISBCS	0.038 (0.036, 0.041), p<.001		
	DSBCS-14 vs ISBCS	0.025 (0.023, 0.028), p<.001		

DSBCS-90: delayed sequential bilateral cataract surgery with 15-90 day interval; DSBCS-14: delayed sequential bilateral cataract surgery with 1-14 day interval; ISBCS: immediate sequential bilateral cataract surgery; BCVA: best corrected visual acuity; SD, standard deviation

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eTable 3. Univariable Linear Regression Results for Postoperative Visual Acuity

		Uncorrected Visual Acuity						Best Corrected Visual Acuity					
		First Surgery Eye			Second Surgery Eye			First Surgery Eye			Second Surgery Eye		
		Change in Letters	95% CI	p value	Change in Letters	95% CI	p value	Change in Letters	95% CI	p value	Change in Letters	95% CI	p value
Decade of Life		-1.04	(-1.07,-1.02)	<.001	-0.98	(-1.01,-0.95)	<.001	-0.97	(-0.99,-0.95)	<.001	-0.87	(-0.89,-0.85)	.001
Gender (ref=Female)	Male	0.66	(0.61,0.71)	<.001	0.93	(0.87,0.98)	<.001	-0.11	(-0.14,-0.07)	<.001	-0.02	(-0.05,0.01)	.23
	Not Reported	-2.71	(-3.2,-2.21)	<.001	-2.35	(-2.85,-1.85)	<.001	-1.17	(-1.52,-0.82)	<.001	-1.4	(-1.73,-1.07)	<.001
Race (ref=White)	Asian	-1.73	(-1.9,-1.56)	<.001	-2.01	(-2.18,-1.84)	<.001	-1.42	(-1.54,-1.3)	<.001	-1.4	(-1.52,-1.29)	<.001
	Black or African American	-0.99	(-1.1,-0.88)	<.001	-0.79	(-0.9,-0.68)	<.001	-1.52	(-1.59,-1.45)	<.001	-1.4	(-1.47,-1.33)	<.001
	Other	-1.63	(-1.86,-1.39)	<.001	-1.51	(-1.75,-1.27)	<.001	-1.43	(-1.59,-1.26)	<.001	-1.28	(-1.44,-1.13)	<.001
	Unknown	-0.77	(-0.84,-0.7)	<.001	-0.77	(-0.84,-0.7)	<.001	-1.02	(-1.07,-0.97)	<.001	-0.99	(-1.04,-0.95)	<.001
Insurance (ref=Medicare)	Commercial	1.05	(0.99,1.11)	<.001	0.95	(0.89,1.01)	<.001	0.76	(0.72,0.8)	<.001	0.73	(0.69,0.77)	<.001
	Medicaid	-2.86	(-3.1,-2.62)	<.001	-2.81	(-3.05,-2.57)	<.001	-2.93	(-3.11,-2.76)	<.001	-2.66	(-2.83,-2.49)	<.001
	Other	0.28	(0.22,0.34)	<.001	0.33	(0.27,0.39)	<.001	0.27	(0.22,0.31)	<.001	0.2	(0.16,0.24)	<.001
Prior Diagnosis	AMD	-3.62	(-3.69,-3.54)	<.001	-3.09	(-3.17,-3.01)	<.001	-3.21	(-3.26,-3.15)	<.001	-2.7	(-2.75,-2.65)	<.001

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in Surgery Eye	DR	-4.53	(-4.66,-4.41)	<.001	-4.03	(-4.15,-3.9)	<.001	-4.73	(-4.82,-4.65)	<.001	-4.38	(-4.47,-4.3)	<.001
	Glaucoma	-0.82	(-0.89,-0.76)	<.001	-0.51	(-0.57,-0.45)	<.001	-0.65	(-0.7,-0.61)	<.001	-0.44	(-0.48,-0.4)	<.001
Baseline BCVA in Surgery Eye		0.2	(0.19,0.2)	<.001	0.28	(0.27,0.28)	<.001	0.18	(0.17,0.18)	<.001	0.25	(0.25,0.25)	<.001
Surgery Group (ref=DSBCS-90)	DSBCS-14	0.75	(0.7,0.8)	<.001	0.94	(0.89,0.99)	<.001	1.27	(1.23,1.3)	<.001	0.66	(0.63,0.69)	<.001
	ISBCS	-1.82	(-1.99,-1.66)	<.001	-1.78	(-1.95,-1.61)	<.001	-0.86	(-0.97,-0.75)	<.001	-2.1	(-2.2,-1.99)	<.001
Surgeon Volume (ref=<1 per week)	1-10 per week	0.57	(0.36,0.77)	<.001	0.36	(0.16,0.57)	.001	0.24	(0.09,0.4)	.001	0.19	(0.05,0.34)	.008
	>10 per week	0.58	(0.38,0.79)	<.001	0.34	(0.14,0.55)	.001	0.47	(0.32,0.63)	<.001	0.14	(0,0.29)	.05

CI: confidence intervals; AMD: age-related macular degeneration; DR: diabetic retinopathy; DSBCS-90: delayed sequential bilateral cataract surgery with 15-90 day interval; DSBCS-14: delayed sequential bilateral cataract surgery with 1-14 day interval; ISBCS: immediate sequential bilateral cataract surgery

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eTable 4. Multivariable Linear Regression Results With the Eye With Worse Pre-surgical Visual Acuity Assigned as the First Eye for the ISBCS Surgery Group

		Uncorrected Visual Acuity						Best Corrected Visual Acuity					
		Model 1: First/Worst Eye			Model 2: Second/Best Eye			Model 3: First/Worst Eye			Model 4: Second/Best Eye		
		Change in Letters	95% CI	P value	Change in Letters	95% CI	P value	Change in Letters	95% CI	P value	Change in Letters	95% CI	P value
Decade of Life		-1.01	(-1.04,-0.98)	<.001	-0.76	(-0.78,-0.73)	<.001	-0.93	(-0.95,-0.91)	<.001	-0.67	(-0.69,-0.65)	<.001
Gender (Ref=Female)	Male	0.93	(0.88,0.98)	<.001	0.98	(0.93,1.03)	<.001	0.15	(0.12,0.18)	<.001	0.06	(0.03,0.09)	<.001
	Not Reported	-0.46	(-0.94,0.02)	.06	-0.18	(-0.65,0.29)	.46	0.68	(0.35,1.01)	<.001	0.29	(-0.01,0.6)	.06
Race (Ref=White)	Asian	-1.04	(-1.2,-0.87)	<.001	-1.29	(-1.45,-1.12)	<.001	-0.88	(-0.99,-0.76)	<.001	-0.83	(-0.93,-0.72)	<.001
	Black or African American	-0.46	(-0.57,-0.35)	<.001	-0.24	(-0.35,-0.13)	<.001	-1.12	(-1.19,-1.05)	<.001	-0.95	(-1.01,-0.88)	<.001
	Other	-1.30	(-1.54,-1.07)	<.001	-1.06	(-1.28,-0.83)	<.001	-1.31	(-1.46,-1.15)	<.001	-0.99	(-1.13,-0.85)	<.001
	Unknown	-0.12	(-0.19,-0.05)	<.001	-0.14	(-0.21,-0.07)	<.001	-0.43	(-0.48,-0.38)	<.001	-0.39	(-0.43,-0.34)	<.001
Insurance (Ref=Medicare)	Commercial	0.06	(0,0.12)	.04	0.00	(-0.06,0.06)	.97	-0.11	(-0.15,-0.07)	<.001	-0.09	(-0.12,-0.05)	<.001
	Medicaid	-1.52	(-1.75,-1.28)	<.001	-1.18	(-1.41,-0.95)	<.001	-1.66	(-1.83,-1.49)	<.001	-1.30	(-1.45,-1.14)	<.001
	Other	0.27	(0.21,0.33)	<.001	0.24	(0.18,0.3)	<.001	0.27	(0.23,0.31)	<.001	0.15	(0.11,0.18)	<.001
Prior Diagnoses in Surgery Eye	AMD	-3.03	(-3.11,-2.95)	<.001	-2.32	(-2.39,-2.24)	<.001	-2.78	(-2.83,-2.73)	<.001	-2.10	(-2.14,-2.05)	<.001
	DR	-4.30	(-4.43,-4.18)	<.001	-3.50	(-3.62,-3.38)	<.001	-4.48	(-4.57,-4.4)	<.001	-3.91	(-3.98,-3.83)	<.001
	Glaucoma	-1.23	(-1.29,-1.17)	<.001	-0.79	(-0.85,-0.73)	<.001	-1.02	(-1.06,-0.98)	<.001	-0.71	(-0.75,-0.68)	<.001
Pre-surgery BCVA in Surgery Eye		0.20	(0.2,0.2)	<.001	0.27	(0.26,0.27)	<.001	0.18	(0.18,0.18)	<.001	0.24	(0.24,0.24)	<.001

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Surgery Group (Ref=DSBCS-90)	DSBCS-14	0.40	(0.35,0.45)	<.001	0.79	(0.74,0.84)	<.001	0.89	(0.85,0.92)	<.001	0.48	(0.45,0.51)	<.001
	ISBCS	-3.18	(-3.35,-3.02)	<.001	-1.67	(-1.83,-1.51)	<.001	-1.95	(-2.06,-1.85)	<.001	-1.94	(-2.03,-1.84)	<.001

CI: confidence intervals; AMD: age-related macular degeneration; DR: diabetic retinopathy; BCVA: best corrected visual acuity. DSBCS-90: delayed sequential bilateral cataract surgery with 15-90 day interval; DSBCS-14: delayed sequential bilateral cataract surgery with 1-14 day interval; ISBCS: immediate sequential bilateral cataract surgery

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eTable 5. Multivariable Linear Model Results for Postoperative Visual Acuity With Surgeon Surgery Volume Included

		Uncorrected Visual Acuity						Best Corrected Visual Acuity					
		Model 1: First Eye			Model 2: Second Eye			Model 3: First Eye			Model 4: Second Eye		
		Change in Letters	95% CI	p value	Change in Letters	95% CI	p value	Change in Letters	95% CI	p value	Change in Letters	95% CI	p value
Decade of Life		-1.01	(-1.04,-0.98)	<.001	-0.75	(-0.78,-0.72)	<.001	-0.93	(-0.94,-0.91)	<.001	-0.67	(-0.69,-0.65)	<.001
Gender (ref=Female)	Male	0.93	(0.88,0.98)	<.001	0.98	(0.93,1.03)	<.001	0.14	(0.11,0.18)	<.001	0.06	(0.03,0.09)	<.001
	Not Reported	-0.49	(-0.97,-0.01)	.45	-0.2	(-0.68,0.28)	.41	0.66	(0.33,0.99)	<.001	0.3	(-0.01,0.61)	.05
Race (ref=White)	Asian	-1.09	(-1.25,-0.92)	<.001	-1.25	(-1.42,-1.09)	<.001	-0.88	(-1,-0.77)	<.001	-0.8	(-0.91,-0.69)	<.001
	Black or African American	-0.46	(-0.57,-0.35)	<.001	-0.24	(-0.35,-0.13)	<.001	-1.1	(-1.17,-1.03)	<.001	-0.96	(-1.03,-0.9)	<.001
	Other	-1.29	(-1.52,-1.06)	<.001	-1.12	(-1.35,-0.88)	<.001	-1.29	(-1.45,-1.14)	<.001	-1.04	(-1.19,-0.89)	<.001
	Unknown	-0.13	(-0.2,-0.06)	<.001	-0.13	(-0.2,-0.06)	<.001	-0.44	(-0.48,-0.39)	<.001	-0.38	(-0.43,-0.34)	<.001
Insurance (ref=Medicare)	Commercial	0.07	(0.01,0.13)	.03	0	(-0.06,0.06)	.89	-0.09	(-0.13,-0.05)	<.001	-0.1	(-0.13,-0.06)	<.001
	Medicaid	-1.45	(-1.69,-1.21)	<.001	-1.17	(-1.41,-0.94)	<.001	-1.75	(-1.93,-1.58)	<.001	-1.33	(-1.49,-1.17)	<.001
	Other	0.25	(0.19,0.31)	<.001	0.25	(0.19,0.31)	<.001	0.26	(0.22,0.3)	<.001	0.16	(0.12,0.19)	<.001
Prior Diagnosis	AMD	-3	(-3.08,-2.92)	<.001	-2.3	(-2.38,-2.22)	<.001	-2.76	(-2.82,-2.71)	<.001	-2.1	(-2.15,-2.05)	<.001

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in Surgery Eye	DR	-4.27	(-4.39,-4.15)	<.001	-3.49	(-3.61,-3.37)	<.001	-4.46	(-4.54,-4.37)	<.001	-3.91	(-3.99,-3.84)	<.001
	Glaucoma	-1.18	(-1.24,-1.12)	<.001	-0.81	(-0.87,-0.74)	<.001	-0.98	(-1.02,-0.94)	<.001	-0.74	(-0.78,-0.71)	<.001
Baseline BCVA in Surgery Eye		0.2	(0.19,0.2)	<.001	0.27	(0.27,0.27)	<.001	0.17	(0.17,0.18)	<.001	0.25	(0.24,0.25)	<.001
Surgery Group (ref=DSBCS-90)	DSBCS-14	0.4	(0.35,0.45)	<.001	0.79	(0.74,0.84)	<.001	0.87	(0.84,0.91)	<.001	0.48	(0.45,0.51)	<.001
	ISBCS	-2.77	(-2.93,-2.61)	<.001	-1.65	(-1.81,-1.48)	<.001	-1.61	(-1.71,-1.5)	<.001	-1.87	(-1.97,-1.77)	<.001
Surgeon Volume (ref=<1 surgery per week)	1-10 per week	0.52	(0.32,0.72)	<.001	0.31	(0.11,0.5)	.002	0.13	(-0.02,0.27)	.08	0.15	(0.01,0.28)	.03
	>10 per week	0.56	(0.36,0.76)	<.001	0.3	(0.1,0.49)	.003	0.29	(0.15,0.43)	<.001	0.12	(-0.02,0.25)	.09

CI: confidence intervals; AMD: age-related macular degeneration; DR: diabetic retinopathy; BCVA: best corrected visual acuity. DSBCS-90: delayed sequential bilateral cataract surgery with 15-90 day interval; DSBCS-14: delayed sequential bilateral cataract surgery with 1-14 day interval; ISBCS: immediate sequential bilateral cataract surgery

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eTable 6. Percentage of Bilateral Surgery Patients From All Years of the IRIS® Registry in Each Surgery Group (DSBCS-90, DSBCS-14, ISBCS) by Surgeon Cataract Surgery Volume

Volume	DSBCS-90	DSBCS-14	ISBCS
Percentage performed by Low Volume Surgeons (less than 1 surgery per week)	1.37%	0.95%	2.21%
Percentage performed by Intermediate Volume Surgeons (between 1 and 10 surgeries per week)	54.73%	41.87%	56.42%
Percentage performed by High Volume Surgeons (more than 10 surgeries per week)	43.90%	57.19%	41.37%

DSBCS-90: delayed sequential bilateral cataract surgery with 15-90 day interval; DSBCS-14: delayed sequential bilateral cataract surgery with 1-14 day interval; ISBCS: immediate sequential bilateral cataract surgery.

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eResults. Supplemental Results

A total of 1,132,008 complete cases, defined as participants who had postoperative VA measurements available, were included for post-operative UCVA analysis and 1,409,485 complete cases included for post-operative BCVA analysis in the models for the first surgery eye. There were 1,145,430 complete cases included for the UCVA analysis and 1,427,039 complete cases included for BCVA analysis in the models for the second surgery eye.

Univariable regression analyses

First surgery eye outcomes
Non-White race (Asian, Black or African American, Other, and Unknown) was associated with worse VA outcomes for both UCVA (1.73, 0.99, 1.63, and 0.77 fewer letters, respectively) and BCVA (1.42, 1.52, 1.43, and 1.02 fewer letters, respectively) in the first eye after cataract surgery when compared to White patients.(eTable 3 in the Supplement) Diagnosis of AMD, DR, or glaucoma was associated with worse VA outcomes, with DR showing the largest effect (4.53 fewer letters for UCVA and 4.73 letters for BCVA), when compared to patients without DR. Medicaid insurance was associated with worse outcomes compared to Medicare (2.86 and 2.93 fewer letters for UCVA and BCVA, respectively), while commercial insurance was associated with slightly better outcomes (1.05 and 0.76 more letters for UCVA and BCVA respectively).

Compared to the DSBCS-90 group, the patients in the ISBCS group had lower VA in their first surgery eye, with an UCVA of 1.82 fewer letters and BCVA of 0.86 fewer letters. The DSBCS-14 group had slightly better outcomes with an average BCVA in their first surgery eye of 0.75 more letters compared to the DSBCS-90 group.(eTable 3 in the Supplement)

Second surgery eye outcomes
Non-White race (Asian, Black or African American, and Other) was associated with worse VA outcomes in the second surgery eye for both UCVA (2.01, 0.79, 1.51, and 0.77 fewer letters, respectively) and BCVA (1.40, 1.40, 1.28, and 0.99 fewer letters, respectively) when compared to White patients. The diagnosis of AMD, DR, and glaucoma were associated with worse second eye VA outcomes, with DR showing the largest effect (4.03 letters for UCVA and 4.38 letters for BCVA). Compared to patients with Medicare, patients covered by Medicaid resulted in 2.81 and 2.66 fewer letters for UCVA and BCVA, respectively. This was in contrast with those with commercial insurance who achieved slightly higher VA, 0.95 and 0.73 for UCVA and BCVA, respectively.(eTable 3 in the Supplement)

Compared to the DSBCS-90 surgery group, the patients in the ISBCS group had lower VA in their second surgery eye, with a UCVA of 1.78 fewer letters and a BCVA of 2.10 fewer letters. The DSBCS-14 group had slightly better outcomes with an average BCVA of 0.94 additional letters compared to the DSBCS-90 group, and a BCVA of 0.66 additional letters.(eTable 3 in the Supplement)

Multivariable regression analyses

Differences in mean postoperative VA between the DSBCS-90 and ISBCS surgery groups persisted when the eye with worst pre-surgical VA was assigned as the first surgery eye, and the eye with best pre-surgical VA was assigned as the second surgery eye for the ISBCS group (UCVA 3.18±0.16 fewer letters, BCVA 1.95±0.11 fewer letters in the first/worst eye; UCVA 1.67±0.16 fewer letters, BCVA 1.94±0.10 fewer letters in the best/second eye).(eTable 4)

Surgical Practice Trends
We identified 8,824,416 surgeries from 7,034 surgeons who performed bilateral cataract surgeries within the IRIS Registry. Out of these, 427 surgeons in our study were excluded because they performed only one of two surgeries for each of their patients. The proportion of patients who underwent ISBCS, DSBCS-14, or DSBCS-90 was not different among different surgical groups when stratified by provider's surgery volume. For DSBCS-14 surgeries, low volume surgeons operated on approximately 1.0% of the patients, moderate volume surgeons on 41.9% and

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high volume surgeons on 57.2% in the IRIS Registry and the proportions of surgeons by volume who performed ISBCS or DSBCS-90 were remarkably similar.(eTable 6)

Surgical practice trends were not associated with large differences in post-operative visual acuity. For UCVA in the first surgery eye, surgeons who averaged 1-10 or >10 cataract surgeries per week only had an average visual acuity of 0.52 (95%CI: 0.32-0.72, p<.001) and 0.56 (95%CI: 0.36-0.76, p<.001) letters higher than the group of surgeons averaging less than one cataract surgery per week. In the second eye, the differences in UCVA for medium and high volume surgeons were only 0.31 (95%CI: 0.11-0.50, p=.002) and 0.30 (95%CI: 0.10-0.49, p=.003) letters higher on average than low volume surgeons. For BCVA in the first surgery eye, surgeons who averaged 1-10 or >10 cataract surgeries per week only had an average visual acuity of 0.13 (95%CI: -0.02-0.27, p=.08) and 0.29 (95%CI: 0.15-0.43, p<.001) letters higher than the group of surgeons averaging less than one cataract surgery per week. In the second eye, the differences in BCVA for medium and high volume surgeons were only 0.15 (95%CI: 0.01-0.28, p=.03) and 0.12 (95%CI: -0.02-0.25, p=.09) letters higher on average than low volume surgeons.(eTable 5)

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