On-line Table 1: Subgroup analysis of primary clinical end points and qualitative worst stenosis by distance of injection from worst level of stenosis and epidural injection approach

Primary Clinical Endpoint, Injection Approach Subgroup, Distance of Injection from Maximum Stenosis Subgroup	Max. Qualitative Central Stenosis on Imaging	Lidocaine				Corticosteroid and Lidocaine				Treatment Effect[a]		Interaction			
		No.	Baseline Mean (SD)	3 Weeks Mean (SD)	6 Weeks Mean (SD)	No.	Baseline Mean (SD)	3 Weeks Mean (SD)	6 Weeks Mean (SD)	3 Weeks Mean (95% CI)	6 Weeks Mean (95% CI)	3 Weeks Interaction Coefficient (95% CI)	*P* Value[b]	6 Weeks Interaction Coefficient (95% CI)	*P* Value[b]
Disability RDQ															
All															
≤1 lumbar spinal level												−0.1 (−1.4-1.2)	.85	−0.5 (−2.0-0.9)	.46
	Mild	41	15.8 (4.7)	13.7 (6.3)	13.3 (6.8)	47	17.2 (4.5)	13.2 (5.4)	13.8 (6.2)	−1.5 (−3.6-0.6)	−0.4 (−2.7-2.0)				
	Moderate	48	16.0 (3.9)	12.0 (6.2)	11.6 (6.9)	30	16.7 (4.8)	9.6 (7.1)	11.4 (6.9)	−2.4 (−4.8-0.0)	−0.8 (−3.3-1.7)				
	Severe	70	15.2 (4.1)	13.4 (5.3)	12.6 (6.1)	85	15.2 (4.3)	11.8 (5.5)	11.4 (5.5)	−1.8 (−3.4 to −0.2)	−1.4 (−3.1-0.4)				
Interlaminar															
All												−1.1 (−2.6-0.4)	.15	−1.0 (−2.8-0.7)	.24
	Mild	30	15.8 (4.7)	13.4 (6.5)	13.4 (6.9)	41	17.4 (4.2)	13.5 (5.2)	14.1 (5.8)	−1.4 (−3.8-1.0)	−0.6 (−3.4-2.1)				
	Moderate	36	16.8 (3.9)	12.0 (6.7)	10.9 (0.4)	24	17.9 (4.1)	10.1 (7.4)	12.2 (7.2)	−2.5 (−5.1-0.1)	0.3 (−2.6-3.2)				
	Severe	53	15.4 (4.0)	13.5 (4.5)	12.7 (5.5)	55	16.1 (4.4)	10.7 (6.0)	11.2 (6.3)	−3.5 (−5.4 to −1.6)	−2.3 (−4.4 to −0.1)				
≤1 lumbar spinal level												−1.2 (−2.8-0.4)	.14	−1.2 (−3.0-0.6)	.19
	Mild	29	15.7 (4.8)	13.1 (6.4)	13.2 (6.9)	40	17.4 (4.2)	13.4 (5.2)	14.1 (5.9)	−1.3 (−3.7-1.1)	−0.5 (−3.3-2.3)				
	Moderate	33	16.6 (3.9)	11.7 (6.6)	11.1 (7.1)	22	17.9 (4.3)	9.7 (7.3)	11.9 (7.1)	−2.5 (−5.3-0.3)	−0.3 (−3.3-2.7)				
	Severe	47	15.7 (3.9)	13.8 (4.5)	13.2 (5.4)	49	16.3 (4.1)	10.9 (5.8)	11.2 (5.9)	−3.4 (−5.4 to −1.4)	−2.6 (−4.9 to −0.3)				
Transforaminal															
All												2.2 (−0.1-4.5)	.05	0.8 (−1.8-3.4)	.54
	Mild	12	16.2 (4.5)	15.5 (6.0)	13.4 (6.7)	7	16.3 (5.8)	11.9 (6.5)	12.6 (8.1)	−3.3 (−7.5-0.9)	−0.8 (−5.8-4.2)				
	Moderate	15	14.7 (3.9)	12.5 (5.4)	12.7 (6.5)	10	14.0 (4.6)	10.2 (7.1)	10.2 (7.5)	−1.6 (−5.5-2.3)	−1.6 (−5.8-2.7)				
	Severe	29	14.4 (4.8)	12.2 (6.8)	11.5 (7.2)	38	14.1 (4.1)	13.2 (4.8)	11.9 (4.9)	0.9 (−1.4-3.2)	0.4 (−2.2-3.0)				
≤1 lumbar spinal level												2.3 (−0.1-4.7)	.06	0.9 (−1.9-3.6)	.53
	Mild	12	16.2 (4.5)	15.5 (6.0)	13.4 (6.7)	7	16.3 (5.8)	11.9 (6.5)	12.6 (8.1)	−3.3 (−7.7-1.1)	−0.7 (−5.7-4.3)				
	Moderate	15	14.7 (3.9)	12.5 (5.4)	12.7 (6.5)	8	13.4 (4.7)	9.4 (7.2)	10.0 (6.6)	−1.9 (−6.3-2.5)	−1.2 (−6.0-3.6)				
	Severe	23	14.3 (4.5)	12.3 (6.8)	11.2 (7.4)	38	13.8 (4.1)	13.1 (4.9)	11.7 (4.9)	1.1 (−1.5-3.7)	0.7 (−2.1-3.5)				
Leg pain NRS															
All															
≤1 lumbar spinal level												0.0 (−0.7-0.7)	.92	−0.3 (−1.0-0.5)	.51
	Mild	41	7.0 (1.7)	5.2 (2.8)	4.9 (2.8)	47	7.1 (2.1)	4.7 (2.4)	5.4 (2.7)	−0.5 (−1.6-0.6)	0.4 (−0.8-1.6)				
	Moderate	48	7.6 (1.7)	4.6 (3.0)	4.5 (3.3)	30	6.9 (2.4)	3.0 (2.6)	3.3 (2.8)	−1.1 (−2.4-0.2)	−0.8 (−2.1-0.5)				
	Severe	70	7.0 (1.6)	5.1 (2.9)	4.7 (2.8)	85	7.2 (1.7)	4.7 (2.5)	4.6 (2.8)	−0.5 (−1.3-0.3)	−0.2 (−1.1-0.7)				
Interlaminar															
All												−0.1 (−1.0-0.7)	.74	−0.7 (−1.6-0.2)	.11
	Mild	30	7.1 (1.5)	5.0 (2.8)	4.7 (2.7)	41	7.1 (2.0)	4.6 (2.3)	5.5 (2.6)	−0.6 (−1.9-0.7)	0.8 (−0.7-2.2)				
	Moderate	36	8.0 (1.6)	4.5 (3.3)	3.9 (3.5)	24	7.3 (2.3)	3.1 (2.9)	3.4 (3.2)	−1.2 (−2.6-0.3)	−0.3 (−1.9-1.2)				
	Severe	53	7.0 (1.6)	5.1 (2.7)	4.8 (2.7)	55	7.3 (1.6)	4.4 (2.7)	4.2 (2.9)	−0.9 (−1.9-0.2)	−0.7 (−1.8-0.5)				
≤1 lumbar spinal level												−0.2 (−1.1-0.6)	.58	−0.9 (−1.8-0.1)	.07
	Mild	29	7.1 (1.5)	4.9 (2.8)	4.5 (2.7)	40	7.1 (2.1)	4.6 (2.3)	5.5 (2.6)	−0.5 (−1.8-0.8)	0.9 (−0.5-2.3)				
	Moderate	33	8.0 (1.6)	4.4 (3.2)	4.2 (3.6)	22	7.4 (2.3)	2.9 (2.7)	3.2 (3.0)	−1.3 (−2.8-0.3)	−0.7 (−2.3-0.8)				
	Severe	47	7.1 (1.6)	5.2 (2.8)	4.9 (2.7)	49	7.4 (1.6)	4.3 (2.7)	4.2 (2.9)	−0.9 (−2.0-0.2)	−0.8 (−2.0-0.4)				
Transforaminal															
All												0.7 (−0.5-1.9)	.25	1.1 (−0.2-2.4)	.10
	Mild	12	6.8 (2.3)	5.7 (2.8)	5.8 (3.0)	7	7.4 (2.4)	5.0 (3.3)	4.9 (3.1)	−0.9 (−3.1-1.4)	−1.3 (−3.8-1.2)				
	Moderate	15	6.9 (1.8)	4.9 (2.3)	5.1 (2.5)	10	5.8 (1.9)	3.1 (2.0)	3.8 (2.2)	−1.2 (−3.3-1.0)	−0.8 (−3.0-1.3)				
	Severe	29	7.1 (1.6)	5.1 (0.8)	4.5 (2.9)	38	7.1 (1.8)	5.3 (2.7)	5.2 (2.6)	0.2 (−1.0-1.4)	0.7 (−0.6-2.0)				
≤1 lumbar spinal level												0.7 (−0.5-2.0)	.24	1.2 (−0.2-2.6)	.08
	Mild	12	6.8 (2.3)	5.7 (2.8)	5.8 (3.0)	7	7.4 (2.4)	5.0 (3.3)	4.9 (3.1)	−0.9 (−3.2-1.4)	−1.4 (−3.9-1.2)				
	Moderate	15	6.9 (1.8)	4.8 (2.3)	5.1 (2.5)	8	5.8 (2.2)	3.4 (2.2)	3.8 (2.3)	−0.8 (−3.1-1.6)	−0.8 (−3.2-1.6)				
	Severe	23	7.0 (1.6)	4.8 (2.9)	4.2 (3.0)	36	7.0 (1.8)	5.2 (2.2)	5.1 (3.0)	0.4 (−0.9-1.7)	0.9 (−0.5-2.4)				

Note:—Max. indicates maximum.

[a] Negative treatment effect values favor the corticosteroid and lidocaine group; positive values favor the lidocaine-only group. Differences were adjusted for baseline outcome values and recruitment site.

[b] *P* values indicate the level of statistical significance for the ANCOVA interaction coefficient term between the maximum qualitative central stenosis and the injectate group differing from zero, which would indicate a differential clinical response to injectate based on the degree of spinal stenosis. For subgroup analyses, a statistical significance threshold of $P < .01$ was adopted to minimize false discoveries.

On-line Table 2: Subgroup analysis of primary clinical end points and quantitative minimum thecal sac cross-sectional area by distance of injection from worst level of central stenosis and injection approach

Primary Clinical Endpoint and Injection Approach Subgroup	Distance of Injection from Maximum Stenosis Subgroup	3 Weeks Interaction Coefficient (95% CI)	*P* Value[a]	6 Weeks Interaction Coefficient (95% CI)	*P* Value[a]
Disability RDQ					
All	≤1 Lumbar spinal level	0.02 (−0.02-0.06)	.30	0.02 (−0.02-0.06)	.27
Interlaminar	All	0.02 (−0.02-0.06)	.14	0.03 (−0.01-0.07)	.13
	≤1 Lumbar spinal level	0.03 (−0.01-0.06)	.10	0.03 (−0.01-0.06)	.19
Transforaminal	All	−0.03 (−0.11-0.05)	.45	0.02 (−0.06-0.10)	.57
	≤1 Lumbar spinal level	−0.03 (−0.12-0.05)	.41	0.02 (−0.07-0.11)	.59
Leg pain NRS					
All	≤1 Lumbar spinal level	0.01 (−0.01-0.03)	.28	0.02 (0.00-0.04)	.07
Interlaminar	All	0.01 (−0.01-0.03)	.24	0.02 (0.00-0.04)	.03
	≤1 Lumbar spinal level	0.01 (−0.01-0.03)	.14	0.02 (0.00-0.04)	.03
Transforaminal	All	−0.01 (−0.05-0.03)	.71	0.00 (−0.04-0.04)	.88
	≤1 Lumbar spinal level	−0.01 (−0.05-0.03)	.58	0.00 (−0.05-0.04)	.83

[a] *P* values indicate the level of statistical significance for the ANCOVA interaction coefficient term between quantitative minimum thecal sac cross-sectional area and the injectate group differing from zero, which would indicate a differential clinical response to injectate based on the degree of spinal stenosis. For subgroup analyses, a statistical significance threshold value of $P < .01$ was adopted to minimize false discoveries.

On-line Table 3: Exploratory analyses of primary and secondary clinical end points with qualitative imaging predictors

	Lidocaine				Corticosteroid and Lidocaine				Treatment Effect (95% CI)[a]		Interaction			
Clinical Endpoint and Imaging Predictor	No.	Baseline Mean (SD)	3 Weeks Mean (SD)	6 Weeks Mean (SD)	No.	Baseline Mean (SD)	3 Weeks Mean (SD)	6 Weeks Mean (95% CI)	3 Weeks Mean (95% CI)	6 Weeks Mean (95% CI)	3 Weeks Interaction Coefficient (95% CI)	*P* Value[b]	6 Weeks Interaction Coefficient (95% CI)	*P* Value[b]
Disability RDQ														
Maximum qualitative central stenosis											−0.1 (−1.3-1.2)	.90	−0.5 (−1.9-0.9)	.50
Mild	42	15.9 (4.6)	13.9 (6.3)	13.4 (6.8)	48	17.2 (4.4)	13.3 (5.4)	13.9 (6.1)	−1.6 (−3.6-0.4)	−0.5 (−2.8-1.9)				
Moderate	51	16.2 (4.0)	12.2 (6.3)	11.5 (7.1)	34	16.8 (4.6)	10.1 (7.2)	11.6 (7.2)	−2.3 (−4.5 to −0.1)	−0.4 (−2.8-2.0)				
Severe	82	15.0 (4.3)	13.1 (5.3)	12.3 (6.1)	93	15.2 (4.4)	11.7 (5.6)	11.5 (5.7)	−1.8 (−3.3 to −0.3)	−1.3 (−2.9-0.4)				
Maximum qualitative CSF effacement											−0.1 (−1.1-0.9)	.82	−0.2 (−1.4-0.9)	.68
None	20	16.2 (5.3)	15.0 (6.2)	13.7 (7.2)	25	17.0 (4.9)	12.5 (5.4)	12.2 (5.9)	−3.2 (−6.2 to −0.2)	−2.2 (−5.5-1.1)				
Mild	32	15.4 (3.8)	11.4 (6.2)	11.5 (6.5)	20	17.2 (4.2)	13.2 (7.0)	13.3 (7.5)	0.8 (−2.0-3.6)	0.7 (−2.5-3.9)				
Moderate	31	15.9 (4.3)	14.2 (5.3)	12.3 (6.6)	38	16.7 (4.8)	11.6 (6.4)	13.2 (6.8)	−3.4 (−5.8 to −1.0)	0.1 (−2.7-2.8)				
Severe	67	15.1 (4.3)	13.4 (5.7)	12.8 (6.2)	75	15.0 (4.3)	11.5 (5.8)	11.1 (5.9)	−2.0 (−3.6 to −0.3)	−1.7 (−3.6-0.1)				
Leg pain NRS														
Maximum qualitative central stenosis											0.1 (−0.6-0.8)	.81	−0.2 (−1.0-0.5)	.54
Mild	42	7.0 (1.7)	5.2 (2.8)	5.0 (2.8)	48	7.2 (2.1)	4.7 (2.4)	5.4 (2.7)	−0.6 (−1.7-0.5)	0.3 (−0.9-1.6)				
Moderate	51	7.7 (1.7)	4.6 (3.0)	4.3 (3.3)	34	6.9 (2.3)	3.1 (2.7)	3.5 (2.9)	−1.2 (−2.4-0.1)	−0.5 (−1.7-0.8)				
Severe	82	7.0 (1.6)	5.1 (2.7)	4.7 (2.7)	93	7.2 (1.7)	4.8 (2.5)	4.6 (2.8)	−0.5 (−1.3-0.3)	−0.2 (−1.0-0.7)				
Maximum qualitative CSF effacement											0.0 (−0.5-0.6)	.96	−0.3 (−0.9-0.3)	.28
None	20	6.9 (1.9)	5.8 (2.7)	4.8 (3.0)	25	6.6 (2.4)	4.6 (2.6)	4.7 (2.9)	−1.3 (−2.8-0.3)	−0.1 (−1.8-1.6)				
Mild	32	7.5 (1.3)	4.3 (3.1)	4.4 (2.8)	20	7.5 (1.9)	4.1 (2.5)	5.5 (3.0)	−0.1 (−1.6-1.3)	1.2 (−0.5-2.8)				
Moderate	31	7.7 (1.9)	5.7 (2.7)	5.2 (3.1)	38	7.0 (2.0)	3.9 (2.9)	4.2 (2.8)	−1.5 (−2.8 to −0.1)	−0.8 (−2.2-0.6)				
Severe	67	6.9 (1.5)	5.3 (2.7)	5.0 (2.8)	75	7.2 (1.7)	4.7 (2.4)	4.6 (2.7)	−0.7 (−1.6-0.2)	−0.5 (−1.5-0.4)				
Back pain NRS														
Maximum qualitative central stenosis											−0.3 (−1.0-0.3)	.33	−0.1 (−0.8-0.6)	.72
Mild	42	6.9 (4.9)	4.8 (2.5)	4.7 (2.6)	48	6.7 (2.5)	4.7 (2.4)	5.0 (2.6)	0.0 (−1.0-1.1)	0.3 (−0.8-1.5)				
Moderate	51	7.1 (7.1)	2.3 (2.7)	4.4 (2.9)	34	6.5 (3.1)	2.8 (2.7)	3.8 (3.1)	−1.3 (−2.4 to −0.1)	−0.5 (−1.6-0.7)				
Severe	82	6.1 (6.1)	4.6 (2.7)	4.1 (2.5)	93	6.6 (2.0)	4.2 (2.6)	4.3 (2.8)	−0.7 (−1.5-0.1)	0.0 (−0.8-0.8)				
Maximum qualitative CSF effacement											−0.3 (−0.8-0.2)	.28	−0.1 (−0.6-0.5)	.76
None	20	7.6 (1.8)	5.3 (2.8)	5.3 (2.8)	25	6.3 (3.0)	4.3 (2.3)	4.2 (2.8)	−0.6 (−2.0-0.9)	−0.8 (−2.4-0.8)				
Mild	32	7.2 (2.1)	4.0 (2.4)	4.2 (2.6)	20	6.5 (3.1)	4.6 (3.0)	5.1 (3.4)	1.0 (−0.4-2.4)	1.2 (−0.4-2.7)				
Moderate	31	5.5 (3.7)	4.3 (2.8)	3.9 (2.7)	38	6.4 (2.4)	3.3 (2.5)	4.2 (2.9)	−1.5 (−2.7 to −0.3)	−0.1 (−1.4-1.2)				
Severe	67	6.1 (2.3)	4.8 (2.5)	4.4 (2.4)	75	6.5 (2.0)	4.3 (2.5)	4.2 (2.6)	−0.7 (−1.6-0.1)	−0.3 (−1.2-0.6)				
Mean leg and back pain NRS														
Maximum qualitative central stenosis											0.2 (−0.3-0.6)	.45	−0.1 (−0.6-0.4)	.62
Mild	42	6.4 (1.7)	4.7 (1.7)	4.6 (1.8)	48	6.7 (1.7)	4.3 (1.6)	4.8 (1.8)	−0.5 (−1.1-0.2)	0.2 (−0.6-1.0)				
Moderate	51	7.0 (1.3)	4.3 (1.9)	4.1 (2.1)	34	6.4 (1.9)	3.4 (1.8)	3.6 (1.9)	−0.7 (−1.5-0.0)	−0.4 (−1.2-0.4)				
Severe	82	6.5 (1.1)	4.5 (1.6)	4.4 (1.9)	93	6.7 (1.2)	4.4 (1.6)	4.4 (1.9)	−0.2 (−0.7-0.3)	−0.1 (−1.7-1.5)				
Maximum qualitative CSF effacement											0.1 (−0.3-0.4)	.77	−0.2 (−0.6-0.2)	.27
None	20	6.4 (1.4)	5.0 (1.6)	4.5 (2.0)	25	6.3 (2.1)	4.3 (1.7)	4.4 (1.9)	−0.8 (−1.7-0.2)	−0.2 (−1.3-1.0)				
Mild	32	6.7 (0.9)	4.2 (1.8)	4.1 (1.8)	20	6.9 (1.6)	3.9 (1.6)	4.9 (2.0)	−0.3 (−1.2-0.6)	0.8 (−0.3-1.9)				
Moderate	31	7.0 (1.6)	4.9 (1.9)	4.6 (1.9)	38	6.4 (1.7)	3.9 (1.9)	4.0 (1.9)	−0.9 (−1.7 to −0.1)	−0.5 (−1.4-0.4)				
Severe	67	6.4 (0.9)	4.6 (1.5)	4.6 (1.9)	75	6.5 (1.2)	4.3 (1.6)	4.3 (1.7)	−0.4 (−1.4-1.2)	−0.4 (−1.4-1.2)				
SSSQ symptom subscale														
Maximum qualitative central stenosis											−0.1 (−0.2-0.1)	.32	0.0 (−0.2-0.2)	.88
Mild	42	3.2 (0.7)	2.8 (0.8)	2.7 (0.8)	48	3.2 (0.6)	2.5 (0.6)	2.7 (0.8)	−0.3 (−0.5-0.0)	0.1 (−0.2-0.4)				
Moderate	51	3.1 (0.7)	2.6 (0.7)	2.7 (0.9)	34	3.2 (0.6)	2.4 (0.8)	2.4 (0.8)	−0.2 (−0.5-0.1)	−0.2 (−0.5-0.1)				
Severe	81	3.1 (0.6)	2.8 (0.7)	2.6 (0.7)	93	3.2 (0.6)	2.6 (0.7)	2.6 (0.7)	−0.2 (−0.4 to −0.1)	0.0 (−0.2-0.2)				
Maximum qualitative CSF effacement											0.0 (−0.1-0.2)	.58	0.0 (−0.1-0.1)	.91
None	20	3.3 (0.7)	3.0 (0.7)	2.8 (0.8)	25	3.1 (0.6)	2.3 (0.6)	2.5 (0.7)	−0.6 (−1.0 to −0.3)	−0.2 (−0.6-0.2)				
Mild	32	3.0 (0.7)	2.5 (0.8)	2.5 (0.8)	20	3.3 (0.6)	2.7 (0.6)	2.8 (0.9)	0.2 (−0.2-0.5)	0.2 (−0.2-0.6)				
Moderate	31	3.1 (0.7)	2.8 (0.6)	2.6 (0.8)	38	3.2 (0.6)	2.5 (0.8)	2.6 (0.8)	−0.3 (−0.6-0.0)	−0.1 (−0.5-0.2)				
Severe	66	3.1 (0.5)	2.8 (0.6)	2.6 (0.7)	75	3.2 (0.6)	2.6 (0.7)	2.6 (0.7)	−0.2 (−0.4-0.0)	−0.1 (−0.3-0.1)				

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On-line Table 3: Continued

Clinical Endpoint and Imaging Predictor	Lidocaine				Corticosteroid and Lidocaine				Treatment Effect (95% CI)[a]		Interaction			
	No.	Baseline Mean (SD)	3 Weeks Mean (SD)	6 Weeks Mean (SD)	No.	Baseline Mean (SD)	3 Weeks Mean (SD)	6 Weeks Mean (95% CI)	3 Weeks Mean (95% CI)	6 Weeks Mean (95% CI)	3 Weeks Interaction Coefficient (95% CI)	*P* Value[b]	6 Weeks Interaction Coefficient (95% CI)	*P* Value[b]
SSSQ physical function subscale														
Maximum qualitative central stenosis											0.0 (−0.2-0.2)	.99	0.0 (−0.2-0.2)	.80
Mild	42	2.4 (0.6)	2.2 (0.7)	2.2 (0.6)	48	2.5 (0.5)	2.2 (0.6)	2.3 (0.7)	0.0 (−0.2-0.2)	0.1 (−0.2-0.3)				
Moderate	51	2.5 (0.5)	2.1 (0.6)	2.2 (0.7)	34	2.6 (0.5)	2.1 (0.7)	2.3 (0.7)	−0.1 (−0.4-0.1)	0.1 (−0.1-0.4)				
Severe	81	2.5 (0.5)	2.3 (0.6)	2.2 (0.6)	92	2.6 (0.5)	2.2 (0.6)	2.3 (0.7)	−0.1 (−0.3-0.0)	0.1 (−0.1-0.3)				
Maximum qualitative CSF effacement											−0.1 (−0.2-0.1)	.32	0.0 (−0.1-0.1)	.61
None	20	2.5 (0.6)	2.3 (0.6)	2.1 (0.6)	25	2.5 (0.5)	2.1 (0.6)	2.1 (0.8)	−0.2 (−0.5-0.1)	0.0 (−0.3-0.4)				
Mild	32	2.4 (0.5)	2.0 (0.5)	2.1 (0.6)	20	2.5 (0.4)	2.3 (0.6)	2.3 (0.7)	0.2 (−0.1-0.5)	0.2 (−0.2-0.5)				
Moderate	31	2.5 (0.6)	2.4 (0.6)	2.3 (0.6)	38	2.5 (0.5)	2.1 (0.7)	2.4 (0.7)	−0.3 (−0.5-0.0)	0.0 (−0.3-0.3)				
Severe	66	2.6 (0.5)	2.4 (0.6)	2.3 (0.6)	74	2.6 (0.5)	2.2 (0.6)	2.3 (0.7)	−0.2 (−1.4-1.2)	0.0 (−1.4-1.2)				

[a] Negative treatment effect values favor the corticosteroid and lidocaine group; positive values favor the lidocaine-only group. Differences were adjusted for baseline outcome values and recruitment site.

[b] *P* values indicate the level of statistical significance for the ANCOVA interaction coefficient term between maximum qualitative central stenosis and the injectate group differing from zero, which would indicate a differential clinical response to injectate based on the degree of spinal stenosis. For exploratory analyses, a statistical significance threshold value of $P < .01$ was adopted to minimize false discoveries.

On-line Table 4: Exploratory analyses of primary and secondary clinical end points with all quantitative and summary qualitative imaging predictors

Clinical End Point and Imaging Predictor	3 Weeks Interaction Coefficient (95% CI)	*P* Value	6 Weeks Interaction Coefficient (95% CI)	*P* Value[a]
Disability RDQ				
Minimum angle-corrected thecal sac cross-sectional area	0.01 (−0.01-0.03)	.40	0.02 (−0.02-0.06)	.17
Minimum thecal sac cross-sectional area	0.01 (−0.01-0.03)	.44	0.02 (−0.02-0.06)	.26
Mean angle-corrected thecal sac cross-sectional area	0.02 (0.00-0.04)	.14	0.01 (−0.03-0.05)	.50
Mean thecal sac cross-sectional area	0.02 (−0.01-0.05)	.11	0.01 (−0.03-0.05)	.62
Minimum angle-corrected thecal sac AP diameter on axial images	0.11 (−0.35-0.57)	.62	0.34 (−0.18-0.86)	.20
Minimum thecal sac AP diameter on axial images	0.10 (−0.34-0.54)	.64	0.25 (−0.25-0.75)	.34
Mean angle-corrected thecal sac AP diameter on axial images	0.32 (−0.24-0.88)	.25	0.27 (−0.37-0.91)	.39
Mean thecal sac AP diameter on axial images	0.33 (−0.21-0.87)	.21	0.21 (−0.39-0.81)	.49
Minimum thecal sac AP diameter on sagittal images	0.50 (0.02-0.98)	.04	0.62 (0.06-1.18)	.03
Mean thecal sac AP diameter on sagittal images	0.72 (0.16-1.28)	.01	0.61 (−0.03-1.25)	.05
Minimum thecal sac ML diameter	0.28 (−0.08-0.64)	.11	0.24 (−0.16-0.64)	.23
Mean thecal sac ML diameter	0.21 (−0.23-0.65)	.33	0.12 (−0.36-0.60)	.62
Mean qualitative central stenosis score	−0.38 (−2.74-1.98)	.75	−1.06 (−3.66-1.54)	.40
Mean qualitative CSF effacement score	−0.41 (−2.43-1.61)	.68	−0.99 (−3.21-1.23)	.37
Leg pain NRS				
Minimum angle-corrected thecal sac cross-sectional area	0.01 (−0.01-0.03)	.33	0.02 (0.00-0.04)	.06
Minimum thecal sac cross-sectional area	0.01 (−0.01-0.03)	.33	0.02 (0.00-0.03)	.06
Mean angle-corrected thecal sac cross-sectional area	0.01 (−0.01-0.03)	.27	0.01 (−0.01-0.03)	.15
Mean thecal sac cross-sectional area	0.01 (−0.01-0.02)	.31	−0.01 (−0.03-0.01)	.15
Minimum angle-corrected thecal sac AP diameter on axial images	0.05 (−0.19-0.29)	.71	0.21 (−0.05-0.47)	.12
Minimum thecal sac AP diameter on axial images	0.04 (−0.20-0.28)	.75	0.18 (−0.08-0.44)	.17
Mean angle-corrected thecal sac AP diameter on axial images	0.06 (−0.24-0.36)	.67	0.20 (−0.12-0.52)	.23
Mean thecal sac AP diameter on axial images	0.05 (−0.23-0.33)	.72	0.20 (−0.11-0.51)	.20
Minimum thecal sac AP diameter on sagittal images	0.11 (−0.15-0.37)	.42	0.36 (0.08-0.64)	.01
Mean thecal sac AP diameter on sagittal images	0.17 (−0.13-0.47)	.26	0.38 (0.06-0.70)	.02
Minimum thecal sac ML diameter	0.07 (−0.11-0.25)	.44	0.16 (−0.04-0.36)	.12
Mean thecal sac ML diameter	0.12 (−0.12-0.36)	.30	0.14 (−0.10-0.38)	.25
Mean qualitative central stenosis score	0.58 (−0.68-1.84)	.36	−0.23 (−1.61-1.15)	.74
Mean qualitative CSF effacement score	−0.04 (−1.12-1.04)	.94	−0.97 (−2.11-0.17)	.09
Back pain NRS				
Minimum angle-corrected thecal sac cross-sectional area	0.01 (−0.01-0.03)	.20	0.01 (−0.01-0.03)	.49
Minimum thecal sac cross-sectional area	0.01 (−0.01-0.03)	.20	0.01 (−0.01-0.03)	.51
Mean angle-corrected thecal sac cross-sectional area	0.01 (−0.01-0.03)	.07	0.00 (−0.02-0.02)	.84
Mean thecal sac cross-sectional area	0.01 (0.00-0.03)	.10	0.00 (−0.01-0.02)	.94
Minimum angle-corrected thecal sac AP diameter on axial images	0.11 (−0.13-0.35)	.35	0.10 (−0.16-0.36)	.45
Minimum thecal sac AP diameter on axial images	0.10 (−0.12-0.32)	.37	0.08 (−0.16-0.32)	.52
Mean angle-corrected thecal sac AP diameter on axial images	0.15 (−0.13-0.43)	.28	0.03 (−0.29-0.35)	.85
Mean thecal sac AP diameter on axial images	0.13 (−0.15-0.41)	.35	0.01 (−0.29-0.31)	.95
Minimum thecal sac AP diameter on sagittal images	0.17 (−0.07-0.41)	.17	0.23 (−0.03-0.49)	.08
Mean thecal sac AP diameter on sagittal images	0.30 (0.02-0.58)	.03	0.25 (−0.05-0.55)	.10
Minimum thecal sac ML diameter	0.11 (−0.07-0.29)	.23	0.10 (−0.10-0.29)	.32
Mean thecal sac ML diameter	0.20 (−0.02-0.42)	.07	0.05 (−0.19-0.29)	.66
Mean qualitative central stenosis score	−0.48 (−1.70-0.74)	.43	−0.54 (−1.82-0.74)	.40
Mean qualitative CSF effacement score	−0.87 (−1.88-0.14)	.08	−0.88 (−1.94-0.18)	.10
Mean leg and back pain NRS				
Minimum angle-corrected thecal sac cross-sectional area	0.00 (−0.01-0.01)	.65	0.01 (−0.01-0.03)	.06
Minimum thecal sac cross-sectional area	0.00 (−0.01-0.01)	.65	0.01 (−0.01-0.03)	.06
Mean angle-corrected thecal sac cross-sectional area	0.00 (−0.01-0.01)	.45	0.01 (−0.01-0.03)	.14
Mean thecal sac cross-sectional area	0.00 (−0.01-0.01)	.53	0.01 (0.00-0.02)	.16
Minimum angle-corrected thecal sac AP diameter on axial images	0.00 (−0.15-0.15)	.99	0.14 (−0.04-0.32)	.12
Minimum thecal sac AP diameter on axial images	−0.01 (−0.15-0.13)	.94	0.12 (−0.04-0.28)	.17
Mean angle-corrected thecal sac AP diameter on axial images	0.02 (−0.16-0.20)	.85	0.13 (−0.09-0.35)	.24
Mean thecal sac AP diameter on axial images	0.00 (−0.17-0.18)	.96	0.12 (−0.08-0.32)	.23
Minimum thecal sac AP diameter on sagittal images	0.03 (−0.13-0.19)	.73	0.23 (0.05-0.41)	.01
Mean thecal sac AP diameter on sagittal images	0.08 (−0.10-0.26)	.38	0.25 (0.03-0.47)	.02
Minimum thecal sac ML diameter	0.02 (−0.10-0.14)	.76	0.11 (−0.03-0.25)	.10
Mean thecal sac ML diameter	0.05 (−0.09-0.19)	.48	0.10 (−0.06-0.26)	.23
Mean qualitative central stenosis score	0.46 (−0.32-1.24)	.23	−0.03 (−0.93-0.87)	.95
Mean qualitative CSF effacement score	0.03 (−0.63-0.69)	.94	−0.62 (−1.36-0.12)	.10
SSSQ symptom subscale				
Minimum angle-corrected thecal sac cross-sectional area	0.00 (0.00-0.00)	.70	0.00 (0.00-0.01)	.09
Minimum thecal sac cross-sectional area	0.00 (0.00-0.00)	.72	0.00 (0.00-0.01)	.10
Mean angle-corrected thecal sac cross-sectional area	0.00 (0.00-0.00)	.60	0.00 (0.00-0.01)	.62
Mean thecal sac cross-sectional area	0.00 (0.00-0.00)	.54	0.00 (0.00-0.00)	.57
Minimum angle-corrected thecal sac AP diameter on axial images	0.02 (−0.04-0.08)	.49	0.06 (0.00-0.12)	.07
Minimum thecal sac AP diameter on axial images	0.02 (−0.04-0.08)	.48	0.05 (−0.01-0.11)	.09
Mean angle-corrected thecal sac AP diameter on axial images	0.03 (−0.05-0.11)	.41	0.02 (−0.06-0.10)	.59
Mean thecal sac AP diameter on axial images	0.03 (−0.03-0.09)	.33	0.03 (−0.05-0.11)	.50
Minimum thecal sac AP diameter on sagittal images	0.04 (−0.02-0.10)	.22	0.09 (0.03-0.15)	.01
Mean thecal sac AP diameter on sagittal images	0.03 (−0.03-0.09)	.36	0.06 (−0.02-0.14)	.16
Minimum thecal sac ML diameter	0.01 (−0.03-0.05)	.65	0.03 (−0.01-0.07)	.17
Mean thecal sac ML diameter	0.00 (−0.06-0.05)	.89	0.03 (−0.03-0.09)	.40
Mean qualitative central stenosis score	0.11 (−0.19-0.41)	.45	0.00 (−0.33-0.33)	1.00
Mean qualitative CSF effacement score	0.11 (−0.13-0.35)	.37	−0.10 (−0.38-0.18)	.47

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On-line Table 4: Continued

Clinical End Point and Imaging Predictor	3 Weeks Interaction Coefficient (95% CI)	*P* Value	6 Weeks Interaction Coefficient (95% CI)	*P* Value[a]
SSSQ physical function subscale				
Minimum angle-corrected thecal sac cross-sectional area	0.00 (0.00-0.00)	.36	0.00 (0.00-0.01)	.25
Minimum thecal sac cross-sectional area	0.00 (0.00-0.00)	.48	0.00 (0.00-0.01)	.39
Mean angle-corrected thecal sac cross-sectional area	0.00 (0.00-0.00)	.34	0.00 (0.00-0.00)	.66
Mean thecal sac cross-sectional area	0.00 (0.00-0.00)	.47	0.00 (0.00-0.00)	.87
Minimum angle-corrected thecal sac AP diameter on axial images	0.02 (−0.02-0.06)	.32	0.04 (−0.02-0.10)	.16
Minimum thecal sac AP diameter on axial images	0.02 (−0.02-0.06)	.42	0.03 (−0.03-0.09)	.32
Mean angle-corrected thecal sac AP diameter on axial images	0.03 (−0.03-0.09)	.31	0.02 (−0.04-0.08)	.50
Mean thecal sac AP diameter on axial images	0.02 (−0.04-0.08)		0.01 (−0.05-0.07)	.67
Minimum thecal sac AP diameter on sagittal images	0.04 (−0.02-0.10)	.17	0.05 (−0.01-0.11)	.09
Mean thecal sac AP diameter on sagittal images	0.04 (−0.02-0.10)	.17	0.04 (−0.02-0.10)	.25
Minimum thecal sac ML diameter	0.02 (−0.02-0.06)	.27	0.01 (−0.03-0.05)	.63
Mean thecal sac ML diameter	0.01 (−0.03-0.05)	.64	0.01 (−0.05-0.07)	.60
Mean qualitative central stenosis score	0.04 (−0.22-0.30)	.77	0.06 (−0.24-0.36)	.68
Mean qualitative CSF effacement score	−0.08 (−0.30-0.14)	.43	−0.12 (−0.36-0.12)	.34

[a] *P* values indicate the level of statistical significance for the ANCOVA interaction coefficient term between imaging predictor and injectate group differing from zero, which would indicate a differential clinical response to injectate based on the degree of spinal stenosis. For exploratory analyses, a statistical significance threshold value of $P < .01$ was adopted to minimize false discoveries.

On-line Table 5: Exploratory analyses of primary imaging measures among subgroups defined by degree of improvement in primary clinical end points

		Nonresponders				Responders					
		Lidocaine		Corticosteroid and Lidocaine		Lidocaine		Corticosteroid and Lidocaine		ANCOVA[c]	
Responder Subgroup Definition[a]	Primary Imaging Measure[b]	No.	Mean (95% CI)	No.	Mean (95% CI)	No.	Mean (95% CI)	No.	Mean (95% CI)	Interaction Coefficient (95% CI)	*P* Value
Disability RDQ: ≥30% Improvement at 3 weeks	Maximum qualitative central stenosis	122	2.2 (2.1-2.4)	107	2.3 (2.1-2.4)	42	2.3 (2.1-2.6)	64	2.4 (2.2-2.6)	0.02 (−0.37-0.40)	.93
Disability RDQ: ≥30% Improvement at 3 weeks	Minimum thecal sac cross-sectional area	107	71.2 (64.3-78.2)	95	72.8 (65.3-80.3)	32	68.7 (59.2-78.3)	58	71.4 (58.5-84.2)	−4.2 (−23.4-15.0)	.66
Disability RDQ: ≥50% Improvement at 3 weeks	Maximum qualitative central stenosis	139	2.3 (2.1-2.4)	131	2.3 (2.2-2.4)	25	2.2 (1.9-2.5)	40	2.3 (2.1-2.6)	0.12 (−0.34-0.58)	.61
Disability RDQ: ≥50% Improvement at 3 weeks	Minimum thecal sac cross-sectional area	120	71.0 (64.5-77.6)	118	72.3 (65.6-78.9)	19	67.8 (55.4-80.1)	35	72.6 (55.6-89.6)	−6.1 (−29.3-17.1)	.60
Disability RDQ: ≥30% Improvement at 6 weeks	Maximum qualitative central stenosis	115	2.3 (2.1-2.4)	109	2.3 (2.1-2.4)	53	2.3 (2.1-2.5)	61	2.4 (2.2-2.6)	0.10 (−0.26-0.46)	.58
Disability RDQ: ≥30% Improvement at 6 weeks	Minimum thecal sac cross-sectional area	99	71.2 (64.1-78.4)	99	73.8 (66.6-81.0)	43	67.7 (57.9-77.4)	53	69.1 (58.1-80.1)	−4.0 (−22.0-14.0)	.66
Disability RDQ: ≥50% Improvement at 6 weeks	Maximum qualitative central stenosis	131	2.3 (2.1-2.4)	132	2.3 (2.2-2.4)	37	2.2 (2.0-2.5)	38	2.4 (2.1-2.6)	0.18 (−0.24-0.60)	.38
Disability RDQ: ≥50% Improvement at 6 weeks	Minimum thecal sac cross-sectional area	113	69.9 (63.2-76.6)	117	72.6 (66.0-79.2)	29	68.5 (56.4-80.7)	35	73.4 (60.1-86.6)	−7.5 (−28.1-13.1)	.47
Leg pain NRS: ≥30% Improvement at 3 weeks	Maximum qualitative central stenosis	90	2.2 (2.0-2.4)	80	2.3 (2.1-2.5)	73	2.3 (2.1-2.5)	91	2.3 (2.1-2.5)	−0.12 (−0.48-0.24)	.49
Leg pain NRS: ≥30% Improvement at 3 weeks	Minimum thecal sac cross-sectional area	82	70.9 (63.0-78.5)	73	72.3 (63.7-80.9)	56	70.3 (62.2-78.5)	80	72.1 (62.4-81.7)	−3.1 (−20.5-14.3)	.72
Leg pain NRS: ≥50% Improvement at 3 weeks	Maximum qualitative central stenosis	109	2.2 (2.1-2.4)	107	2.3 (2.2-2.5)	54	2.3 (2.1-2.5)	64	2.4 (2.1-2.6)	−0.16 (−0.52-0.20)	.37
Leg pain NRS: ≥50% Improvement at 3 weeks	Minimum thecal sac cross-sectional area	98	70.3 (63.0-77.6)	98	71.8 (64.6-79.2)	40	70.3 (60.4-80.2)	55	74.1 (62.7-85.5)	−5.4 (−24.0-13.2)	.57
Leg pain NRS: ≥30% Improvement at 6 weeks	Maximum qualitative central stenosis	84	2.2 (2.0-2.3)	89	2.2 (2.1-2.4)	84	2.4 (2.2-2.5)	81	2.4 (2.2-2.6)	−0.12 (−0.46-0.22)	.48
Leg pain NRS: ≥30% Improvement at 6 weeks	Minimum thecal sac cross-sectional area	77	69.1 (61.0-77.3)	80	73.8 (65.8-81.8)	65	69.3 (60.9-77.7)	72	72.3 (63.5-81.2)	−7.7 (−24.7-9.3)	.37
Leg pain NRS: ≥50% Improvement at 6 weeks	Maximum qualitative central stenosis	103	2.2 (2.1-2.4)	111	2.3 (2.1-2.4)	65	2.3 (2.1-2.5)	59	2.4 (2.2-2.6)	0.04 (−0.32-0.40)	.84
Leg pain NRS: ≥50% Improvement at 6 weeks	Minimum thecal sac cross-sectional area	91	67.9 (60.5-75.4)	101	72.8 (65.7-79.9)	51	69.3 (59.4-79.3)	51	75.4 (65.4-85.4)	−10.8 (−28.6-7.0)	.22

[a] Patients were categorized into responder subgroups based on the degree of improvement, at least 30% or 50%, in the primary clinical outcome measures of the RDQ disability score or the leg pain NRS at 3 or 6 weeks.

[b] For each clinical responder subgroup, the number of patients is indicated for each epidural injectate group. The mean and 95% confidence intervals for the primary imaging measures are reported for all subgroups. Maximum/worst qualitative central stenosis was scored as follows: 0 = normal; 1 = mild; 2 = moderate stenosis; and 3 = severe stenosis. The reported minimum thecal sac cross-sectional areas were angle-corrected.

[c] To evaluate differences in primary imaging measures between responder subgroups, we used ANCOVA models with each primary imaging measure as a dependent variable with the epidural injectate group and clinical response status as categoric variables, adjusting for baseline outcome values and recruitment site. *P* values indicate the level of statistical significance for the ANCOVA interaction coefficient term between the responder subgroup and the injectate group differing from zero, which would indicate a differential imaging measure between injectate groups based on clinical response.