On-Line Fig 1. Kaplan-Meier survival estimates. *A*, Observed (*solid line*) 5-year survival compared with that expected (*dashed line*) for US white residents of like age and sex for the treated (vertebroplasty) cohort (*black line*) and the cohort of untreated Rochester, Minnesota residents (*gray line*) with vertebral fractures. *B*, Observed 5-year survival of the treated (vertebroplasty) cohort (*solid lines*) for men (*black line*) and women (*gray line*) compared with the cohort of untreated Rochester, Minnesota residents (*dashed lines*) with a symptomatic vertebral fracture, considering only symptomatic subjects. *C*, Predicted 5-year survival comparison of the treated (*black line*)-versus-untreated cohort (*dashed line*) with vertebral fractures, adjusted for age, sex, and Charlson indices, considering only symptomatic subjects.

On-Line Table 1: HRs with 95% CIs[a] for risk of death after adjusting for age among the treated (vertebroplasty) vertebral fracture cohort

Variable	Summary Mean ± SD	Univariate HR (95% CI)	Sex-Adjusted HR (95% CI)	Sex- and Comorbidity-Adjusted HR (95% CI)
Preoperative (mean)				
Daily rest pain (0–10) (n = 486)	4.4 ± 3.3	0.98 (0.94–1.02)	0.98 (0.94–1.03)	0.98 (0.94–1.02)
Daily activity pain (0–10) (n = 504)	8.3 ± 1.9	0.96 (0.89–1.03)	0.96 (0.89–1.04)	0.97 (0.90–1.05)
RDQ score (0–23) (n = 258)	18.5 ± 3.6	0.96 (0.92–1.02)	0.97 (0.92–1.02)	0.96 (0.91–1.01)
Perioperative (mean)				
Cement volume (mL) (n = 503)	4.9 ± 3.3	1.01 (0.97–1.05)	0.99 (0.95–1.04)	1.00 (0.96–1.04)
Postoperative quantitative (mean)				
Rest pain (0–10) (n = 268)	1.6 ± 2.4	0.96 (0.88–1.05)	0.96 (0.88–1.05)	0.98 (0.90–1.08)
Difference postoperative-preoperative rest pain (n = 255)	−2.1 ± 3.3	1.02 (0.96–1.09)	1.02 (0.95–1.09)	1.03 (0.96–1.10)
Activity pain (0–10) (n = 268)	3.4 ± 3.1	0.96 (0.90–1.02)	0.96 (0.90–1.02)	0.96 (0.90–1.02)
Difference postoperative-preoperative activity pain (n = 265)	−4.9 ± 3.4	0.98 (0.92–1.04)	0.97 (0.92–1.03)	0.98 (0.92–1.04)
Postoperative qualitative change (−1 to 2) (mean)				
Rest pain change (n = 328)	1.2 ± 0.8	0.94 (0.75–1.17)	0.92 (0.74–1.15)	0.83 (0.66–1.03)
Activity pain change (n = 328)	1.1 ± 0.6	1.08 (0.81–1.45)	1.08 (0.82–1.44)	1.01 (0.76–1.32)
One-week quantitative (mean)				
Rest (0–10) (n = 424)	1.7 ± 2.5	1.00 (0.95–1.06)	1.00 (0.94–1.05)	0.98 (0.93–1.03)
Difference 1-week preoperative rest pain (n = 402)	−2.6 ± 3.4	1.02 (0.98–1.07)	1.02 (0.98–1.06)	1.01 (0.97–1.05)
Activity pain (0–10) (n = 424)	4.2 ± 2.9	0.99 (0.94–1.04)	0.99 (0.94–1.04)	0.99 (0.94–1.04)
Difference 1-week preoperative activity pain (n = 414)	−4.1 ± 3.2	1.00 (0.96–1.05)	1.01 (0.96–1.06)	1.01 (0.96–1.06)
RDQ (0–23) (n = 225)	9.9 ± 6.0	1.00 (0.97–1.04)	1.01 (0.97–1.04)	0.99 (0.96–1.03)
One-week qualitative change (−1 to 2) (mean)				
Rest pain change (n = 481)	1.3 ± 0.8	1.00 (0.85–1.19)	1.01 (0.86–1.20)	1.03 (0.87–1.22)
Activity pain change (n = 478)	1.0 ± 0.6	1.10 (0.87–1.39)	1.08 (0.86–1.37)	1.11 (0.88–1.40)
Mobility (n = 462)	0.7 ± 0.5	1.09 (0.81–1.47)	1.10 (0.82–1.49)	1.15 (0.84–1.57)
Medication use (n = 376)	0.5 ± 0.6	0.88 (0.67–1.15)	0.88 (0.67–1.15)	0.90 (0.69–1.18)
One-month quantitative (mean)				
Rest (0–10) (n = 377)	1.4 ± 2.3	1.00 (0.93–1.07)	1.01 (0.94–1.08)	1.00 (0.94–1.08)
Difference 1-month preoperative rest pain (n = 356)	−2.9 ± 3.4	0.98 (0.93–1.03)	0.98 (0.93–1.03)	0.99 (0.94–1.04)
Activity pain (0–10) (n = 373)	3.9 ± 2.9	0.99 (0.94–1.05)	0.99 (0.94–1.05)	0.97 (0.92–1.03)
Difference 1-month preoperative activity pain (n = 363)	−4.4 ± 3.4	1.00 (0.95–1.05)	1.00 (0.95–1.04)	0.98 (0.93–1.03)
RDQ (0–23) (n = 187)	9.8 ± 5.7	1.01 (0.97–1.05)	1.00 (0.96–1.05)	1.00 (0.95–1.04)
One-month qualitative change (−1 to 2) (mean)				
Rest pain change (n = 413)	1.3 ± 0.9	1.03 (0.86–1.23)	1.02 (0.86–1.22)	1.06 (0.89–1.28)
Activity pain change (n = 415)	1.0 ± 0.7	0.85 (0.69–1.06)	0.86 (0.69–1.07)	0.96 (0.76–1.20)
Mobility (n = 403)	0.7 ± 0.5	0.90 (0.68–1.21)	0.87 (0.65–1.16)	0.93 (0.70–1.23)
Medication use (n = 309)	0.6 ± 0.6	0.99 (0.73–1.35)	1.00 (0.73–1.36)	1.02 (0.74–1.40)
Total fracture levels (n = 524)	1.9 ± 1.2	1.01 (0.91–1.14)	1.00 (0.89–1.12)	1.01 (0.90–1.13)
Fracture in the lumbar spine (n = 524)		1.06 (0.81–1.39)	0.98 (0.74–1.28)	1.02 (0.77–1.34)
Fracture in the thoracic spine (n = 524)		1.06 (0.81–1.40)	1.14 (0.86–1.49)	1.16 (0.88–1.53)

[a] HR is defined as the change in mortality risk per 1 unit change in a clinical metric variable. A CI that includes unity indicates no evidence of a relationship with survival.