SUPPLEMENTARY TABLE 2

Adjusted estimate for the between-strategy contrast, sensitivity analyses, and data integrity

Panel A. Firth penalized adjusted estimate (reported for transparency)					
Analysis	n	Events (n)	Effect estimate	95% CI	*p*
Primary (event-free follow-up ≥ 6 months; 30.44 days/month)	416	18	aOR 0.044	0.000-0.352	0.0004
Event-free follow-up threshold raised to ≥ 12 months	402	18	aOR 0.039	0.000-0.320	0.0003
Panel B. Missing data and structural missingness					
Variable or variable group	Missing or structural NA				
	n/N	%	Classification	Rationale / implication	
Core adjusted-model covariates (age, side, sliding status)	0/416	0.0	Complete	No missing values in variables used for adjusted analyses	
Time to surgery and follow-up duration	0/416	0.0	Complete	Timing and censoring variables fully observed	
Contralateral operative finding at index operation	317/416	76.2	Structural NA	Undefined by design when contralateral side not explored	
Contralateral hernia content at index operation	318/416	76.4	Mostly structural NA	317 structural NAs by design plus 1 blank in a bilaterally explored negative case	
Second-operation date / time to event	398/416	95.7	Structural NA	Recorded only for the 18 metachronous events	

CI, confidence interval; aOR, adjusted odds ratio; NA, not applicable. Since no metachronous contralateral operation can occur after bilateral exploration, the contralateral groin having been addressed at the index operation, the bilateral-exploration group contains zero events by design, producing complete separation in any regression model for the between-strategy contrast. The Firth penalized adjusted odds ratios in Panel A (model: age, side of presentation, ipsilateral sliding status, and follow-up duration) are presented for transparency only and should not be used as comparative-effectiveness estimates. In Panel B, structural NA denotes fields undefined by study design rather than missing observations.