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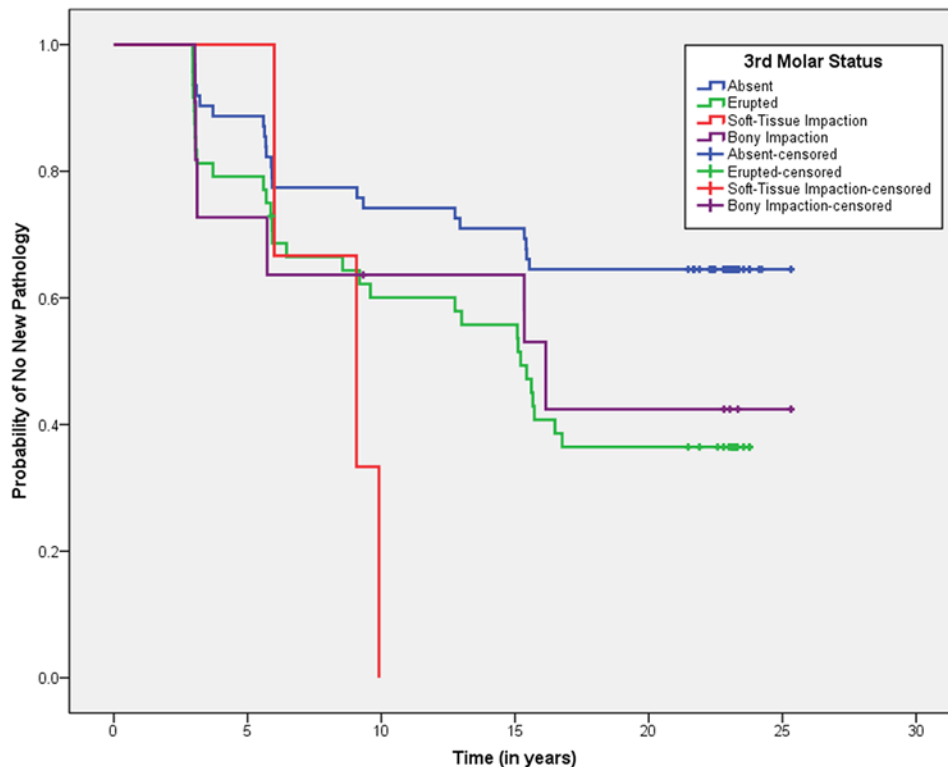
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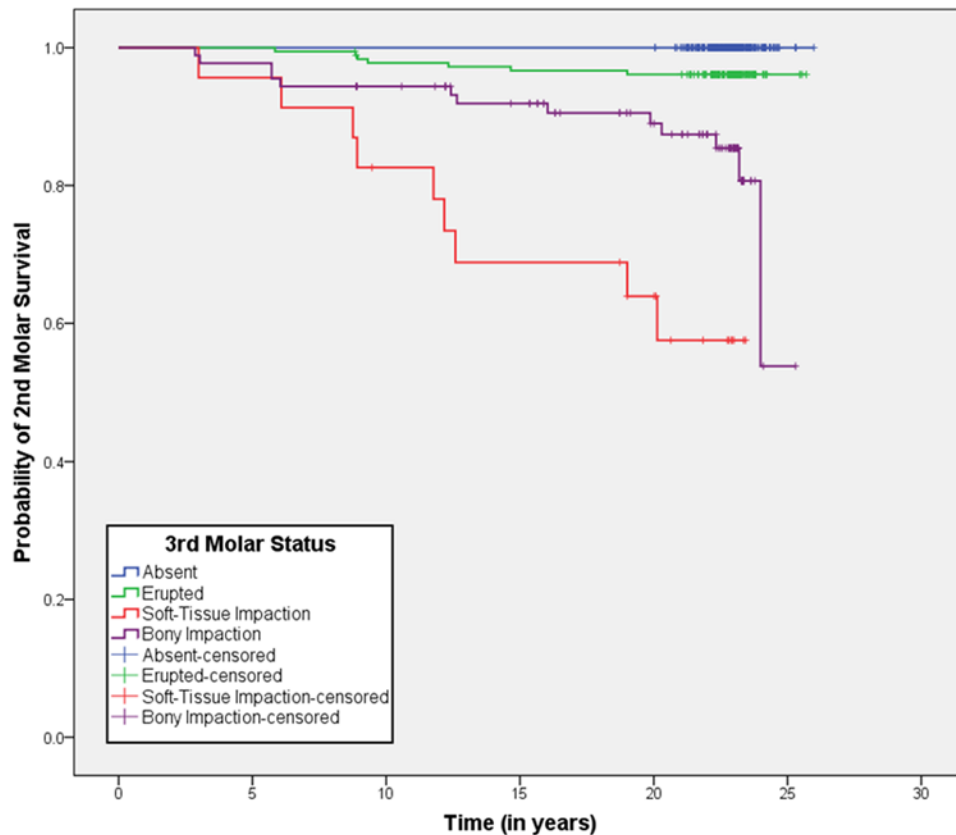
Retained Asymptomatic Third Molars and Risk for Second Molar Pathology

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APPENDIX



Appendix Figure 1. Survival plot for any incident pathology on distal of second molar by status of adjacent third molar for subset of subjects with absent third molar on one side and existing third molar on opposite side



Appendix Figure 2. Survival plot for second molar tooth loss by status of adjacent third molar.

Appendix Table 1. Distribution of Baseline Second Molar Distal Surface, Bone Loss, and Probing Depth by Third Molar Status

Second Molar	Baseline Third Molar Status, % (n)			
	Absent, n = 460	Erupted, n = 196 ^a	Soft Tissue Impaction, n = 25	Bony Impaction, n = 89
Distal coronal surface				
Sound	71.1 (327)	60.0 (138)	68.0 (17)	83.2 (74)
Filled	22.8 (105)	28.3 (65)	24.0 (6)	14.6 (13)
Primary caries	3.3 (15)	6.1 (14)	4.0 (1)	1.1 (1)
Secondary caries	2.8 (13)	5.7 (13)	4.0 (1)	1.1 (1)
Distal bone loss ^a				
None	52.2 (240)	55.1 (108)	28.0 (7)	51.7 (46)
< 20%	41.7 (192)	35.7 (70)	44.0 (11)	31.5 (28)
20%-40%	5.2 (24)	8.2 (16)	20.0 (5)	12.4 (11)
> 40%	0.9 (4)	1.0 (2)	8.0 (2)	4.5 (4)
Distal probing depth, mm				
≤ 2	33.5 (154)	37.8 (74)	12.0 (3)	30.3 (27)
> 2 to ≤ 3	37.2 (171)	34.7 (68)	20.0 (5)	36.0 (32)
> 3 to ≤ 4	19.8 (91)	20.4 (40)	36.0 (9)	27.0 (24)
> 4	9.6 (44)	7.1 (14)	32.0 (8)	6.7 (6)

^an = 230 for distal coronal surface.

Appendix Table 2. Generalized Estimating Equation Logistic Regression for Prevalent Pathologies of Distal of Second Molar

Third Molar Status	Odds Ratio	95% Confidence Interval	p ^a
Caries Experience			
Absent	Reference	—	< .001
Erupted	1.73	1.23, 2.43	
Soft tissue impaction	1.24	0.61, 2.52	
Bony impaction	0.55	0.30, 1.01	
Distal Bone Loss, ≥ 20%			
Absent	Reference	—	.037
Erupted	1.59	0.85, 2.95	
Soft tissue impaction	4.93	1.59, 15.2	
Bony impaction	2.64	1.31, 5.34	
Distal Probing Depth, > 4 mm			
Absent	Reference	—	.067
Erupted	0.76	0.42, 1.40	
Soft tissue impaction	3.98	1.57, 10.1	
Bony impaction	0.58	0.23, 1.47	

^aValues are based on generalized estimating equation logistic regression models comparing third molar status impact on prevalence of caries experience, bone loss, and probing depth of distal of adjacent second molars while adjusting for age, smoking status, and educational status.

Appendix Table 3. Survival Analysis for Any Incident Pathology on Distal of Adjacent Second Molar for a Subset With Absent Third Molar on One Side and Erupted/Impacted Third Molar on Opposite Side (n = 54 subjects, n = 124 teeth)

Third Molar Status	Relative Risk	95% Confidence Interval	p ^a
Absent	Reference	—	< .001
Erupted	2.14	1.27, 3.58	
Soft tissue impaction	6.25	3.29, 11.9	
Bony impaction	2.49	1.17, 5.28	

^aValue is based on marginal multivariate survival regression models comparing third molar status impact on incident pathology on distal of adjacent second molars while adjusting for age, smoking status, and educational status.