Recurrence is Not Associated with a Reduced Quality of Life in Patients with Recurrent Sinonasal Malignancy

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Introduction

- Sinonasal cancer represents a heterogenous group of malignancies which as a group have poor survival
- Recent work demonstrates that patients with sinonasal malignancy have a low quality of life (QoL) prior to treatment[1]
- Extensive disease, specifically skull base and orbital invasion, and surgical management of regional disease predicted worse QoL outcomes[2,3]
- Patients with other solid tumors, such as breast cancers, have been found to have lower QoL on recurrence than initial diagnosis, driven primarily by lower scores in physical domains[4]
- No studies to date have investigated the impact of recurrent sinonasal cancer on QoL

Methods and Materials

- Study design: Prospective, observational, hypothesis-driven investigation
- First hypothesis: Patients with recurrent sinonasal cancer have worse physical QoL than patients with non-recurrent sinonasal cancer
- Second hypothesis: Patients with recurrent sinonasal cancer have better psychological QoL than patients with non-recurrent sinonasal cancer
- Patients who participated in the CORSICA study from 2015 to 2024 were included
- Physical subdomains of the University of Washington QoL Questionnaire were used to quantify physical QoL
- The “frustrated” subdomain of the Sinonasal Outcome Tests-22 was used to measure psychological QoL
- Mixed effects modeling was used to compare QoL outcomes of interest between patients with recurrent and those without recurrent sinonasal cancer
- QoL outcomes were adjusted for covariates previously observed to impact QoL in sinonasal cancer patients, including: orbital involvement, skull base erosion, perineural invasion, treatment with neck dissection
- Time of QoL survey complete was categorized from initial or recurrent diagnosis to 6 months, 7-12 months, 13-18 months, 19-24 months, and greater than 24 months

Results

N (%) or mean or SD	Overall N = 675	Patients with any recurrence N = 84	Patients with no recurrence N = 591	p-value
Sex				
Male	352 (52.15)	45 (54.88)	307 (55.72)	0.89
Female	281 (41.63)	37 (45.12)	244 (44.28)	
Age	63.71 (19.21)	65.08 (17.92)	63.45 (19.46)	0.45
Race				
White	498 (73.78)	65 (78.31)	433 (78.87)	0.91
Non-white	134 (19.85)	18 (21.69)	116 (21.13)	
Smoking history				
Never	314 (46.52)	37 (48.05)	277 (55.40)	0.23
Ever	263 (38.96)	40 (51.95)	223 (44.60)	
Unknown	98 (14.52)			
Education				
High school or less	216 (32.00)	28 (38.36)	188 (40.34)	0.62
College	220 (32.59)	28 (38.36)	192 (41.20)	
Postsecondary	103 (15.26)	17 (23.29)	86 (18.45)	
Unknown	136 (20.15)			
T stage				
T0	1 (0.15%)	0 (0.00%)	1 (0.23%)	0.29
T1	56 (8.30%)	3 (4.11%)	53 (12.10%)	
T2	59 (8.74%)	9 (12.33%)	50 (11.42%)	
T3	105 (15.56%)	13 (17.81%)	92 (21.00%)	
T4a	146 (21.63%)	28 (38.36%)	118 (26.94%)	
T4b	134 (19.85%)	18 (24.66%)	116 (26.48%)	
TX	10 (1.48%)	2 (2.74%)	8 (1.83%)	
Missing	164 (24.30%)	0 (0.00%)	1 (0.23%)	
Histology				
Adenocarcinoma	31 (4.59)	25 (5.31)	6 (7.06)	**0.006**
Adenoid cystic carcinoma	40 (5.93)	34 (7.22)	6 (7.06)	
Melanoma	81 (12.00)	58 (12.31)	23 (27.06)	
Neuroendocrine carcinoma	27 (4.00)	25 (5.31)	2 (2.35)	
Olfactory neuroblastoma	67 (9.93)	62 (13.16)	5 (5.88)	
Sinonasal undifferentiated carcinoma	37 (5.48)	28 (5.94)	9 (10.59)	
Squamous cell carcinoma	165 (24.44)	143 (30.36)	22 (25.88)	
Other	108 (16.00)	96 (20.38)	12 (14.12)	
Missing	119 (17.63)			

Table 1. Study participant demographics, disease, and treatment characteristics.

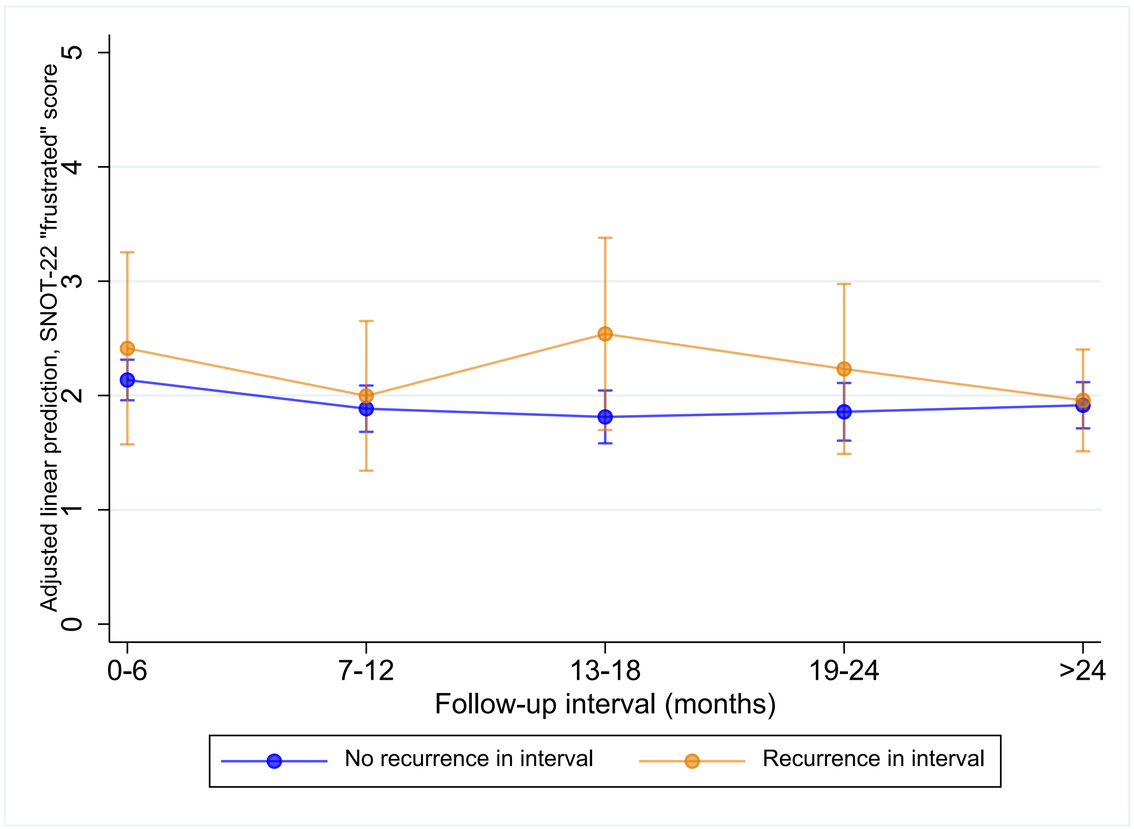

Figure 1. Adjusted psychological quality of life in patients with or without recurrence of sinonasal cancer.

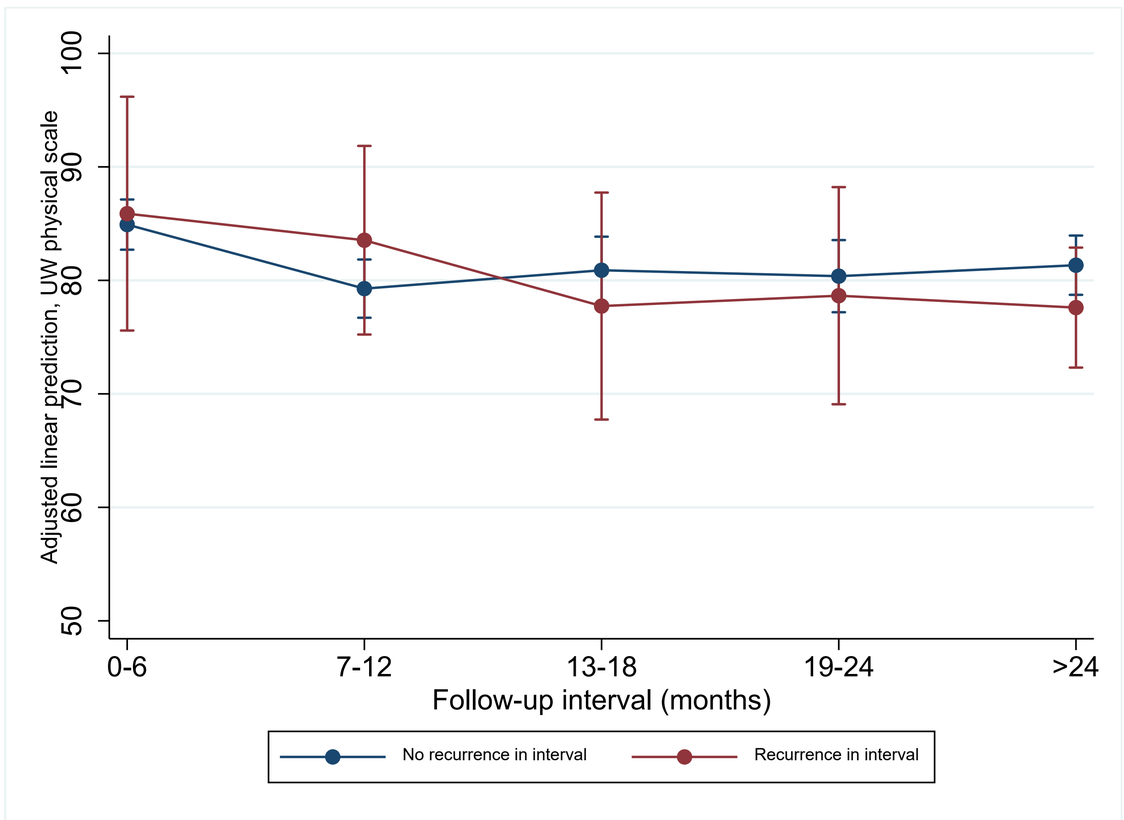

Figure 2. Adjusted physical quality of life in patients with or without recurrence of sinonasal cancer.

Discussion

We observed very similar demographic and disease characteristics between patients with and without recurrent disease, except for difference in tumor histopathology driven by more frequent mucosal melanoma seen in the recurrent group. Both psychological and physical QoL were similar in patients with and without recurrence when adjusting for covariates previously observed to have a significant impact on QoL.

Conclusions

Patients with sinonasal cancers appear to have unique QoL trajectories among patients with recurrent solid tumors in that both physical and psychological QoL do not appear to be different in the recurrent versus initial diagnosis setting. This suggests that symptomatology and impact of QoL may not be distinguishing features of recurrence in SNM, promoting the concept of continual radiographic and endoscopic surveillance.

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