

Effectuated Cancer Region and Psychiatric Disorders in Smoking Cessation

Eva Winter, PhD; Maher Karam-Hage, MD; George Kyriotakis, PhD; Jason D. Robinson, PhD; Diane Beneventi, PhD; Jennifer A. Minnix, PhD; Janice A. Blalock, PhD; Paul M. Cinciripini

Key Terms

- Smoking cessation = quitting smoking
- Thoracic region = part of body with lungs and heart
- Abstinence = completely stopped smoking

Introduction

- Known correlation of smoking cigarettes and cancer, esp. lung cancer
- Known correlation of presence psychiatric disorders and Substance Use Disorder (SUD)
- Aim to examine interaction of psychiatric disorders and smoking cessation
- Aim to examine if region of cancer effects sustained cessation
- No literature understanding smoking cessation outcomes in interaction of type of cancer and presence of psychiatric disorders, specifically depression and anxiety.

Methods

- Using data of 3245 patients participating in MD Anderson Tobacco Treatment Program (2006-2014) (TTP)
- TTP uses initial questionnaires and follow up visits to assess psychiatric and smoking status
- TTP Provides free counseling and medication On first consultation face to face and on paper inform patients of how data is used, who will be able to access data, and possible risks to ensure ethical treatment of participants
- Patients treated as individuals - medication for both smoking cessation and psychiatric treatment vary from patient to patient
- Tracked smoking abstinence over 3, 6, and 9 months
- An initial face to face consultation followed by 6-8 follow up sessions over an 8-12 week period that can be repeated as many times as necessary
- Examine collected data using regression analysis to determine if statistical significance exists per cancer effected region in smoking cessation
- Rates of sustained abstinence per region were compared to the abstinence of those with no cancer history

Considerations

- Of 5061 initial participants, 1816 patients were removed for several reasons:
 - No program initiated because undergoing treatment from another program or incomplete
 - No consultation
 - No medical consultation
 - Died before 9 month follow up
 - Smoked less than 1 cigarette per day or used tobacco product besides cigarettes

Main takeaway:
Cancers in the head and neck region have higher correlation with success in quitting smoking, and patients with psychiatric disorders had lower rates of success quitting smoking.

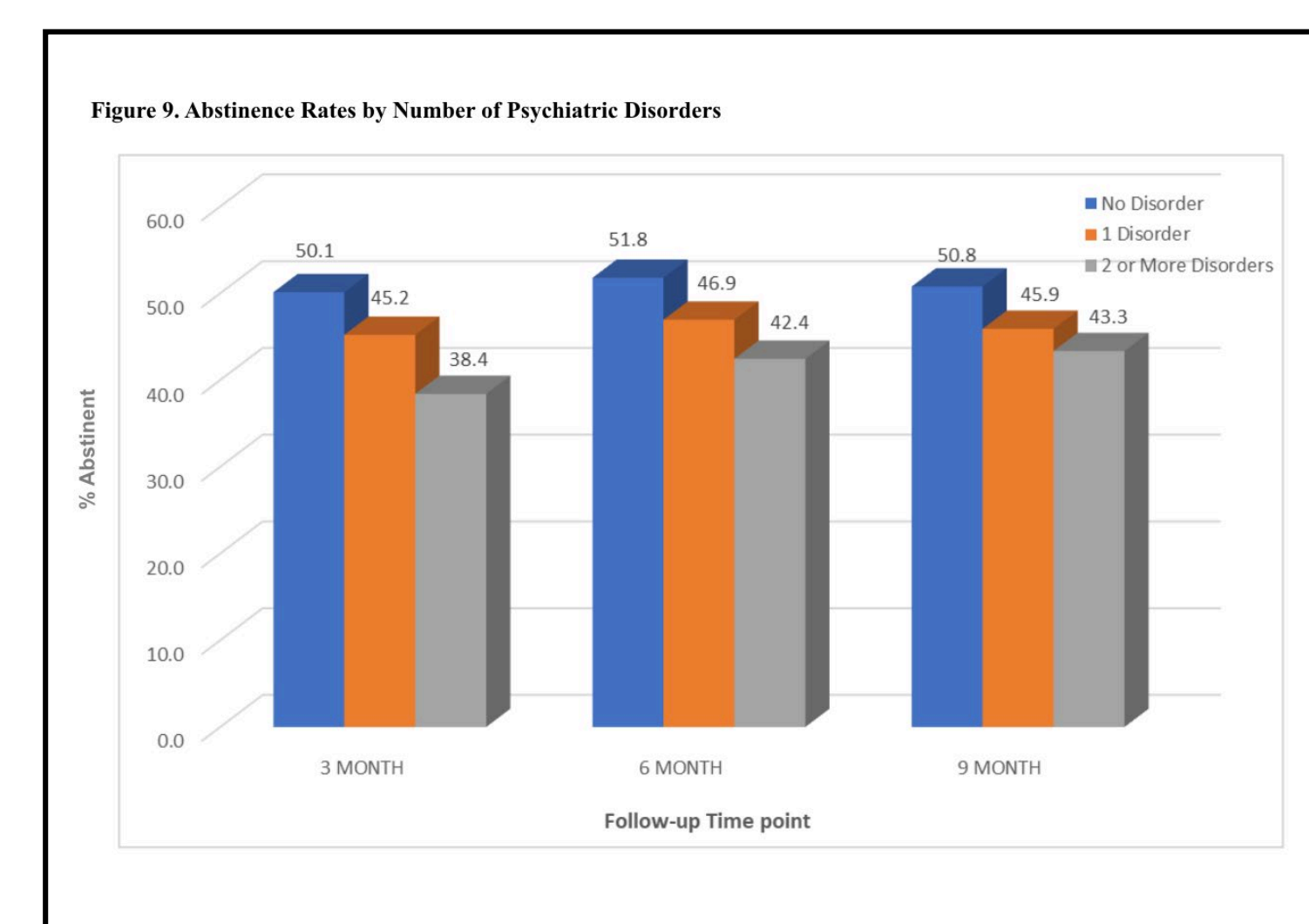
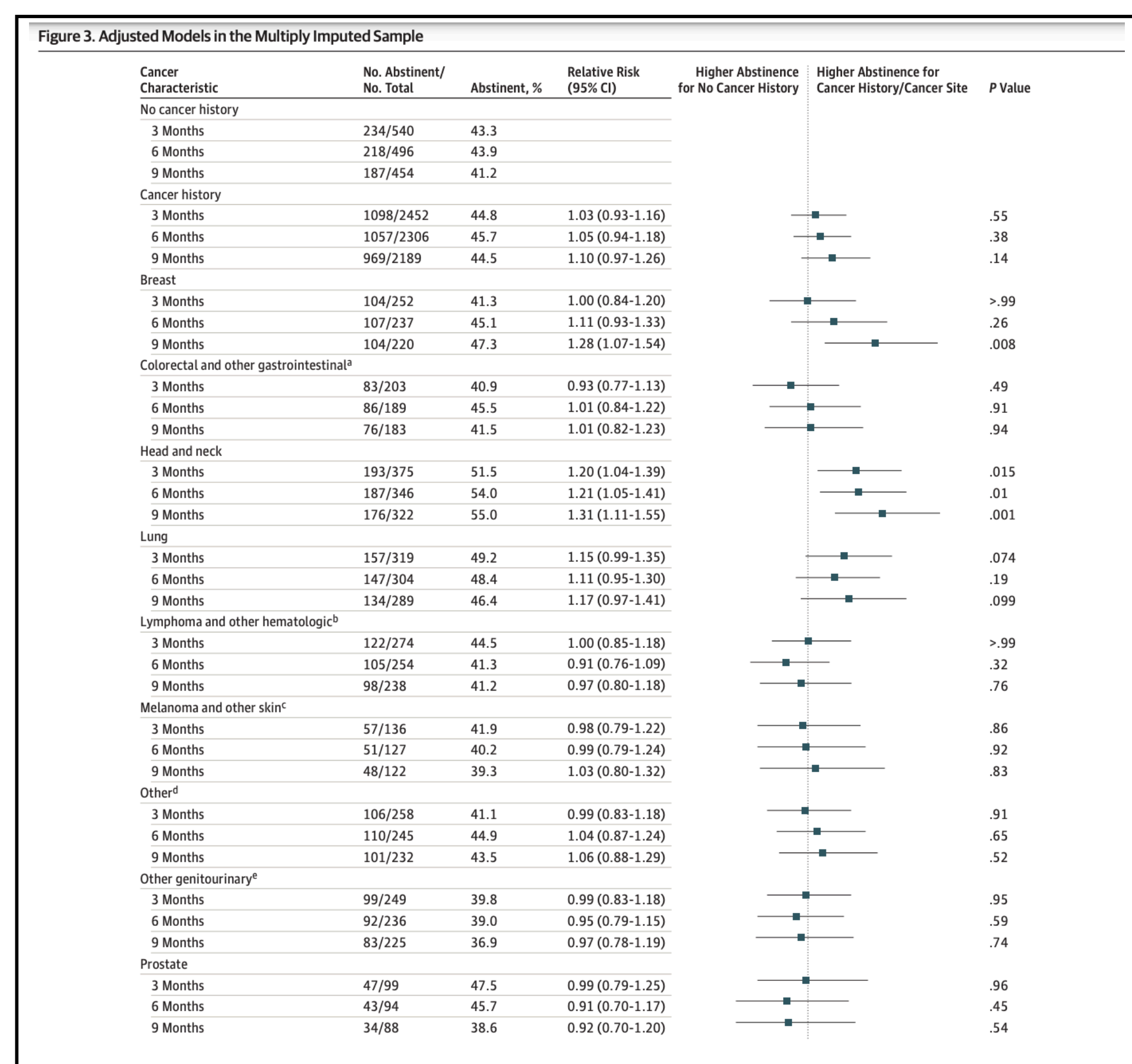


Figure Above:
Existence of Psychiatric Disorders effects sustained smoking abstinence

Figure to Right:
Baseline breakdown of participants in Tabaco Treatment Program, displays prevalence of psychiatric disorders per cancer effected region:
Highest prevalence of depression in those with in Breast, Gastro-Intestinal and Head and Neck.
Highest prevalence of anxiety in Breast and Head and Neck Cancer.

Characteristic	No Cancer History (n = 253) ^a	Cancer History (n = 266)	Breast (n = 233) ^a	Colorectal and Other GI (n = 223) ^a	Head Neck (n = 417)	Lung (n = 338)	Lymphoma and Other Hematologic (n = 292) ^a	Melanoma and Other Skin (n = 143) ^a	Prostate (n = 110)	Other Genitourinary (n = 273) ^a	Other Cancers (n = 281) ^a
Age, mean (SD), y	48.3 (11.3)	53.3 (10.8)	52.8 (10.4)	56.8 (9.7)	55.6 (10.1)	61.1 (9.2)	51.8 (11.8)	54.5 (11.5)	60.6 (11.0)	54.0 (11.0)	52.6 (11.3)
P-value ^b	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
Men, No. (%)	237 (40.0)	1351 (50.9)	NA	144 (65.2)	287 (68.8)	169 (50.0)	178 (61.0)	81 (56.6)	110 (100)	129 (46.9)	130 (46.3)
P-value ^b	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	.05	.08
Race/Ethnicity, No. (%)											
Black	71 (12.0)	251 (9.5)	41 (15.4)	17 (7.7)	28 (6.7)	36 (10.7)	28 (9.6)	2 (1.4)	11 (10.0)	20 (7.3)	25 (8.9)
Hispanic	29 (4.9)	143 (5.4)	18 (6.8)	12 (5.4)	19 (4.6)	9 (2.7)	24 (8.2)	4 (2.8)	6 (5.5)	18 (6.5)	17 (6.0)
Other	172 (28.0)	81 (3.1)	7 (2.6)	14 (6.3)	9 (2.2)	14 (4.8)	1 (0.7)	3 (2.7)	5 (4.5)	5 (1.8)	11 (3.9)
White	321 (54.1)	2177 (82.1)	200 (75.2)	178 (80.5)	361 (86.5)	284 (84.0)	226 (77.4)	138 (99.1)	90 (81.8)	232 (84.4)	228 (83.1)
P-value ^b	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001
Psychiatric Comorbidities on PHQ, No. (%)											
No	318 (56.1)	1239 (51.0)	111 (44.9)	104 (53.0)	175 (46.1)	169 (54.9)	129 (53.8)	75 (56.4)	62 (62.6)	126 (54.3)	117 (47.2)
Yes	249 (43.9)	1144 (48.0)	136 (55.1)	92 (46.9)	209 (54.0)	139 (45.1)	111 (46.3)	58 (43.6)	37 (37.4)	106 (45.7)	131 (52.8)
P-value ^b	.08	.003	.46	.002	.73	.54	.59	.22	.65	.02	.02
Anxiety, No. (%)											
No	433 (75.8)	1796 (74.0)	177 (69.7)	149 (74.1)	266 (68.7)	229 (73.6)	181 (73.6)	105 (78.4)	84 (83.2)	180 (74.1)	173 (68.4)
Yes	138 (24.2)	635 (26.1)	77 (30.3)	52 (25.9)	121 (31.3)	82 (24.4)	65 (24.4)	29 (21.6)	17 (16.8)	63 (25.9)	80 (31.6)
P-value ^b	.34	.06	.93	.03	.37	.45	.79	.22	.95	.06	.06
Alcohol-related											
No	511 (89.5)	2201 (90.5)	228 (89.8)	182 (90.6)	344 (88.9)	298 (95.8)	225 (91.5)	117 (87.3)	84 (83.2)	225 (92.6)	224 (88.5)
Yes	60 (10.5)	230 (9.5)	26 (10.2)	19 (9.5)	43 (11.1)	13 (4.2)	21 (8.5)	17 (12.7)	17 (16.8)	18 (7.4)	29 (11.5)
P-value ^b	.49	.91	.67	.77	.001	.39	.47	.07	.17	.68	.68
Depression											
No	429 (75.1)	1718 (70.5)	166 (65.4)	138 (68.7)	265 (68.5)	220 (70.5)	182 (73.1)	102 (76.1)	83 (82.2)	175 (72.0)	167 (66.0)
Yes	142 (24.9)	737 (29.5)	88 (34.7)	63 (31.3)	122 (31.5)	92 (29.5)	65 (24.3)	32 (23.9)	18 (17.8)	68 (28.0)	86 (34.0)
P-value ^b	.03	.004	.07	.02	.14	.66	.81	.12	.35	.007	.007
Smoking cessation medication, No. (%)											
No	23 (3.9)	156 (5.9)	15 (5.4)	14 (6.3)	46 (11.0)	9 (2.7)	16 (5.5)	4 (2.8)	5 (4.5)	13 (4.7)	14 (5.0)
Yes	570 (96.1)	2496 (94.1)	25 (94.6)	207 (93.7)	371 (88.9)	329 (97.3)	276 (94.5)	139 (97.2)	105 (95.5)	262 (95.3)	267 (95.0)
P-value ^b	.05	.25	.13	<.001	.33	.27	.54	.74	.36	.46	.46
FCD score, mean (SD) ^c	4.1 (2.2)	4.1 (2.3)	4.1 (2.1)	4.4 (2.0)	4.7 (2.2)	4.6 (2.0)	4.2 (2.3)	4.96 (2.20)	4.29 (2.30)	4.96 (2.39)	4.56 (2.30)
P-value ^b	<.001	.68	.03	<.001	<.001	.41	<.001	.37	<.001	.004	.004
CPD, median (IQR) ^d	15 (10-20)	18 (10-20)	15 (10-20)	20 (10-20)	18 (9-20)	15 (10-20)	20 (10-20)	20 (10-20)	20 (10-20)	20 (10-20)	20 (10-20)
P-value ^b	.001	>.99	.47	<.001	.01	>.99	.002	.006	<.001	<.001	<.001
Years smoked, mean (SD) ^e	27.0 (13.4)	34.5 (12.8)	30.6 (10.9)	36.4 (11.8)	35.3 (12.2)	41.8 (10.8)	33.29 (13.4)	33.5 (12.8)	37 (11.8)	33.9 (13.3)	32.8 (12.4)
P-value ^b	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001	<.001

Abbreviations: CPD, cigarettes per day; FCD, Fagerstrom Test for Cigarette Dependence; GI, gastrointestinal; IQR, interquartile range; PHQ, Patient Health Questionnaire.
^a Denominators vary in some areas where data were not available for all patients.
^b The other testing for each type of cancer is presented in the first paragraph of the Results section.
^c All P values are based on 2-tailed t tests for continuous and y test for categorical comparisons of a cancer group (cancer history, current sites) vs the no cancer history group.
^d Possible range, 0 to 10; higher scores indicate greater dependence.
^e P-values were adjusted with quantile regression.



This work was supported by NIH/NCI R25CA056452 (Eva Winter, Shine Chang, Ph.D., Principle Investigator)

Results

- Mean smoking abstinence rates not significantly different in patients with cancer history and with no cancer history except at 9 months
 - At 9 months those with no cancer history had a slightly higher rate of sustained abstinence
- Patients with cancers in the head and neck region are more likely to have sustained abstinence
- Patients with cancers specifically related to smoking are do not have higher likelihood of sustained abstinence
- Presence of one psychiatric disorder is correlated with the decrease of smoking cessation success, and more than one psychiatric disorder is correlated with greater decrease in smoking cessation success

Conclusions

- Understanding increased correlation of smoking cessation in cancer effecting differing regions will allow more tailored approaches to treatment for cancer patients
 - Specifically, those with lung caner, what would be believed to have a more direct causal link with smoking, do not have significantly greater success with abstinence than those with other cancer effected regions, so the approach could be adjusted to addressing overall health instead of specifically lung health
- Those with psychiatric disorder recognized as needing more support in smoking cessation, therefore require more resource allocation

Future Steps

- Examine the interaction of psychiatric disorders and cancer region classification in sustained smoking abstinence
- Examine namely depression, anxiety, and insomnia

References

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