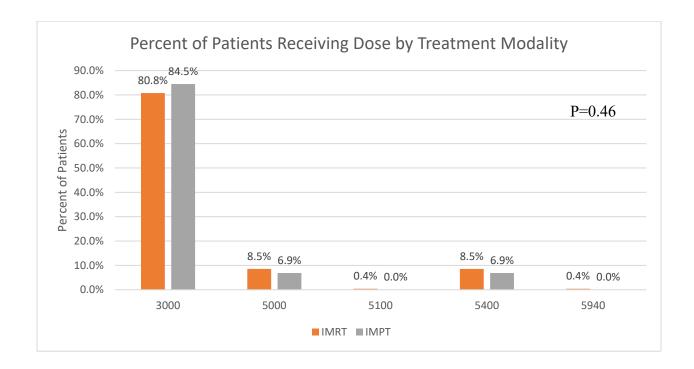
Supplementary Online Content

Youssef I, Yoon J, Mohamed N, et al. Toxicity profiles and survival outcomes among patients with nonmetastatic oropharyngeal carcinoma treated with intensity-modulated proton therapy vs intensity-modulated radiation therapy. *JAMA Netw Open*. 2022;5(11):e2241538. doi:10.1001/jamanetworkopen.2022.41538

eFigure. Percentage of Patients Receiving Dose by Treatment Modality
eTable 1. Univariable and Multivariable Analyses for Factors Associated With the
Development of Grade 3 or Higher Acute Adverse Events
eTable 2. Univariable and Multivariable Analyses for Factors Associated With the
Development of Grade 1 or Higher Chronic Adverse Events
eTable 3. Univariable and Multivariable Analyses for Overall Survival and ProgressionFree Survival

This supplementary material has been provided by the authors to give readers additional information about their work.

eFigure



Variable	UVA [Confidence Interval-(CI)]	P value	MVA (Confidence Interval)	P value
RT Modality				
IMRT	1 [Reference]			
IMPT	0.20 [0.015-0.55]	.004		
Sex		T .	1	1
Female	1 [Reference]			
Male	1.66 [0.34-8.1]	0.534		
Age	0.96 [0.89-1.03]	0.214		
Smoking History		1		
No	1 [Reference]			
Yes	1.42 [0.39-5.1]	0.595		
KPS	.998 [0.89-1.12]	0.977		
T-Stage		- 1		1
T1-T2	1 [Reference]			
T3-T4	0.799 [0.22-2.9]	0.733		
N stage		T .	1	1
N0-N1	1 [Reference]			
N2-N3	1.92 [0.42-8.82]	0.40		
HPV/P16 status		l		l
Negative/UK	1 [Reference]			
Positive	a	NA		
Concurrent systemic	c therapy	1		
Yes	1 [Reference]			
No	a	NA		
Type of Chemother	apy	l		
Cisplatin	1 [Reference]			
Other	0.76 [0.16-3.69]	0.73		

Abbreviations: UVA: Univariable Analysis, MVA: Multivariable analysis, IMRT: Intensity Modulated Radiation Therapy, IMPT: Intensity Modulated Proton Therapy, HPV, Human Papilloma Virus a-OR and CI could not be computed for HPV/p16 status and Concurrent systemic therapy due to zero values

^{*}MVA cells empty since only 1 variable was significant on UVA

eTable 2: Univariable and Multivari	able Analyses for Factors Associate	ed With the	Development of Gra	ade 1 or
Higher Chronic Adverse Events				
Variable	UVA [Confidence Interval-(CI)]	P value	MVA* (Confidence	P value
			Interval)	
RT Modality			T	
IMRT	1 [Reference]			
IMPT	0.32 [0.14-0.72]	.006		
Sex				
Female	1 [Reference]			
Male	0.55 [0.20-1.47]	0.23		
Age	1.01 [0.96-1.05]	0.80		
Smoking History				
No	1 [Reference]			
Yes	1.15 [0.54-2.5]	0.72		
Karnofsky Performance Status	1.02 [0.95-1.09]	0.63		
T-Stage				
T1-T2	1 [Reference]			
T3-T4	0.82 [0.37-1.8]	0.63		
N stage				
N0-N1	1 [Reference]			
N2-N3	1.45 [0.54-3.9]	0.46		
HPV/P16 status				
Negative/Unknown	1 [Reference]			
Positive	1.79 [0.48-6.6]	0.39		
Concurrent systemic therapy			•	•
Yes	1 [Reference]			
No	0.88 [.11-7.21]	0.91		
Type of Chemotherapy	<u>,</u>	•	•	•
Cisplatin	1 [Reference]			
Other	1.6[0.46-5.54]	0.46		

Abbreviations: UVA: Univariable Analysis, MVA: Multivariable analysis, IMRT: Intensity Modulated Radiation Therapy, IMPT: Intensity Modulated Proton Therapy, HPV, Human Papilloma Virus *MVA cells empty since only 1 variable was significant on UVA

eTable 3: Univariable	and Multivarial	ble Analys	ses for Overall S	Survival a	nd Progression-	Free Sur	vival	
	Overall Survival			Progression Free Survival				
Variable	Univariable		Multivariable		Univariable		Multivariable	
	HR[CI]	P value	HR	P value	HR	P	HR	Р
						value		value
Radiation Modality		ı	l .	1				
IMRT	1		1		1		1	
11/11/1	[Reference]		[Reference]		[Reference]		[Reference]	
IMPT	0.28 [.04-	0.21	[reserved]		1.23[.54-	0.62	NA	NA
11/11 1	2.1]	0.21			2.82]	0.02		1111
Sex	12.11			1	1 2.02]		<u> </u>	1
Male	1				1		1	
Widte	[Reference]				[Reference]		[Reference]	
Female	1.25[.36-	0.73			.83 [.29-	.72	[Reference]	
Temate	4.28]	0.75			2.34]	.12		
Age	1.04[0.99-	0.17	1.0 [.96-	.60	1.04 [1-	.06	1.05[.99-	.07
Age	1.04[0.99-	0.17	1.07]	.00	1.04 [1-	.00	1.03[.99-	.07
Smalring History	1.1]		1.07]		1.06]		1.1]	
Smoking History	1			1	1		1	
No	[Defense es]				[Defenence]		[Defenence]	
N	[Reference]	0.226			[Reference]	0.162	[Reference]	
Yes	1.76[0.69- 4.5]	0.226			1.68[0.89- 3.28]	0.163		
Karnofsky	0.9[.8695]	<.001	.92 [.8698]	.006	.92 [0.88-	<.001	0.9 [.8496]	.001
Performance Status		****	., _ [, .]	1000	0.96]	****		
T Stage		ı	l .	1	1 222 2			
T1-T2	1		1		1		1 1	
1112	[Reference]		[Reference]		[Reference]		[Reference]	
T3-T4	5.77 [2.1-	<.001	3.5 [1.19-	.02	3.98[1.99-	<.001	1.84 [.74-	.19
	16.03]	••••	10.3]	.02	7.97]	••••	4.56]	.17
N stage	10.00]		10.0]	1	1 112 1			1
N0-N1	1				1		1	
110 111	[Reference]				[Reference]		[Reference]	
N2-N3	.66 [.192-	.50			.59[0.27-	0.20	.85 [.34-	0.85
112-113	2.25]	.50			1.32]	0.20	2.12]	0.65
HPV/P16 status	2.23			1	1.52		2.12	1
Negative/Unknown	1		1		1		1	
Tregative/Officiowii	[Reference]		[Reference]		[Reference]		[Reference]	
Positive	.15 [.0639]	<.001	.14 [.0538]	<.001	0.27	.002	.23 [.0862]	.004
TOSITIVE	.13 [.0039]	~.001	.14 [.0336]	~.001	[.1262]	.002	.23 [.0802]	.004
Concurrent systemic	therapy	•	•	•		•	•	•
No	1				1		1	
	[Reference]				[Reference]		[Reference]	
Yes	21.2[0-12]	.56			21.2[.01-65]	0.46		
Type of Chemotherap			L.	1	. []		•	
Other	Ť 1		1		1		1	
	[Reference]		[Reference]		[Reference]		[Reference]	
Cisplatin	4.05 [1.63-	.003	2.05 [.76-	.158	2.77[1.38-	.004	1.31 [0.5-	0.6
Сюргани	10.1]	.005	5.55]	.150	5.50]	.007	3.5]	
	1 10.1	1	2.22]	l	1 2.2 0]	1	1 2.2]	1

Abbreviations: UVA: Univariable Analysis, MVA: Multivariable analysis, IMRT: Intensity Modulated Radiation Therapy, IMPT: Intensity Modulated Proton Therapy, HPV, Human Papilloma Virus