

Supplementary Materials

Table S1. Pearson Correlation Coefficients (r) matrix with the diet quality indices included in this analysis.

	AHEI-2010	aMED	DASH	Low-Carbohydrate
AHEI-2010	--			
aMED	0.73	--		
DASH	0.76	0.72	--	
Low-Carbohydrate	0.13	-0.08	-0.06	--

Table S2. Stratified ORs and 95% CI for associations between quintiles of *a priori* defined diet quality index scores with NIS symptom summary score ≥ 12 1-year post-diagnosis ($n = 323$).

BMI							
Underweight/Normal Weight ($n = 101$)							
Index	Q1	Q2	Q3	Q4	Q5	p_{trend}	$p_{\text{Q5-Q1}}$
AHEI-2010	1.00	1.14 (0.23–5.76)	0.46 (0.09–2.28)	0.34 (0.06–1.67)	0.31 (0.06–1.53)	0.09	0.16
aMED	1.00	0.34 (0.09–1.17)	0.35 (0.08–1.57)	0.34 (0.07–1.62)	0.72 (0.15–3.77)	0.30	0.68
DASH	1.00	0.35 (0.05–2.01)	0.04 (0.01–0.23) **	0.12 (0.02–0.7) *	0.12 (0.01–0.83) *	0.01 *	0.04 *
Low Carbohydrate	1.00	1.13 (0.28–4.54)	0.88 (0.16–5.13)	0.40 (0.09–1.70)	0.26 (0.05–1.29)	0.04 *	0.11
Overweight/Obese ($n = 222$)							
Index	Q1	Q2	Q3	Q4	Q5	p_{trend}	$p_{\text{Q5-Q1}}$
AHEI-2010	1.00	0.90 (0.34–2.31)	1.13 (0.44–2.91)	0.40 (0.16–1.02)	0.71 (0.27–1.84)	0.19	0.49
aMED	1.00	0.31 (0.12–0.76) *	0.42 (0.17–1.05)	0.52 (0.22–1.20)	0.27 (0.09–0.76) *	0.05	0.01 *
DASH	1.00	0.87 (0.33–2.25)	0.48 (0.2–1.12)	0.58 (0.23–1.40)	0.57 (0.22–1.42)	0.14	0.23
Low Carbohydrate	1.00	1.50 (0.63–3.63)	1.10 (0.44–2.76)	0.77 (0.31–1.91)	1.68 (0.66–4.36)	0.62	0.28
Smoking Status							
Current/Former Smokers ($n = 224$)							
Index	Q1	Q2	Q3	Q4	Q5	p_{trend}	$p_{\text{Q5-Q1}}$
AHEI-2010	1.00	0.60 (0.21–1.65)	0.32 (0.11–0.87) *	0.20 (0.07–0.55) **	0.42 (0.14–1.18)	0.02 *	0.10

aMED	1.00	0.38 (0.15–0.95) *	0.26 (0.10–0.66) **	0.33 (0.13–0.81) *	0.40 (0.13–1.21)	0.04 *	0.10
DASH	1.00	0.78 (0.31–1.98)	0.25 (0.10–0.63) **	0.29 (0.11–0.75) *	0.50 (0.18–1.38)	0.02 *	0.18
Low Carbohydrate	1.00	1.28 (0.52–3.15)	1.15 (0.46–2.84)	0.51 (0.20–1.31)	1.31 (0.49–3.58)	0.82	0.59

Nonsmokers (*n* = 99)

Index	Q1	Q2	Q3	Q4	Q5	<i>p</i> _{trend}	<i>p</i> _{Q5-Q1}
AHEI-2010	1.00	1.90 (0.44–8.54)	2.62 (0.66–11.25)	0.94 (0.22–4.00)	1.11 (0.28–4.49)	0.86	0.89
aMED	1.00	0.64 (0.18–2.22)	1.34 (0.27–6.96)	0.37 (0.07–1.78)	0.41 (0.09–1.78)	0.21	0.24
DASH	1.00	0.32 (0.07–1.33)	0.79 (0.20–3.12)	0.29 (0.07–1.12)	0.41 (0.09–1.67)	0.18	0.22
Low Carbohydrate	1.00	1.72 (0.46–6.71)	0.4 (0.08–1.82)	0.81 (0.22–2.95)	0.46 (0.09–2.21)	0.23	0.34

Cancer Stage

Stages 0–2 (*n* = 104)

Index	Q1	Q2	Q3	Q4	Q5	<i>p</i> _{trend}	<i>p</i> _{Q5-Q1}
AHEI-2010	1.00	0.78 (0.19–3.14)	0.76 (0.17–3.37)	0.81 (0.19–3.48)	0.54 (0.1–2.66)	0.53	0.45
aMED	1.00	0.12 (0.02–0.57) *	0.12 (0.02–0.53) **	0.38 (0.09–1.46)	0.32 (0.05–1.80)	0.27	0.21
DASH	1.00	0.15 (0.03–0.61) *	0.34 (0.07–1.41)	0.19 (0.03–0.94) *	0.25 (0.04–1.35)	0.13	0.11
Low Carbohydrate	1.00	1.55 (0.40–6.17)	0.66 (0.17–2.52)	0.71 (0.14–3.38)	0.71 (0.17–2.91)	0.44	0.64

Stages 3,4 (*n* = 219)

Index	Q1	Q2	Q3	Q4	Q5	<i>p</i> _{trend}	<i>p</i> _{Q5-Q1}
AHEI-2010	1.00	0.64 (0.23–1.71)	0.89 (0.32–2.44)	0.29 (0.11–0.72) **	0.62 (0.23–1.63)	0.14	0.33
aMED	1.00	0.61 (0.23–1.61)	0.49 (0.20–1.12)	0.35 (0.11–1.13)	0.40 (0.14–1.15)	0.07	0.09
DASH	1.00	1.09 (0.37–3.24)	0.42 (0.16–1.06)	0.37 (0.14–0.92) *	0.48 (0.16–1.44)	0.02 *	0.19
Low Carbohydrate	1.00	1.43 (0.56–3.71)	1.30 (0.52–3.28)	0.70 (0.28–1.71)	1.32 (0.50–3.53)	0.85	0.58

HPV Status

Positive (*n* = 71)

Index	Q1	Q2	Q3	Q4	Q5	<i>p</i> _{trend}	<i>p</i> _{Q5-Q1}
AHEI-2010	1.00	0.06 (0.01–0.49) *	0.46 (0.06–3.25)	0.24 (0.02–1.73)	0.66 (0.07–5.23)	0.53	0.69
aMED	1.00	0.02 (0–0.24) **	0.05 (0–0.47) *	0.02 (0–0.76) *	0.20 (0.01–2.71)	0.41	0.26
DASH	1.00	0.18 (0.02–1.21)	0.4 (0.06–2.43)	0.19 (0.03–1.14)	0.34 (0.04–2.49)	0.31	0.29

Low Carbohydrate	1.00	6.66 (1.09–54.64)	12.28 (1.37–207.13) *	2.59 (0.5–15.25)	1.49 (0.27–8.67)	0.80	0.65
------------------	------	-------------------	-----------------------	------------------	------------------	------	------

Negative (*n* = 92)

Index	Q1	Q2	Q3	Q4	Q5	<i>p</i>_{trend}	<i>p</i>_{Q5-Q1}
AHEI-2010	1.00	0.14 (0.02–0.68) *	0.36 (0.07–1.73)	0.21 (0.04–0.97)	0.72 (0.14–3.67)	0.90	0.69
aMED	1.00	0.42 (0.11–1.55)	0.66 (0.17–2.60)	0.72 (0.13–4.17)	0.8 (0.20–3.28)	0.99	0.76
DASH	1.00	0.48 (0.10–2.22)	0.27 (0.07–1.04)	0.48 (0.10–2.13)	0.48 (0.09–2.54)	0.27	0.39
Low Carbohydrate	1.00	2.23 (0.52–10.79)	0.68 (0.16–2.76)	0.36 (0.07–1.59)	1.04 (0.25–4.37)	0.57	0.96

Education

High School or Less (*n* = 91)

Index	Q1	Q2	Q3	Q4	Q5	<i>p</i>_{trend}	<i>p</i>_{Q5-Q1}
AHEI-2010	1.00	0.30 (0.04–1.85)	0.33 (0.04–2.17)	0.29 (0.04–1.88)	0.05 (0.01–0.32) **	<0.01 **	<0.01 **
aMED	1.00	0.17 (0.03–0.8) *	0.16 (0.03–0.89) *	0.23 (0.03–1.48)	0.01 (0–0.13) **	<0.01 **	<0.01 **
DASH	1.00	0.35 (0.05–2.18)	0.51 (0.09–2.78)	0.14 (0.02–0.72) *	0.14 (0.03–0.68) *	0.01 *	0.02 *
Low Carbohydrate	1.00	2.59 (0.48–16.76)	0.82 (0.17–4.02)	1.37 (0.28–7.1)	0.80 (0.16–4.06)	0.60	0.79

Some College or Greater (*n* =232)

Index	Q1	Q2	Q3	Q4	Q5	<i>p</i>_{trend}	<i>p</i>_{Q5-Q1}
AHEI-2010	1.00	0.96 (0.38–2.46)	0.67 (0.27–1.65)	0.77 (0.31–1.93)	1.05 (0.41–2.69)	0.90	0.92
aMED	1.00	0.48 (0.22–1.05)	0.71 (0.26–1.89)	0.97 (0.34–2.81)	0.71 (0.27–1.86)	0.77	0.48
DASH	1.00	0.36 (0.15–0.83) *	0.48 (0.18–1.26)	0.61 (0.24–1.53)	0.59 (0.21–1.62)	0.51	0.31
Low Carbohydrate	1.00	1.15 (0.48–2.74)	1.08 (0.44–2.64)	0.5 (0.20–1.21)	1.07 (0.42–2.77)	0.59	0.88

Tumor Site

Oral Cavity (*n* = 96)

Index	Q1	Q2	Q3	Q4	Q5	<i>p</i>_{trend}	<i>p</i>_{Q5-Q1}
AHEI-2010	1.00	0.71 (0.16–3.17)	1.19 (0.26–5.65)	1.09 (0.25–4.87)	1.05 (0.23–4.77)	0.76	0.95
aMED	1.00	0.15 (0.03–0.7) *	0.29 (0.05–1.34)	0.38 (0.08–1.62)	0.37 (0.06–1.97)	0.31	0.25
DASH	1.00	0.18 (0.03–0.82) *	0.77 (0.17–3.42)	0.35 (0.06–1.82)	0.19 (0.03–1.12)	0.34	0.08
Low Carbohydrate	1.00	1.36 (0.32–5.89)	0.59 (0.14–2.44)	0.81 (0.15–4.34)	0.66 (0.15–2.91)	0.44	0.59

Oropharynx (*n* = 157)

Index	Q1	Q2	Q3	Q4	Q5	p_{trend}	$p_{\text{Q5-Q1}}$
AHEI-2010	1.00	0.71 (0.19–2.54)	0.5 (0.14–1.66)	0.35 (0.1–1.17)	0.50 (0.14–1.72)	0.15	0.28
aMED	1.00	0.45 (0.14–1.35)	0.29 (0.07–1.06)	0.21 (0.05–0.94) *	0.29 (0.07–1.12)	0.04 *	0.08
DASH	1.00	0.56 (0.15–2.05)	0.17 (0.05–0.53) **	0.35 (0.09–1.28)	0.30 (0.08–1.11)	0.04 *	0.08
Low Carbohydrate	1.00	1.46 (0.46–4.87)	1.54 (0.50–4.97)	0.97 (0.35–2.73)	0.63 (0.20–2.00)	0.38	0.43

Larynx ($n = 66$)

Index	Q1	Q2	Q3	Q4	Q5	p_{trend}	$p_{\text{Q5-Q1}}$
AHEI-2010	1.00	0.80 (0.10–6.23)	0.40 (0.05–3.07)	0.18 (0.02–1.19)	0.12 (0.01–0.95)	0.01 *	0.06
aMED	1.00	0.45 (0.09–2.18)	0.32 (0.04–1.92)	0.05 (0.00–0.63) *	0.38 (0.04–2.89)	0.12	0.36
DASH	1.00	6.40 (0.64–160.43)	0.16 (0.02–1.02)	0.27 (0.04–1.65)	1.13 (0.13–10.3)	0.37	0.91
Low Carbohydrate	1.00	0.83 (0.10–6.63)	0.63 (0.11–3.56)	0.39 (0.03–3.44)	1.73 (0.26–12.95)	0.74	0.58

Treatment Modality

Treatment Involving Radiation as Primary or Adjuvant Modality ($n = 232$)

Index	Q1	Q2	Q3	Q4	Q5	p_{trend}	$p_{\text{Q5-Q1}}$
AHEI-2010	1.00	0.93 (0.35–2.48)	0.79 (0.30–2.07)	0.38 (0.15–0.98) *	0.64 (0.24–1.67)	0.13	0.36
aMED	1.00	0.66 (0.26–1.67)	0.73 (0.32–1.62)	0.52 (0.16–1.73)	0.43 (0.16–1.16)	0.10	0.10
DASH	1.00	1.44 (0.53–3.94)	0.59 (0.23–1.47)	0.59 (0.23–1.53)	0.57 (0.22–1.44)	0.07	0.24
Low Carbohydrate	1.00	1.51 (0.59–3.97)	1.14 (0.48–2.70)	0.69 (0.30–1.58)	1.71 (0.65–4.73)	0.81	0.29

Treatment Not Involving Any Radiation (i.e., Surgical or Chemotherapy Alone) ($n = 91$)

Index	Q1	Q2	Q3	Q4	Q5	p_{trend}	$p_{\text{Q5-Q1}}$
AHEI-2010	1.00	0.76 (0.16–3.53)	0.26 (0.05–1.21)	1.5 (0.31–7.32)	0.38 (0.06–2.03)	0.46	0.27
aMED	1.00	0.08 (0.02–0.34) **	0.17 (0.02–0.93) *	0.23 (0.04–1.11)	0.53 (0.08–3.10)	0.21	0.49
DASH	1.00	0.24 (0.05–0.97)	0.18 (0.03–0.82) *	0.09 (0.01–0.47) **	0.49 (0.09–2.61)	0.15	0.4
Low Carbohydrate	1.00	2.73 (0.68–11.78)	1.14 (0.27–4.91)	0.48 (0.09–2.38)	0.33 (0.06–1.59)	0.08	0.18

* $p < 0.05$

** $p < 0.01$

All models adjusted for age, cancer stage, smoking status, HPV status, total calories, and baseline NIS symptom summary score. Covariates for which models were stratified were not included in the corresponding model.

Table S3. ORs and 95% CI for associations between quintiles of *a priori* defined diet quality index scores with NIS symptom summary score ≥ 12 1-year post-diagnosis stratified on the presence of significant pretreatment NIS.

NIS Present at Study Entry (<i>n</i> = 251)							
Index	Q1	Q2	Q3	Q4	Q5	<i>p</i> _{trend}	<i>p</i> _{Q5-Q1}
AHEI-2010	1.00	0.68 (0.27–1.67)	0.62 (0.25–1.52)	0.34 (0.13–0.82) *	0.57 (0.23–1.39)	0.09	0.22
aMED	1.00	0.40 (0.16–0.97) *	0.41 (0.18–0.91) *	0.51 (0.22–1.15)	0.50 (0.19–1.33)	0.23	0.17
DASH	1.00	0.39 (0.15–0.96) *	0.27 (0.11–0.63) **	0.33 (0.13–0.81) *	0.40 (0.15–1.04)	0.05	0.06
Low Carbohydrate	1.00	1.39 (0.60–3.28)	0.88 (0.38–2.07)	0.54 (0.23–1.25)	1.02 (0.42–2.47)	0.45	0.97
NIS Not Present at Study Entry (<i>n</i> = 72)							
Index	Q1	Q2	Q3	Q4	Q5	<i>p</i> _{trend}	<i>p</i> _{Q5-Q1}
AHEI-2010	1.00	1.02 (0.15–7.16)	0.79 (0.12–5.24)	0.44 (0.07–2.51)	0.78 (0.11–5.34)	0.52	0.79
aMED	1.00	1.59 (0.19–18.36)	0.16 (0.02–0.81) *	0.20 (0.03–1.32) ^a	NA	0.11	0.10 ^b
DASH	1.00	0.70 (0.10–4.64)	0.28 (0.04–1.81)	0.13 (0.01–0.98)	0.24 (0.03–1.72)	0.06	0.17
Low Carbohydrate	1.00	2.62 (0.34–24.15)	2.95 (0.52–19.25)	1.53 (0.19–13.05)	1.64 (0.23–13.24)	0.67	0.63

**p* < 0.05

***p* < 0.01

All models adjusted for age, cancer stage, smoking status, total calories, and HPV status.

^a Quartiles were used in modeling given the significant amount of ties when attempting to fit quintiles.

^b Reflects *p*_{Q4-Q1}