SUPPLEMENTARY MATERIAL

Dietary Patterns and Colorectal Cancer: a multicenter case-control study in an Iranian population

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Supplementary Table 1. Details regarding categorization of food items into food groups.

Food group	**Food items**
Processed meat	Sausage, salami, kielbasa, hamburger
Organ meat	Lamb brain, Lamb tongue, lamb by-products, chicken giblets
Total fish	Fish, Tuna
Margarine and hydrogenated fats	Margarine, hydrogenated oils and animal fats
Dairy products	Milk, yogurt, cheese, doogh (ayran), kashk (whey), flavored milk, cream
Coffee and tea	Tea, coffee and Nescafé
Fruit	Citrus Fruit, cantaloup, melon, honeydew, watermelon, apricot, sweet and sour cherries, peaches and nectarines, prunus, mulberries, strawberries, plum, fresh figs, grapes, pears, apples, kiwifruit, pomegranate, bananas, persimmon, dates, dried fruit, raisins
Fruit juice	Fresh fruit juice, juice from concentrate
Vegetables	Lettuce, cabbage, cucumber, fresh greens, cooked greens, eggplant, celery, beets, turnips, green peppers, carrots, bell peppers, mushrooms, corn, green beans, zucchini, pumpkin, garlic, onion
Bread	Lavash bread, barbari bread, sangak bread, baguette, barley bread
Pasta and rice	Cooked rice, cooked pasta and noodles
Cereals	Wheat, oats, barley
Snacks	Cheese puffs, chips
Nuts	Walnuts, peanuts, other nuts, seeds
Nonalcoholic beverages	Soda drinks, nonalcoholic and malt beverages
Tomatoes	Tomatoes, tomato paste
Legumes	Green peas, beans, chickpeas, lentils and mung beans, split peas, soybeans, fava beans
Cakes and desserts	Biscuits, wafers and crackers, cream cookies and sweets, dry cookies and sweets, ice cream, tahini, compote
Sugar and candies	Sugar, jam, honey, rock candy, sugar cubes, chocolate
Olives and olive oil	Olives, olive oil
Other oils and condiments/dressings	Liquid oils, mayonnaise and salad dressings, pomegranate paste
Pickles	Pickles, pickled vegetables in vinegar, pickled vegetables in salt water
Red meat	Red meat
Chicken meat	Chicken meat
Eggs	Eggs
Butter	Butter
Potatoes	Potatoes
Pizza	Pizza
Salt	Salt

Supplementary Table 2. Main study participants’ characteristics according to quartiles (Q) of identified dietary patterns.

	Healthy diet				Western-type diet				Other				Dietary pattern high in unhealthy fats			
Characteristics	Q1, n (%) (n=1020)	Q2, n (%) (n=960)	Q3, n (%) (n=1018)	Q4, n (%) (n=1071)	Q1, n (%) (n=932)	Q2, n (%) (n=985)	Q3, n (%) (n=1011)	Q4, n (%) (n=1141)	Q1, n (%) (n=1071)	Q2, n (%) (n=1009)	Q3, n (%) (n=985)	Q4, n (%) (n=1004)	Q1, n (%) (n=963)	Q2, n (%) (n=986)	Q3, n (%) (n=1002)	Q4, n (%) (n=1117)
Province																
Tehran	273 (26.76)	301 (31.35)	261 (25.64)	146 (13.63)	53 (5.69)	160 (16.24)	366 (36.20)	402 (35.23)	360 (33.61)	293 (29.04)	191 (19.39)	137 (13.65)	124 (12.88)	232 (23.53)	297 (29.64)	328 (29.36)
Fars	116 (11.37)	192 (20.00)	362 (35.56)	521 (48.65)	317 (34.01)	299 (30.36)	252 (24.93)	323 (28.31)	292 (27.26)	272 (26.96)	304 (30.86)	323 (32.17)	475 (49.33)	297 (30.12)	220 (21.96)	199 (17.82)
Kerman	229 (22.45)	174 (18.12)	129 (12.67)	93 (8.68)	254 (27.25)	174 (17.66)	105 (10.39)	92 (8.06)	140 (13.07)	135 (13.38)	161 (16.35)	189 (18.82)	108 (11.21)	174 (17.65)	173 (17.27)	170 (15.22)
Golestan	191 (18.73)	100 (10.42)	94 (9.23)	137 (12.79)	168 (18.03)	122 (12.39)	102 (10.09)	130 (11.39)	130 (12.14)	124 (12.29)	120 (12.18)	148 (14.74)	106 (11.01)	96 (9.74)	121 (12.08)	198 (17.73)
Mazandaran	69 (6.76)	20 (2.08)	40 (3.93)	66 (6.16)	42 (4.51)	66 (6.70)	43 (4.25)	44 (3.86)	68 (6.35)	65 (6.44)	36 (3.65)	26 (2.59)	47 (4.88)	60 (6.09)	48 (4.79)	40 (3.58)
Kermanshah	90 (8.82)	117 (12.19)	66 (6.48)	44 (4.11)	61 (6.55)	103 (10.46)	100 (9.89)	53 (4.65)	27 (2.52)	62 (6.14)	121 (12.28)	107 (10.66)	52 (5.40)	72 (7.30)	95 (9.48)	98 (8.77)
Khorasan-Razavi	52 (5.10)	56 (5.83)	66 (6.48)	64 (5.98)	37 (3.97)	61 (6.19)	43 (4.25)	97 (8.50)	54 (5.04)	58 (5.75)	52 (5.28)	74 (7.37)	51 (5.30)	55 (5.58)	48 (4.79)	84 (7.52)
Cancer subsite																
Colon	115	84	100	135	68	94	105	167	130	114	97	93	62	84	115	172
Proximal colon	35	26	36	48	19	32	35	59	45	40	33	27	22	30	35	58
Distal colon	46	40	40	59	32	43	44	66	51	47	45	42	25	42	47	70
Unspecified/ overlapping colon	34	18	24	28	17	19	26	42	34	27	19	24	15	12	33	44
Rectum	97	68	111	128	63	86	98	157	132	89	80	103	92	97	80	135
Missing	7	7	6	7	0	4	7	16	8	5	7	7	8	4	6	9
Age, years																
<30	14 (1.37)	4 (0.42)	6 (0.59)	5 (0.47)	2 (0.21)	7 (0.71)	4 (0.40)	16 (1.40)	4 (0.37)	7 (0.69)	4 (0.41)	14 (1.39)	5 (0.52)	8 (0.81)	3 (0.30)	13 (1.16)
30-39	90 (8.82)	59 (6.15)	76 (7.47)	62 (5.79)	13 (1.39)	41 (4.16)	73 (7.22)	160 (14.02)	63 (5.88)	53 (5.25)	84 (8.53)	87 (8.67)	44 (4.57)	60 (6.09)	80 (7.98)	103 (9.22)
40-49	141 (13.82)	135 (14.06)	165 (16.21)	188 (17.55)	114 (12.23)	129 (13.10)	158 (15.63)	228 (19.98)	113 (10.55)	153 (15.16)	157 (15.94)	206 (20.52)	140 (14.54)	131 (13.29)	159 (15.87)	199 (17.82)
50-59	273 (26.76)	319 (33.23)	308 (30.26)	334 (31.19)	286 (30.69)	293 (29.75)	314 (31.06)	341 (29.89)	311 (29.04)	297 (29.44)	314 (31.88)	312 (31.08)	301 (31.26)	298 (30.22)	297 (29.64)	337 (30.17)
60-69	309 (30.29)	297 (30.94)	336 (33.01)	336 (31.37)	332 (35.62)	352 (35.74)	328 (32.44)	266 (23.31)	382 (35.67)	332 (32.90)	289 (29.34)	275 (27.39)	335 (34.79)	326 (33.06)	297 (29.64)	320 (28.65)
≥70	193 (18.92)	146 (15.21)	127 (12.48)	146 (13.63)	185 (19.85)	163 (16.55)	134 (13.25)	130 (11.39)	198 (18.49)	167 (16.55)	137 (13.91)	110 (10.96)	138 (14.33)	163 (16.53)	166 (16.57)	145 (12.98)
Sex																
Female	371 (36.37)	312 (32.50)	343 (33.69)	344 (32.12)	353 (37.88)	345 (35.03)	344 (34.03)	328 (28.75)	480 (44.82)	370 (36.67)	281 (28.53)	239 (23.80)	267 (27.73)	364 (36.92)	377 (37.62)	361 (32.32)
Male	649 (63.63)	648 (67.50)	675 (66.31)	727 (67.88)	579 (62.12)	640 (64.97)	667 (65.97)	813 (71.25)	591 (55.18)	639 (63.33)	704 (71.47)	765 (76.20)	696 (72.27)	622 (63.08)	625 (62.38)	756 (67.68)
Socioeconomic status																
Low	441 (43.24)	276 (28.75)	255 (25.05)	219 (20.45)	412 (44.21)	311 (31.57)	255 (25.22)	213 (18.67)	255 (23.81)	313 (31.02)	308 (31.27)	315 (31.37)	283 (29.39)	312 (31.64)	295 (29.44)	300 (26.86)
Intermediate	299 (29.31)	319 (33.23)	319 (31.34)	374 (34.92)	294 (31.55)	336 (34.11)	325 (32.15)	356 (31.20)	299 (27.92)	320 (31.71)	305 (30.96)	387 (38.55)	327 (33.96)	332 (33.67)	309 (30.84)	343 (30.71)
High	280 (27.45)	365 (38.02)	444 (43.61)	478 (44.63)	226 (24.25)	338 (34.31)	431 (42.63)	572 (50.13)	517 (48.27)	376 (37.26)	372 (37.77)	302 (30.08)	353 (36.66)	342 (34.69)	398 (39.72)	474 (42.44)
Body mass index																
Underweight	42 (4.12)	28 (2.92)	15 (1.47)	19 (1.77)	29 (3.11)	21 (2.13)	22 (2.18)	32 (2.80)	14 (1.31)	28 (2.78)	27 (2.74)	35 (3.49)	12 (1.25)	28 (2.84)	26 (2.59)	38 (3.40)
Normal weight	401 (39.31)	339 (35.31)	312 (30.65)	333 (31.09)	350 (37.55)	350 (35.53)	309 (30.56)	376 (32.95)	333 (31.09)	326 (32.31)	352 (35.74)	374 (37.25)	326 (33.85)	357 (36.21)	320 (31.94)	382 (34.20)
Overweight	384 (37.65)	398 (41.46)	427 (41.94)	455 (42.48)	372 (39.91)	387 (39.29)	434 (42.93)	471 (41.28)	442 (41.27)	414 (41.03)	417 (42.34)	391 (38.94)	407 (42.26)	411 (41.68)	407 (40.62)	438 (39.21)
Obese	193 (18.92)	195 (20.31)	264 (25.93)	264 (24.65)	181 (19.42)	227 (23.05)	246 (24.33)	262 (22.96)	282 (26.33)	241 (23.89)	189 (19.19)	204 (20.32)	218 (22.64)	190 (19.27)	249 (24.85)	259 (23.19)
Opium use																
Never user	800 (78.43)	788 (82.08)	879 (86.35)	908 (84.78)	743 (79.72)	818 (83.05)	881 (87.14)	933 (81.77)	990 (92.44)	876 (86.82)	806 (81.83)	703 (70.02)	806 (83.70)	812 (82.35)	830 (82.83)	926 (82.90)
Non-regular user	41 (4.02)	51 (5.31)	37 (3.63)	45 (4.20)	43 (4.61)	47 (4.77)	32 (3.17)	52 (4.56)	22 (2.05)	37 (3.67)	45 (4.57)	70 (6.97)	36 (3.74)	42 (4.26)	47 (4.69)	49 (4.39)
Regular user	179 (17.55)	121 (12.60)	102 (10.02)	118 (11.02)	146 (15.67)	120 (12.18)	98 (9.69)	156 (13.67)	59 (5.51)	96 (9.51)	134 (13.60)	231 (23.01)	121 (12.56)	132 (13.39)	125 (12.48)	142 (12.71)
Cigarette smoking																
Never	700 (68.63)	640 (66.67)	703 (69.06)	736 (68.72)	652 (69.96)	687 (69.75)	720 (71.22)	720 (63.10)	842 (78.62)	750 (74.33)	643 (65.28)	544 (54.18)	630 (65.42)	682 (69.17)	712 (71.06)	754 (67.50)
Ever	320 (31.37)	320 (33.33)	315 (30.94)	335 (31.28)	280 (30.04)	298 (30.25)	291 (28.78)	421 (36.90)	229 (21.38)	259 (25.67)	342 (34.72)	460 (45.82)	333 (34.58)	304 (30.83)	290 (28.94)	363 (32.50)
Waterpipe smoking																
No	962 (94.31)	910 (94.79)	958 (94.11)	979 (91.41)	883 (94.74)	935 (94.92)	943 (93.27)	1048 (91.85)	1023 (95.52)	958 (94.95)	918 (93.20)	910 (90.64)	887 (92.11)	919 (93.20)	943 (94.11)	1059 (94.81)
Yes	58 (5.69)	50 (5.21)	60 (5.89)	92 (8.59)	49 (5.26)	50 (5.08)	68 (6.73)	93 (8.15)	48 (4.48)	51 (5.05)	67 (6.80)	94 (9.36)	76 (7.89)	67 (6.80)	59 (5.89)	58 (5.19)
Intake of aspirin																
No	793 (77.75)	745 (77.60)	802 (78.78)	835 (77.96)	683 (73.28)	744 (75.53)	818 (80.91)	930 (81.51)	765 (71.43)	790 (78.30)	788 (80.00)	832 (82.87)	719 (74.66)	742 (75.25)	795 (79.34)	918 (82.18)
Yes	227 (22.25)	214 (22.29)	215 (21.12)	236 (22.04)	249 (26.72)	240 (24.37)	193 (19.09)	210 (18.40)	306 (28.57)	218 (21.61)	196 (19.90)	172 (17.13)	244 (25.34)	244 (24.75)	207 (20.66)	197 (17.64)
Missing	0 (0.00)	1 (0.10)	1 (0.10)	0 (0.00)	0 (0.00)	1 (0.10)	0 (0.00)	1 (0.09)	0 (0.00)	1 (0.10)	1 (0.10)	0 (0.00)	0 (0.00)	0 (0.00)	0 (0.00)	2 (0.18)
Family history of CRC																
No	823 (80.69)	753 (78.44)	779 (76.52)	831 (77.59)	755 (81.01)	788 (80.00)	779 (77.05)	864 (75.72)	830 (77.50)	807 (79.98)	769 (78.07)	780 (77.69)	759 (78.82)	763 (77.38)	797 (79.54)	866 (77.53)
Yes	197 (19.31)	207 (21.56)	239 (23.48)	240 (22.41)	177 (18.99)	197 (20.00)	232 (22.95)	277 (24.28)	241 (22.50)	202 (20.02)	216 (21.93)	224 (22.31)	204 (21.18)	223 (22.62)	205 (20.46)	251 (22.47)

Supplementary Table 3. Study participants' intake of food groups (g/day) according to quartiles of identified dietary patterns.

Food groups	Healthy diet				Western-type diet				Other				Dietary pattern high in unhealthy fats			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Processed meat	2.27 (9.17)	1.59 (4.30)	1.77 (5.51)	2.45 (8.60)	0.76 (3.55)	0.91 (2.37)	1.34 (3.55)	4.65 (12.32)	0.58 (1.86)	0.93 (2.48)	2.07 (5.30)	4.64 (12.87)	1.27 (5.24)	1.27 (3.82)	1.57 (4.61)	3.78 (11.48)
Organ meat	9.56 (28.78)	7.71 (11.18)	8.44 (13.56)	10.40 (16.65)	4.00 (6.50)	5.21 (7.63)	7.66 (9.49)	17.77 (31.58)	7.11 (14.92)	7.62 (14.35)	9.56 (23.42)	12.11 (21.19)	4.95 (7.08)	6.21 (9.43)	7.28 (9.74)	16.70 (31.77)
Total fish	5.38 (7.70)	6.94 (8.08)	11.11 (12.77)	16.27 (23.77)	6.30 (9.19)	8.34 (12.56)	10.28 (14.97)	14.38 (20.30)	12.92 (19.47)	8.95 (14.47)	8.62 (11.56)	9.49 (14.38)	9.04 (13.32)	8.32 (11.13)	10.00 (16.70)	12.51 (18.57)
Margarine and hydrogenated fats	8.86 (13.77)	7.85 (12.57	7.08 (12.52)	8.85 (15.85)	8.31 (13.98)	8.24 (13.36)	7.18 (13.03)	8.87 (14.66)	4.03 (9.07)	5.64 (9.53)	8.44 (11.82)	14.88 (19.67)	6.21 (11.67)	6.48 (11.07)	7.65 (12.60)	11.83 (17.54)
Dairy products	276.52 (176.70)	328.62 (180.70)	359.45 (222.25)	412.86 (279.77)	238.50 (163.60)	294.12 (164.79)	375.28 (190.23)	450.68 (284.53)	397.32 (255.37)	343.90 (234.96)	321.37 (183.20)	315.20 (210.58)	251.42 (156.53)	283.54 (161.50)	351.89 (175.11)	475.68 (293.21)
Coffee and tea	984.03 (752.50)	905.16 (641.84)	922.20 (848.89)	934.29 (826.25)	970.95 (807.43)	867.20 (735.74)	872.04 (622.41)	1026.59 (882.93)	511.30 (397.46)	733.91 (452.16)	919.76 (507.22)	1611.56 (1055.7)	1019.34 (871.42)	920.52 (730.10)	881.34 (708.06)	930.82 (775.20)
Fruit	193.36 (121.21)	279.90 (139.17)	378.12 (186.43)	629.08 (346.61)	316.05 (246.91)	341.71 (246.49)	367.70 (251.93)	457.25 (319.22)	410.92 (312.70)	337.29 (240.18)	359.84 (243.53)	388.19 (290.38)	449.54 (340.20)	351.80 (240.08)	329.43 (246.59)	371.15 (253.86)
Fruit juice	14.97 (41.18)	18.06 (38.30)	22.85 (43.17)	38.37 (69.07)	6.71 (12.68)	12.05 (21.12)	19.08 (28.97)	52.20 (82.11)	25.69 (61.32)	21.47 (50.22)	22.40 (38.53)	25.63 (49.25)	24.86 (61.70)	20.99 (44.05)	18.25 (35.93)	30.47 (56.15)
Vegetables	182.97 (80.28)	260.26 (74.66)	335.06 (98.53)	509.04 (272.96)	316.91 (279.84)	289.79 (156.01)	321.00 (156.02)	365.83 (182.21)	351.14 (203.50)	304.81 (157.41)	314.96 (243.03)	327.57 (183.66)	340.40 (267.40)	301.49 (155.81)	307.02 (175.57)	349.18 (182.27)
Bread	144.24 (125.43)	176.38 (135.63)	183.81 (145.25)	209.34 (183.21)	183.71 (159.43)	165.72 (145.24)	172.28 (133.59)	192.07 (163.34)	136.48 (102.53)	167.82 (131.84)	187.72 (152.29)	226.46 (192.86)	290.13 (206.34)	165.62 (114.89)	139.48 (104.45)	129.97 (104.10)
Pasta and rice	220.35 (192.78)	262.82 (168.37)	271.62 (170.19)	293.35 (212.56)	194.19 (153.17)	245.14 (171.94)	286.08 (185.38)	312.07 (213.82)	211.43 (152.18)	253.99 (171.59)	285.15 (204.94)	302.96 (211.75)	331.62 (219.19)	262.18 (176.93)	244.03 (169.26)	219.67 (171.93)
Cereals	3.16 (6.82)	5.86 (13.24)	6.04 (13.23)	8.19 (18.14)	2.86 (6.80)	4.64 (9.95)	6.61 (13.79)	8.64 (18.90)	10.07 (21.42)	4.85 (9.18)	4.27 (8.67)	3.87 (9.07)	4.60 (11.89)	5.33 (12.17)	5.68 (12.60)	7.51 (16.76)
Snacks	1.45 (5.24)	1.51 (6.13)	1.50 (5.78)	1.88 (7.18)	0.26 (1.11)	0.64 (2.04)	0.97 (2.54)	4.06 (10.75)	0.58 (2.93)	1.05 (3.85)	1.35 (3.75)	3.45 (10.49)	1.18 (3.88)	1.28 (5.86)	1.35 (4.76)	2.45 (8.53)
Nuts	3.34 (4.38)	5.04 (5.35)	6.82 (6.70)	10.19 (10.86)	2.64 (3.14)	3.87 (3.66)	6.29 (4.83)	11.81 (11.36)	9.13 (10.64)	5.55 (6.32)	5.44 (6.10)	5.35 (6.10)	6.02 (8.46)	5.81 (6.66)	5.90 (6.12)	7.76 (9.12)
Nonalcoholic beverages	46.18 (106.56)	39.50 (80.57)	43.71 (73.03)	60.87 (127.88)	17.01 (30.28)	24.46 (43.50)	40.52 (71.16)	99.75 (158.41)	19.74 (38.42)	33.95 (68.79)	47.96 (77.98)	91.72 (160.02)	51.66 (124.40)	38.52 (67.02)	39.33 (86.26)	60.51 (111.50)
Tomatoes	65.56 (38.27)	98.31 (52.00)	137.19 (68.62)	234.84 (161.68)	156.52 (158.19)	120.49 (93.54)	124.56 (88.84)	141.92 (107.01)	135.54 (120.93)	122.31 (89.50)	129.67 (95.25)	155.50 (142.87)	161.08 (128.34)	124.42 (94.66)	120.57 (99.10)	137.70 (127.82)
Legumes	18.62 (15.18)	26.00 (17.92)	34.08 (24.28)	48.61 (48.61)	35.24 (43.71)	28.63 (27.67)	29.86 (24.41)	34.59 (29.92)	29.60 (30.37)	28.62 (23.33)	31.80 (24.85)	38.65 (44.45)	34.18 (40.43)	29.79 (28.65)	30.07 (27.52)	34.27 (30.36)
Cakes and desserts	13.72 (19.48)	17.60 (26.28)	21.69 (32.84)	29.40 (34.27)	10.04 (11.18)	13.63 (13.58)	19.25 (19.25)	37.00 (45.98)	13.34 (18.07)	15.68 (19.63)	22.56 (28.44)	32.01 (42.29)	17.81 (21.82)	16.65 (19.39)	18.52 (24.08)	28.95 (42.64)
Sugar and candies	25.43 (27.37)	23.86 (21.53)	23.04 (22.20)	25.80 (24.05)	22.22 (21.77)	21.30 (21.14)	22.75 (21.86)	30.88 (28.18)	9.51 (9.06)	15.47 (10.47)	24.86 (13.13)	49.45 (31.85)	25.61 (29.79)	23.49 (22.10)	23.13 (23.63)	25.91 (23.12)
Olives and olive oil	0.65 (1.61)	1.27 (2.55)	2.42 (3.71)	4.18 (7.43)	0.70 (1.69)	1.43 (2.82)	2.18 (3.69)	4.01 (7.19)	4.51 (7.44)	1.69 (3.24)	1.31 (2.44)	1.01 (2.39)	2.53 (5.23)	2.01 (4.39)	1.79 (3.40)	2.34 (5.38)
Other oils and condiments/ dressings	7.07 (6.00)	9.73 (7.32)	13.75 (9.97)	20.84 (17.43)	13.61 (14.44)	11.25 (9.78)	12.60 (12.20)	14.34 (12.65)	11.32 (10.15)	11.98 (10.98)	13.94 (13.60)	14.87 (14.28)	13.50 (12.61)	12.04 (11.44)	11.97 (10.90)	14.33 (14.10)
Pickles	8.63 (15.41)	13.22 (18.68)	19.69 (25.12)	35.86 (44.26)	14.81 (24.84)	15.11 (22.61)	18.71 (30.83)	28.34 (37.39)	17.23 (29.03)	16.51 (24.76)	19.54 (29.53)	25.48 (36.44)	18.43 (25.17)	17.14 (26.02)	17.26 (26.25)	25.06 (39.57)
Red meat	12.54 (13.31)	15.58 (14.63)	19.46 (21.31)	23.37 (23.93)	8.25 (9.47)	12.58 (10.38)	18.67 (14.72)	29.47 (27.35)	17.89 (19.96)	16.71 (16.78)	17.89 (18.89)	18.86 (21.54)	10.44 (11.30)	13.79 (13.16)	16.87 (14.08)	28.67 (27.37)
Chicken meat	17.56 (12.05)	22.39 (14.30)	25.26 (16.86)	35.13 (29.87)	22.60 (20.44)	23.14 (20.92)	26.05 (19.08)	28.53 (21.96)	21.83 (15.55)	22.98 (17.61)	25.55 (22.43)	30.88 (25.35)	22.95 (19.09)	22.38 (18.02)	25.01 (17.01)	30.01 (26.12)
Eggs	15.65 (14.66)	19.90 (16.20)	22.98 (17.34)	32.75 (30.13)	22.81 (25.71)	21.64 (18.68)	21.80 (19.52)	25.34 (22.19)	16.21 (13.61)	18.99 (16.79)	24.78 (18.22)	32.47 (30.73)	16.90 (14.23)	17.56 (13.91)	22.01 (17.38)	33.92 (30.34)
Butter	1.22 (2.36)	1.47 (2.83)	1.65 (3.06)	2.15 (4.75)	0.64 (1.42)	1.05 (1.91)	1.63 (2.57)	2.94 (5.32)	1.25 (2.51)	1.64 (4.07)	1.59 (2.90)	2.05 (3.94)	1.00 (2.30)	1.18 (2.15)	1.50 (2.58)	2.68 (5.14)
Potatoes	27.08 (21.60)	36.16 (27.20)	38.89 (31.17)	54.78 (48.62)	52.88 (47.74)	36.38 (29.06)	34.10 (28.91)	35.93 (31.10)	23.93 (22.04)	33.77 (27.26)	44.32 (32.38)	57.00 (46.86)	41.45 (39.14)	37.33 (31.11)	37.17 (33.67)	41.73 (37.13)
Pizza	5.02 (21.77)	3.67 (8.95)	3.72 (9.36)	4.06 (10.83)	1.22 (3.23)	1.76 (4.03)	3.09 (6.04)	9.46 (24.17)	2.86 (7.64)	3.35 (15.04)	4.89 (15.59)	5.49 (15.50)	2.26 (5.78)	2.88 (8.03)	3.65 (9.19)	7.25 (22.78)
Salt	3.48 (2.69)	4.04 (3.04)	4.04 (3.04)	4.45 (3.54)	4.82 (3.90)	3.78 (2.79)	3.76 (2.85)	3.76 (2.77)	2.60 (1.51)	3.24 (2.07)	4.55 (3.03)	5.76 (4.20)	3.75 (2.70)	3.87 (2.87)	3.93 (3.02)	4.43 (3.66)

Reported values represent mean intakes (standard deviation).

Supplementary Table 4. Odds ratios (ORs) and corresponding 95% confidence intervals (CIs) for the association between dietary patterns identified from the factor analysis and colorectal cancer, stratified by specific participants' characteristics.

	Healthy diet			Western-type diet			Other		
	$OR_{Q4\ VS\ Q1}$ (95% CI)	p-value		$OR_{Q4\ VS\ Q1}$ (95% CI)	p-value		$OR_{Q4\ VS\ Q1}$ (95% CI)	p-value	
Stratum		**No correction**	**FDR correction**		**No correction**	**FDR correction**		**No correction**	**FDR correction**
Age									
<50 years	1.00 (0.56, 1.77)	0.995	1.000	1.96 (1.05, 3.65)	0.033	0.592	0.60 (0.35, 1.03)	0.065	1.000
≥50 years	1.69 (1.22, 2.34)	0.002	0.049	5.06 (3.70, 6.91)	<0.001	<0.001	0.92 (0.68, 1.23)	0.556	1.000
$p_{heterogeneity}$		0.023	0.439		0.003	0.067		0.362	1.000
Sex									
Female	1.25 (0.79, 1.98)	0.341	1.000	3.45 (2.25, 5.28)	<0.001	<0.001	0.74 (0.48, 1.14)	0.169	1.000
Male	1.75 (1.21, 2.54)	0.003	0.071	4.93 (3.37, 7.23)	<0.001	<0.001	1.02 (0.73, 1.42)	0.908	1.000
$p_{heterogeneity}$		0.485	1.000		0.162	1.000		0.676	1.000
Opium use									
Never	1.51 (1.11, 2.06)	0.008	0.196	3.84 (2.84, 5.18)	<0.001	<0.001	0.81 (0.61, 1.08)	0.155	1.000
Ever	1.58 (0.75, 3.30)	0.226	1.000	5.72 (2.74, 11.95)	<0.001	<0.001	1.34 (0.63, 2.85)	0.453	1.000
$p_{heterogeneity}$		0.279	1.000		0.027	0.509		0.500	1.000
Cigarette smoking									
Never	1.20 (0.86, 1.68)	0.274	1.000	3.61 (2.63, 4.96)	<0.001	<0.001	0.76 (0.56, 1.03)	0.073	1.000
Ever	2.56 (1.48, 4.45)	0.001	0.025	6.22 (3.44, 11.24)	<0.001	<0.001	1.52 (0.90, 2.57)	0.120	1.000
$p_{heterogeneity}$		0.344	1.000		0.283	1.000		0.632	1.000
Waterpipe smoking									
No	1.46 (1.09, 1.96)	0.011	0.241	4.30 (3.23, 5.73)	<0.001	<0.001	0.91 (0.69, 1.19)	0.483	1.000
Yes	2.46 (0.80, 7.56)	0.117	1.000	2.11 (0.66, 6.72)	0.208	1.000	1.11 (0.40, 3.04)	0.840	1.000
$p_{heterogeneity}$		0.052	0.861		0.658	1.000		0.105	1.000
Body mass index									
Underweight	1.71 (0.10, 28.42)	0.709	1.000	1.00 (0.12, 8.51)	1.000	1.000	0.42 (0.03, 5.39)	0.503	1.000
Normal weight	1.58 (0.95, 2.62)	0.077	1.000	7.87 (4.65, 13.32)	<0.001	<0.001	0.88 (0.54, 1.44)	0.610	1.000
Overweight	1.54 (1.00, 2.39)	0.050	0.843	3.04 (2.01, 4.61)	<0.001	<0.001	0.90 (0.61, 1.33)	0.596	1.000
Obese	1.28 (0.69, 2.37)	0.437	1.000	4.75 (2.59, 8.70)	<0.001	<0.001	0.91 (0.53, 1.55)	0.719	1.000
$p_{heterogeneity}$		0.786	1.000		0.097	1.000		0.981	1.000

FDR: false discovery rate

All dietary patterns identified through the factor analysis were included in the same model, which was further adjusted for: province (Tehran, Fars, Kerman, Golestan, Mazandaran, Kermanshah, Khorasan-Razavi), age (<30, 30-39, 40-49, 50-59, 60-69, ≥70), sex (female, male), opium use (never user, non-regular user, regular user), cigarette smoking (never, ever), regular waterpipe smoking (no, yes), socioeconomic status (low, intermediate, high), family history (yes, no), aspirin intake (yes, no), body mass index 1 year before diagnosis/interview (underweight, normal weight, overweight, bbese), total energy intake (quartiles).

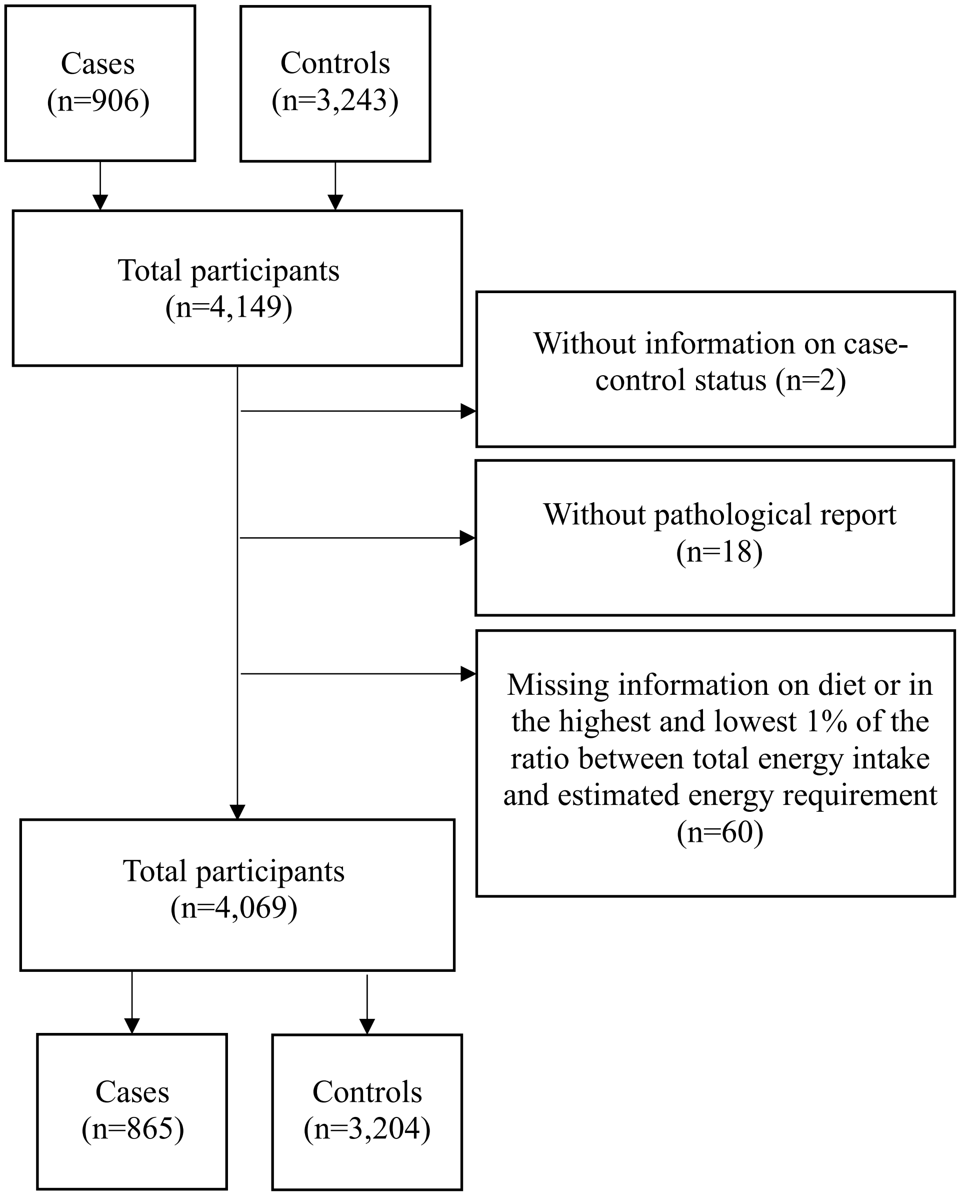
Supplementary Table 5. Odds ratios (ORs) and corresponding 95% confidence intervals (CIs) for the association between a dietary pattern high in unhealthy fats identified using reduced rank regression and colorectal cancer, stratified by specific participants' characteristics.

Stratum	$OR_{Q4\ VS\ Q1}$ (95% CI)	p-value No correction	p-value FDR correction
Age			
<50 years	1.92 (1.16, 3.17)	0.011	0.241
≥50 years	2.30 (1.78, 2.98)	<0.001	<0.001
$p_{heterogeneity}$		0.137	1.000
Sex			
Female	2.80 (1.87, 4.20)	<0.001	<0.001
Male	1.98 (1.49, 2.62)	<0.001	<0.001
$p_{heterogeneity}$		0.535	1.000
Opium use			
Never	2.22 (1.73, 2.86)	<0.001	<0.001
Ever	1.71 (0.97, 3.01)	0.065	1.000
$p_{heterogeneity}$		0.303	1.000
Cigarette smoking			
Never	2.06 (1.58, 2.69)	<0.001	<0.001
Ever	2.39 (1.53, 3.73)	<0.001	0.004
$p_{heterogeneity}$		0.874	1.000
Waterpipe smoking			
No	2.14 (1.69, 2.72)	<0.001	<0.001
Yes	2.79 (1.08, 7.17)	0.034	0.592
$p_{heterogeneity}$		0.895	1.000
Body mass index			
Underweight	1.76 (0.21, 14.91)	0.602	1.000
Normal weight	2.27 (1.50, 3.44)	<0.001	0.004
Overweight	2.18 (1.52, 3.11)	<0.001	0.001
Obese	2.19 (1.37, 3.52)	0.001	0.033
$p_{heterogeneity}$		0.504	1.000

FDR: false discovery rate

Analyses were adjusted for province (Tehran, Fars, Kerman, Golestan, Mazandaran, Kermanshah, Khorasan-Razavi), age (<30, 30-39, 40-49, 50-59, 60-69, ≥70), sex (female, male), opium use (never user, non-regular user, regular user), cigarette smoking (never, ever), regular waterpipe smoking (no, yes), socioeconomic status (low, intermediate, high), family history (yes, no), aspirin intake (yes, no), body mass index 1 year before diagnosis/interview (underweight, normal weight, overweight, bbese), total energy intake (quartiles).

Supplementary Figure 1. Flow diagram describing steps of study participants' inclusion and exclusion in the analysis.



Supplementary Figure 2. Scree plot representing eigenvalues for each factor.