

1. The details of Thyroid Cancer Frequency by Sex in Iran (2014-2017)

Supplementary Table 1: Thyroid Cancer Frequency by Province and Sex

Province	Total N (%)	Female N (%)	Male N (%)
Alborz	372 (2.03)	283 (76.08)	89 (23.92)
Ardabil	215 (1.17)	171 (79.53)	44 (20.47)
Bushehr	309 (1.69)	249 (80.58)	60 (19.42)
Chaharmahal-and-Bakhtiari	408 (2.23)	308 (75.49)	100 (24.51)
East Azerbaijan	1155 (6.3)	899 (77.84)	256 (22.16)
Fars	1942 (10.59)	1537 (79.15)	405 (20.85)
Gilan	938 (5.12)	776 (82.73)	162 (17.27)
Golestan	290 (1.58)	226 (77.93)	64 (22.07)
Hamedan	300 (1.64)	234 (78)	66 (22)
Hormozgan	204 (1.11)	162 (79.41)	42 (20.59)
Ilam	113 (0.62)	91 (80.53)	22 (19.47)
Isfahan	2395 (13.06)	1954 (81.59)	441 (18.41)
Kerman	714 (3.89)	581 (81.37)	133 (18.63)
Kermanshah	421 (2.3)	329 (78.15)	92 (21.85)
Khuzestan	502 (2.74)	393 (78.29)	109 (21.71)
Kohgiluyeh-and-BoyerAhmad	434 (2.37)	359 (82.72)	75 (17.28)
Kurdistan	169 (0.92)	134 (79.29)	35 (20.71)
Lorestan	218 (1.19)	167 (76.61)	51 (23.39)
Markazi	297 (1.62)	211 (71.04)	86 (28.96)
Mazandaran	834 (4.55)	687 (82.37)	147 (17.63)
North-Khorasan	105 (0.57)	80 (76.19)	25 (23.81)
Qazvin	216 (1.18)	167 (77.31)	49 (22.69)
Qom	311 (1.7)	251 (80.71)	60 (19.29)
Razavi-Khorasan	1190 (6.49)	901 (75.71)	289 (24.29)
Semnan	70 (0.38)	51 (72.86)	19 (27.14)
Sistan-and-Baluchestan	255 (1.39)	193 (75.69)	62 (24.31)
South-Khorasan	107 (0.58)	79 (73.83)	28 (26.17)
Tehran	2554 (13.93)	1980 (77.53)	574 (22.47)
West Azerbaijan	318 (1.73)	228 (71.7)	90 (28.3)
Yazd	855 (4.66)	724 (84.68)	131 (15.32)
Zanjan	125 (0.68)	101 (80.8)	24 (19.2)
Total	18336 (100)	14506 (79.11)	3830 (20.89)

Supplementary Table 2: Mean Age of Thyroid Cancer Frequency by Province and Sex

Province	Mean Age (SD)		
	Total	Female	Male
Alborz	45.12 (16.04)	44.03 (15.21)	48.61 (18.11)
Ardabil	47.02 (16.2)	46.18 (15.65)	50.32 (18.03)
Bushehr	42.88 (13.65)	42.59 (13.23)	44.08 (15.33)
Chaharmahal-and-Bakhtiari	42.62 (15.58)	40.7 (14.15)	48.52 (18.18)
East Azerbaijan	45.59 (14.51)	44.82 (14.16)	48.27 (15.42)
Fars	42.73 (15.35)	42.14 (14.84)	44.96 (17)
Gilan	44.66 (14.89)	44.45 (14.52)	45.67 (16.59)
Golestan	42.76 (14.95)	41.44 (14.59)	47.41 (15.39)
Hamedan	46.04 (17.25)	45.47 (17.2)	48.06 (17.39)
Hormozgan	41.78 (16.32)	40.3 (15.9)	47.52 (16.81)
Ilam	43.89 (13.01)	45.2 (12.48)	38.5 (14.05)
Isfahan	42.51 (14.73)	41.64 (14.16)	46.36 (16.5)
Kerman	41.55 (15.52)	41.3 (15.32)	42.64 (16.37)
Kermanshah	43.92 (15.96)	42.5 (15.08)	48.97 (17.97)
Khuzestan	43.51 (16.33)	43.02 (15.94)	45.26 (17.64)
Kohgiluyeh-and-BoyerAhmad	42.69 (15.23)	41.31 (14.06)	49.28 (18.63)
Kurdistan	43.31 (17.33)	41.98 (16.21)	48.4 (20.54)
Lorestan	45.6 (17.16)	43.88 (16.98)	51.22 (16.69)
Markazi	45.01 (16.93)	44.47 (16.05)	46.33 (18.96)
Mazandaran	41.81 (14.76)	40.76 (14.12)	46.73 (16.63)
North-Khorasan	42.54 (15.45)	42.12 (16.02)	43.88 (13.68)
Qazvin	47.69 (16.76)	46.68 (16.77)	51.14 (16.4)
Qom	42.6 (15.2)	42.35 (15.25)	43.67 (15.08)
Razavi-Khorasan	45.87 (16.92)	44.52 (16.48)	50.08 (17.58)
Semnan	44.51 (16.9)	41.14 (14.27)	53.58 (20.25)
Sistan-and-Baluchestan	39.05 (14.43)	37.96 (13.54)	42.45 (16.56)
South-Khorasan	48.36 (18.06)	46.66 (17.1)	53.18 (20.09)
Tehran	44.49 (15.37)	43.84 (14.66)	46.75 (17.42)
West Azerbaijan	47.3 (16.69)	45.89 (16.36)	50.87 (17.06)
Yazd	40.79 (13.43)	40.57 (13.18)	42.02 (14.74)
Zanjan	45.5 (16.29)	43.67 (14.98)	53.21 (19.46)
Total	46.67 (15.48)	42.82 (14.91)	46.87 (17.10)

Supplementary Table 3: Thyroid Cancer Frequency by Year and Sex

Year	Total N (%)	Female N (%)	Male N (%)
2014	3558 (19.40)	2716 (76)	842 (21)
2015	3922 (21.39)	3094 (79)	828 (21)
2016	5122 (27.93)	4103 (80)	1019 (20)
2017	5734 (31.27)	4593 (80)	1141 (20)

Supplementary Table 4: Thyroid Cancer Tumor Grade Frequency by Province and Sex

Grade	Total N (%)	Female N (%)	Male N (%)
1	1264 (6.89)	1010 (80)	254 (20)
2	480 (2.62)	383 (80)	97 (20)
3	303 (1.65)	213 (70)	90 (30)
4	100 (0.55)	67 (67)	33 (33)
5	1 (0.01)	0 ()	1 (100)
6	15 (0.08)	8 (53)	7 (47)
9	16173 (88.20)	12825 (79)	3348 (21)

Supplementary Table 5: Thyroid Cancer Report Type Frequency by Province and Sex

Report	Total N (%)	Female N (%)	Male N (%)
Clinical Investigation	1330 (7.25)	1010 (76)	320 (24)
Cytology Report	867 (4.73)	700 (81)	167 (19)
Death Certificate	205 (1.12)	127 (62)	78 (38)
Pathology Report	15934 (86.90)	12669 (79)	3265 (21)

2. The details of Annual Percent Change and Poisson Regression Analysis By province and Sex in Iran (2014-2017)

Annual Percent Change (APC) in ASR for Entire Country (2014-2017):

Females: APC = 22.59%

Males: APC = 15.25%

Entire Population: APC = 20.81%

Poisson Regression Results in Female:

Coefficient for Year: 0.1849

Rate Ratio (RR) per Year: 1.2031

95% Confidence Interval for RR: [1.1854, 1.2210]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Female ($p < 0.05$)

Poisson Regression Results in Male:

Coefficient for Year: 0.1140

Rate Ratio (RR) per Year: 1.1208

95% Confidence Interval for RR: [1.0893, 1.1532]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Male ($p < 0.05$)

Poisson Regression Results in Entire Population:

Coefficient for Year: 0.1700

Rate Ratio (RR) per Year: 1.1853

95% Confidence Interval for RR: [1.1698, 1.2009]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Total ($p < 0.05$)

Poisson Regression Results for Alborz (Female):

Coefficient for Year: 0.2878

Rate Ratio (RR) per Year: 1.3335

95% Confidence Interval for RR: [1.1972, 1.4854]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Alborz (Female) ($p < 0.05$)

Poisson Regression Results for Alborz (Male):

Coefficient for Year: 0.1401

Rate Ratio (RR) per Year: 1.1504

95% Confidence Interval for RR: [0.9538, 1.3875]

P-value: 0.1428

Result: No statistically significant change in TC incidence over time for Alborz (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Alborz (Total):

Coefficient for Year: 0.2517

Rate Ratio (RR) per Year: 1.2862

95% Confidence Interval for RR: [1.1716, 1.4121]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Alborz (Total) ($p < 0.05$)

Poisson Regression Results for Ardabil (Female):

Coefficient for Year: 0.1340

Rate Ratio (RR) per Year: 1.1434

95% Confidence Interval for RR: [0.9989, 1.3088]

P-value: 0.0518

Result: No statistically significant change in TC incidence over time for Ardabil (Female) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Ardabil (Male):

Coefficient for Year: 0.2402

Rate Ratio (RR) per Year: 1.2715

95% Confidence Interval for RR: [0.9699, 1.6669]

P-value: 0.0821

Result: No statistically significant change in TC incidence over time for Ardabil (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Ardabil (Total):

Coefficient for Year: 0.1555

Rate Ratio (RR) per Year: 1.1682

95% Confidence Interval for RR: [1.0353, 1.3182]

P-value: 0.0116

Result: Statistically significant change in TC incidence over time for Ardabil (Total) ($p < 0.05$)

Poisson Regression Results for Bushehr (Female):

Coefficient for Year: 0.3578

Rate Ratio (RR) per Year: 1.4301

95% Confidence Interval for RR: [1.2720, 1.6078]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Bushehr (Female) ($p < 0.05$)

Poisson Regression Results for Bushehr (Male):

Coefficient for Year: 0.2865

Rate Ratio (RR) per Year: 1.3317

95% Confidence Interval for RR: [1.0536, 1.6832]

P-value: 0.0165

Result: Statistically significant change in TC incidence over time for Bushehr (Male) ($p < 0.05$)

Poisson Regression Results for Bushehr (Total):

Coefficient for Year: 0.3437

Rate Ratio (RR) per Year: 1.4101

95% Confidence Interval for RR: [1.2699, 1.5658]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Bushehr (Total) ($p < 0.05$)

Poisson Regression Results for Chaharmahal-and-Bakhtiari (Female):

Coefficient for Year: 0.1279

Rate Ratio (RR) per Year: 1.1364

95% Confidence Interval for RR: [1.0277, 1.2566]

P-value: 0.0127

Result: Statistically significant change in TC incidence over time for Chaharmahal-and-Bakhtiari (Female)
($p < 0.05$)

Poisson Regression Results for Chaharmahal-and-Bakhtiari (Male):

Coefficient for Year: 0.2865

Rate Ratio (RR) per Year: 1.3317

95% Confidence Interval for RR: [1.1108, 1.5966]

P-value: 0.0020

Result: Statistically significant change in TC incidence over time for Chaharmahal-and-Bakhtiari (Male)
($p < 0.05$)

Poisson Regression Results for Chaharmahal-and-Bakhtiari (Total):

Coefficient for Year: 0.1660

Rate Ratio (RR) per Year: 1.1806

95% Confidence Interval for RR: [1.0813, 1.2889]

P-value: 0.0002

Result: Statistically significant change in TC incidence over time for Chaharmahal-and-Bakhtiari (Total)
($p < 0.05$)

Poisson Regression Results for East Azerbaijan (Female):

Coefficient for Year: 0.3394

Rate Ratio (RR) per Year: 1.4041

95% Confidence Interval for RR: [1.3206, 1.4929]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for East Azerbaijan (Female) ($p < 0.05$)

Poisson Regression Results for East Azerbaijan (Male):

Coefficient for Year: 0.1894

Rate Ratio (RR) per Year: 1.2085

95% Confidence Interval for RR: [1.0813, 1.3507]

P-value: 0.0008

Result: Statistically significant change in TC incidence over time for East Azerbaijan (Male) ($p < 0.05$)

Poisson Regression Results for East Azerbaijan (Total):

Coefficient for Year: 0.3053

Rate Ratio (RR) per Year: 1.3570

95% Confidence Interval for RR: [1.2861, 1.4318]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for East Azerbaijan (Total) ($p < 0.05$)

Poisson Regression Results for Fars (Female):

Coefficient for Year: 0.1474

Rate Ratio (RR) per Year: 1.1588

95% Confidence Interval for RR: [1.1077, 1.2123]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Fars (Female) ($p < 0.05$)

Poisson Regression Results for Fars (Male):

Coefficient for Year: 0.1300

Rate Ratio (RR) per Year: 1.1388

95% Confidence Interval for RR: [1.0432, 1.2433]

P-value: 0.0037

Result: Statistically significant change in TC incidence over time for Fars (Male) ($p < 0.05$)

Poisson Regression Results for Fars (Total):

Coefficient for Year: 0.1438

Rate Ratio (RR) per Year: 1.1546

95% Confidence Interval for RR: [1.1092, 1.2019]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Fars (Total) ($p < 0.05$)

Poisson Regression Results for Gilan (Female):

Coefficient for Year: 0.2704

Rate Ratio (RR) per Year: 1.3105

95% Confidence Interval for RR: [1.2282, 1.3983]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Gilan (Female) ($p < 0.05$)

Poisson Regression Results for Gilan (Male):

Coefficient for Year: 0.1794

Rate Ratio (RR) per Year: 1.1965

95% Confidence Interval for RR: [1.0406, 1.3758]

P-value: 0.0118

Result: Statistically significant change in TC incidence over time for Gilan (Male) ($p < 0.05$)

Poisson Regression Results for Gilan (Total):

Coefficient for Year: 0.2544

Rate Ratio (RR) per Year: 1.2897

95% Confidence Interval for RR: [1.2161, 1.3679]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Gilan (Total) ($p < 0.05$)

Poisson Regression Results for Golestan (Female):

Coefficient for Year: 0.2823

Rate Ratio (RR) per Year: 1.3262

95% Confidence Interval for RR: [1.1755, 1.4961]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Golestan (Female) ($p < 0.05$)

Poisson Regression Results for Golestan (Male):

Coefficient for Year: -0.0000

Rate Ratio (RR) per Year: 1.0000

95% Confidence Interval for RR: [0.8032, 1.2450]

P-value: 1.0000

Result: No statistically significant change in TC incidence over time for Golestan (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Golestan (Total):

Coefficient for Year: 0.2181

Rate Ratio (RR) per Year: 1.2437

95% Confidence Interval for RR: [1.1197, 1.3814]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Golestan (Total) ($p < 0.05$)

Poisson Regression Results for Hamedan (Female):

Coefficient for Year: 0.0960

Rate Ratio (RR) per Year: 1.1007

95% Confidence Interval for RR: [0.9811, 1.2349]

P-value: 0.1020

Result: No statistically significant change in TC incidence over time for Hamedan (Female) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Hamedan (Male):

Coefficient for Year: 0.0000

Rate Ratio (RR) per Year: 1.0000

95% Confidence Interval for RR: [0.8059, 1.2408]

P-value: 1.0000

Result: No statistically significant change in TC incidence over time for Hamedan (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Hamedan (Total):

Coefficient for Year: 0.0748

Rate Ratio (RR) per Year: 1.0777

95% Confidence Interval for RR: [0.9737, 1.1927]

P-value: 0.1485

Result: No statistically significant change in TC incidence over time for Hamedan (Total) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Hormozgan (Female):

Coefficient for Year: 0.1541

Rate Ratio (RR) per Year: 1.1666

95% Confidence Interval for RR: [1.0151, 1.3408]

P-value: 0.0299

Result: Statistically significant change in TC incidence over time for Hormozgan (Female) ($p < 0.05$)

Poisson Regression Results for Hormozgan (Male):

Coefficient for Year: 0.2122

Rate Ratio (RR) per Year: 1.2364

95% Confidence Interval for RR: [0.9385, 1.6288]

P-value: 0.1314

Result: No statistically significant change in TC incidence over time for Hormozgan (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Hormozgan (Total):

Coefficient for Year: 0.1660

Rate Ratio (RR) per Year: 1.1806

95% Confidence Interval for RR: [1.0427, 1.3366]

P-value: 0.0088

Result: Statistically significant change in TC incidence over time for Hormozgan (Total) ($p < 0.05$)

Poisson Regression Results for Ilam (Female):

Coefficient for Year: 0.3598

Rate Ratio (RR) per Year: 1.4331

95% Confidence Interval for RR: [1.1805, 1.7397]

P-value: 0.0003

Result: Statistically significant change in TC incidence over time for Ilam (Female) ($p < 0.05$)

Poisson Regression Results for Ilam (Male):

Coefficient for Year: 0.1835

Rate Ratio (RR) per Year: 1.2015

95% Confidence Interval for RR: [0.8224, 1.7553]

P-value: 0.3426

Result: No statistically significant change in TC incidence over time for Ilam (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Ilam (Total):

Coefficient for Year: 0.3243

Rate Ratio (RR) per Year: 1.3831

95% Confidence Interval for RR: [1.1642, 1.6432]

P-value: 0.0002

Result: Statistically significant change in TC incidence over time for Ilam (Total) ($p < 0.05$)

Poisson Regression Results for Isfahan (Female):

Coefficient for Year: 0.1600

Rate Ratio (RR) per Year: 1.1735

95% Confidence Interval for RR: [1.1274, 1.2215]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Isfahan (Female) ($p < 0.05$)

Poisson Regression Results for Isfahan (Male):

Coefficient for Year: 0.1432

Rate Ratio (RR) per Year: 1.1540

95% Confidence Interval for RR: [1.0608, 1.2554]

P-value: 0.0009

Result: Statistically significant change in TC incidence over time for Isfahan (Male) ($p < 0.05$)

Poisson Regression Results for Isfahan (Total):

Coefficient for Year: 0.1569

Rate Ratio (RR) per Year: 1.1699

95% Confidence Interval for RR: [1.1283, 1.2130]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Isfahan (Total) ($p < 0.05$)

Poisson Regression Results for Kerman (Female):

Coefficient for Year: -0.0296

Rate Ratio (RR) per Year: 0.9708

95% Confidence Interval for RR: [0.9027, 1.0441]

P-value: 0.4250

Result: No statistically significant change in TC incidence over time for Kerman (Female) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Kerman (Male):

Coefficient for Year: 0.1238

Rate Ratio (RR) per Year: 1.1318

95% Confidence Interval for RR: [0.9713, 1.3190]

P-value: 0.1126

Result: No statistically significant change in TC incidence over time for Kerman (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Kerman (Total):

Coefficient for Year: -0.0011

Rate Ratio (RR) per Year: 0.9989

95% Confidence Interval for RR: [0.9355, 1.0666]

P-value: 0.9733

Result: No statistically significant change in TC incidence over time for Kerman (Total) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Kermanshah (Female):

Coefficient for Year: 0.2232

Rate Ratio (RR) per Year: 1.2500

95% Confidence Interval for RR: [1.1325, 1.3797]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Kermanshah (Female) ($p < 0.05$)

Poisson Regression Results for Kermanshah (Male):

Coefficient for Year: 0.0959

Rate Ratio (RR) per Year: 1.1007

95% Confidence Interval for RR: [0.9161, 1.3223]

P-value: 0.3056

Result: No statistically significant change in TC incidence over time for Kermanshah (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Kermanshah (Total):

Coefficient for Year: 0.1949

Rate Ratio (RR) per Year: 1.2152

95% Confidence Interval for RR: [1.1142, 1.3255]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Kermanshah (Total) ($p < 0.05$)

Poisson Regression Results for Khuzestan (Female):

Coefficient for Year: 0.0356

Rate Ratio (RR) per Year: 1.0363

95% Confidence Interval for RR: [0.9485, 1.1321]

P-value: 0.4299

Result: No statistically significant change in TC incidence over time for Khuzestan (Female) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Khuzestan (Male):

Coefficient for Year: -0.0257

Rate Ratio (RR) per Year: 0.9746

95% Confidence Interval for RR: [0.8239, 1.1529]

P-value: 0.7643

Result: No statistically significant change in TC incidence over time for Khuzestan (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Khuzestan (Total):

Coefficient for Year: 0.0223

Rate Ratio (RR) per Year: 1.0226

95% Confidence Interval for RR: [0.9456, 1.1058]

P-value: 0.5763

Result: No statistically significant change in TC incidence over time for Khuzestan (Total) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Kohgiluyeh-and-BoyerAhmad (Female):

Coefficient for Year: 0.1174

Rate Ratio (RR) per Year: 1.1246

95% Confidence Interval for RR: [1.0247, 1.2343]

P-value: 0.0134

Result: Statistically significant change in TC incidence over time for Kohgiluyeh-and-BoyerAhmad (Female) ($p < 0.05$)

Poisson Regression Results for Kohgiluyeh-and-BoyerAhmad (Male):

Coefficient for Year: 0.0801

Rate Ratio (RR) per Year: 1.0834

95% Confidence Interval for RR: [0.8844, 1.3273]

P-value: 0.4390

Result: No statistically significant change in TC incidence over time for Kohgiluyeh-and-BoyerAhmad (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Kohgiluyeh-and-BoyerAhmad (Total):

Coefficient for Year: 0.1110

Rate Ratio (RR) per Year: 1.1174

95% Confidence Interval for RR: [1.0267, 1.2160]

P-value: 0.0101

Result: Statistically significant change in TC incidence over time for Kohgiluyeh-and-BoyerAhmad (Total) ($p < 0.05$)

Poisson Regression Results for Kurdistan (Female):

Coefficient for Year: 0.4687

Rate Ratio (RR) per Year: 1.5979

95% Confidence Interval for RR: [1.3541, 1.8857]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Kurdistan (Female) ($p < 0.05$)

Poisson Regression Results for Kurdistan (Male):

Coefficient for Year: 0.0801

Rate Ratio (RR) per Year: 1.0834

95% Confidence Interval for RR: [0.8049, 1.4583]

P-value: 0.5970

Result: No statistically significant change in TC incidence over time for Kurdistan (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Kurdistan (Total):

Coefficient for Year: 0.3818

Rate Ratio (RR) per Year: 1.4649

95% Confidence Interval for RR: [1.2695, 1.6905]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Kurdistan (Total) ($p < 0.05$)

Poisson Regression Results for Lorestan (Female):

Coefficient for Year: 0.1033

Rate Ratio (RR) per Year: 1.1088

95% Confidence Interval for RR: [0.9676, 1.2707]

P-value: 0.1373

Result: No statistically significant change in TC incidence over time for Lorestan (Female) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Lorestan (Male):

Coefficient for Year: 0.1500

Rate Ratio (RR) per Year: 1.1618

95% Confidence Interval for RR: [0.9068, 1.4885]

P-value: 0.2356

Result: No statistically significant change in TC incidence over time for Lorestan (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Lorestan (Total):

Coefficient for Year: 0.1142

Rate Ratio (RR) per Year: 1.1210

95% Confidence Interval for RR: [0.9948, 1.2631]

P-value: 0.0609

Result: No statistically significant change in TC incidence over time for Lorestan (Total) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Markazi (Female):

Coefficient for Year: 0.3679

Rate Ratio (RR) per Year: 1.4447

95% Confidence Interval for RR: [1.2716, 1.6414]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Markazi (Female) ($p < 0.05$)

Poisson Regression Results for Markazi (Male):

Coefficient for Year: 0.1975

Rate Ratio (RR) per Year: 1.2184

95% Confidence Interval for RR: [1.0053, 1.4765]

P-value: 0.0440

Result: Statistically significant change in TC incidence over time for Markazi (Male) ($p < 0.05$)

Poisson Regression Results for Markazi (Total):

Coefficient for Year: 0.3171

Rate Ratio (RR) per Year: 1.3732

95% Confidence Interval for RR: [1.2350, 1.5268]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Markazi (Total) ($p < 0.05$)

Poisson Regression Results for Mazandaran (Female):

Coefficient for Year: 0.2679

Rate Ratio (RR) per Year: 1.3072

95% Confidence Interval for RR: [1.2201, 1.4005]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Mazandaran (Female) ($p < 0.05$)

Poisson Regression Results for Mazandaran (Male):

Coefficient for Year: 0.1617

Rate Ratio (RR) per Year: 1.1755

95% Confidence Interval for RR: [1.0157, 1.3606]

P-value: 0.0301

Result: Statistically significant change in TC incidence over time for Mazandaran (Male) ($p < 0.05$)

Poisson Regression Results for Mazandaran (Total):

Coefficient for Year: 0.2489

Rate Ratio (RR) per Year: 1.2826

95% Confidence Interval for RR: [1.2051, 1.3650]

P-value: 0.0000

Result: Statistically significant change in TC incidence over time for Mazandaran (Total) ($p < 0.05$)

Poisson Regression Results for North-Khorasan (Female):

Coefficient for Year: 0.1612

Rate Ratio (RR) per Year: 1.1749

95% Confidence Interval for RR: [0.9637, 1.4324]

P-value: 0.1109

Result: No statistically significant change in TC incidence over time for North-Khorasan (Female) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for North-Khorasan (Male):

Coefficient for Year: 0.2779

Rate Ratio (RR) per Year: 1.3204

95% Confidence Interval for RR: [0.9192, 1.8965]

P-value: 0.1325

Result: No statistically significant change in TC incidence over time for North-Khorasan (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for North-Khorasan (Total):

Coefficient for Year: 0.1885

Rate Ratio (RR) per Year: 1.2075

95% Confidence Interval for RR: [1.0150, 1.4365]

P-value: 0.0333

Result: Statistically significant change in TC incidence over time for North-Khorasan (Total) ($p < 0.05$)

Poisson Regression Results for Qazvin (Female):

Coefficient for Year: 0.0072

Rate Ratio (RR) per Year: 1.0072

95% Confidence Interval for RR: [0.8794, 1.1535]

P-value: 0.9173

Result: No statistically significant change in TC incidence over time for Qazvin (Female) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Qazvin (Male):

Coefficient for Year: 0.1562

Rate Ratio (RR) per Year: 1.1690

95% Confidence Interval for RR: [0.9077, 1.5056]

P-value: 0.2264

Result: No statistically significant change in TC incidence over time for Qazvin (Male) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Qazvin (Total):

Coefficient for Year: 0.0408

Rate Ratio (RR) per Year: 1.0416

95% Confidence Interval for RR: [0.9244, 1.1737]

P-value: 0.5033

Result: No statistically significant change in TC incidence over time for Qazvin (Total) ($p \geq 0.05$ or insufficient data)

Poisson Regression Results for Qom (Female):

...

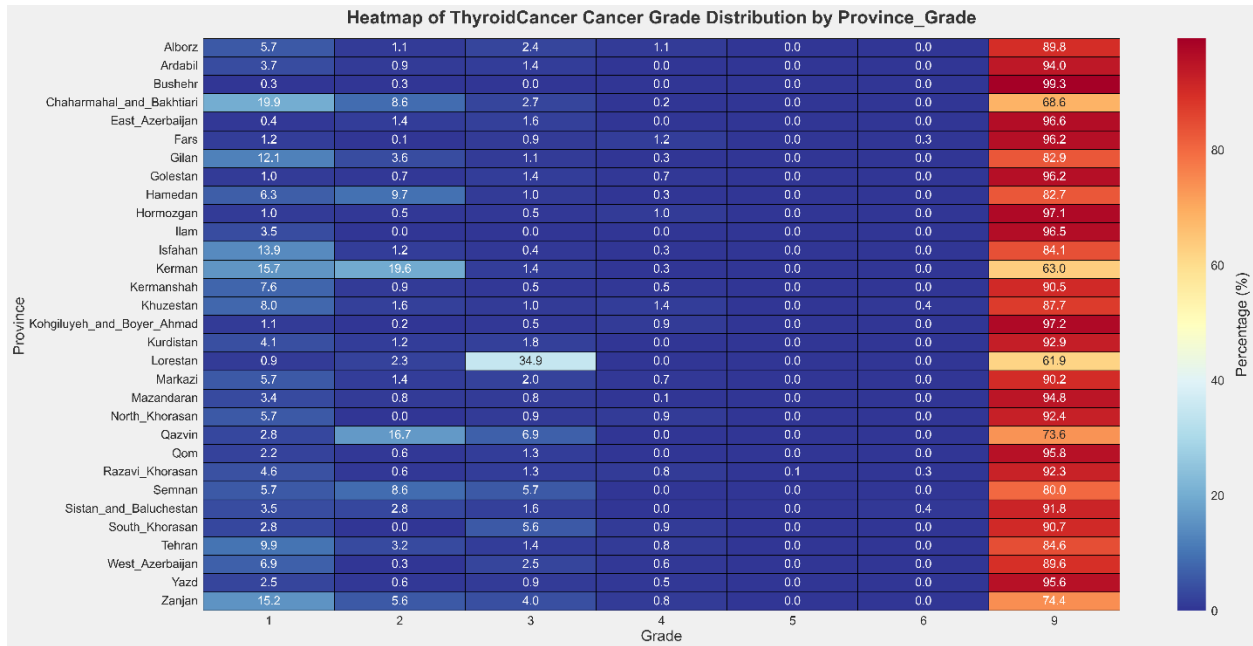
Rate Ratio (RR) per Year: 0.9904

95% Confidence Interval for RR: [0.8467, 1.1586]

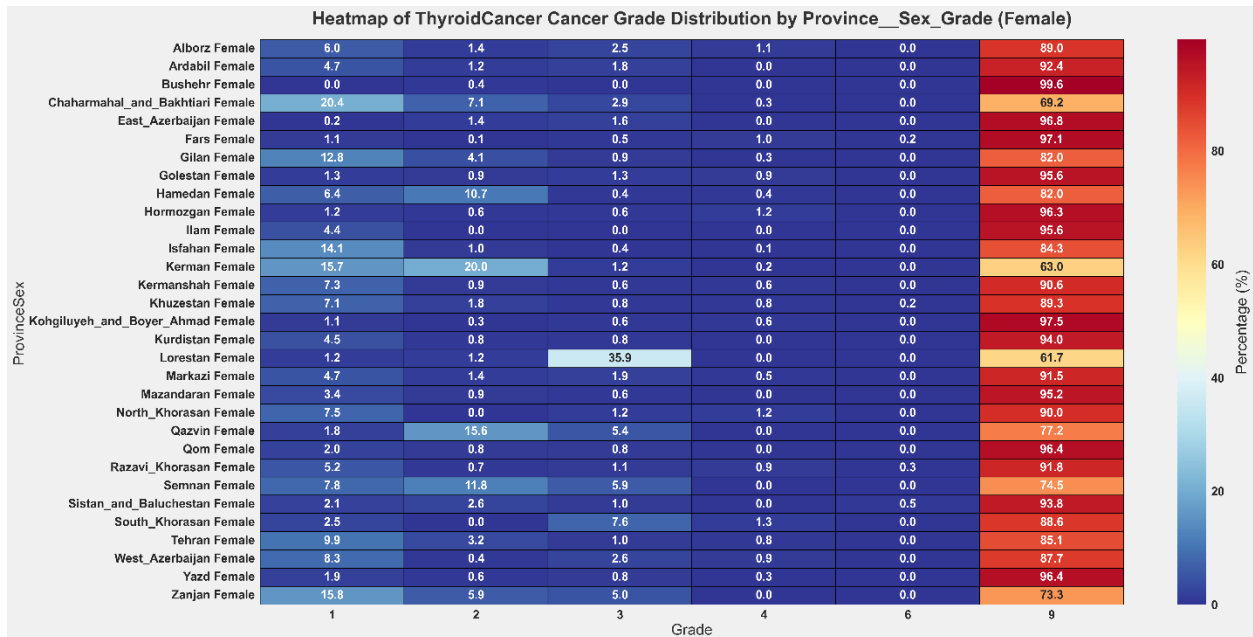
P-value: 0.9045

Result: No statistically significant change in TC incidence over time for Zanjan (Total) ($p \geq 0.05$ or insufficient data)

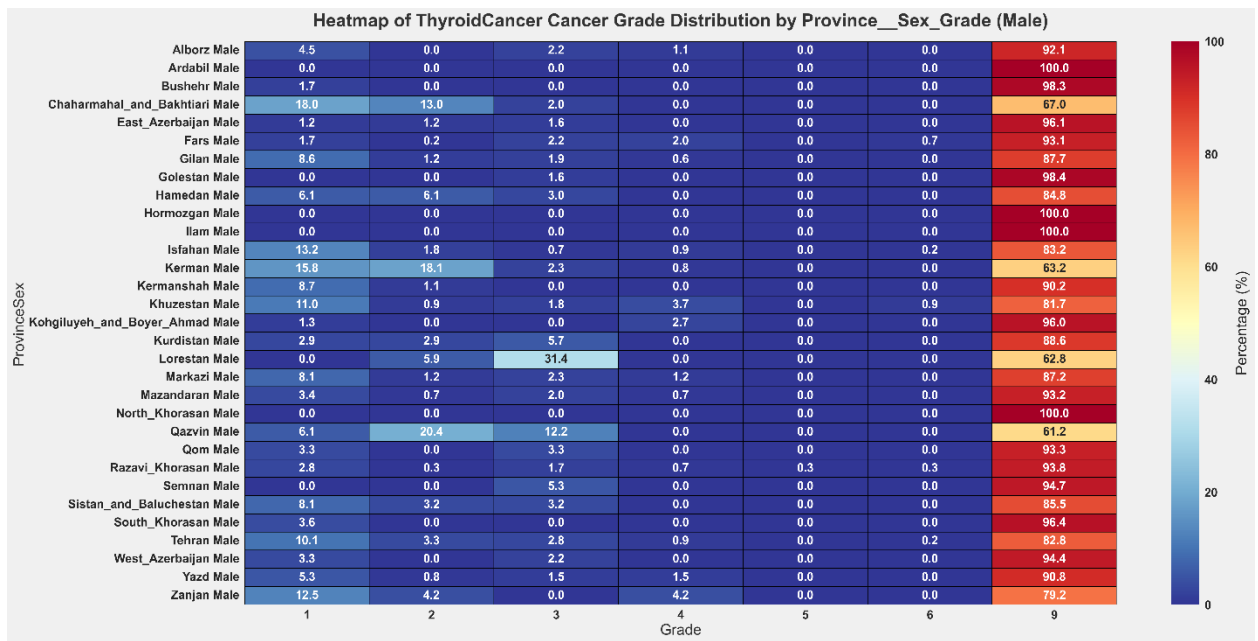
3. Thyroid Cancer Grade Distribution in Iran (2014-2017)



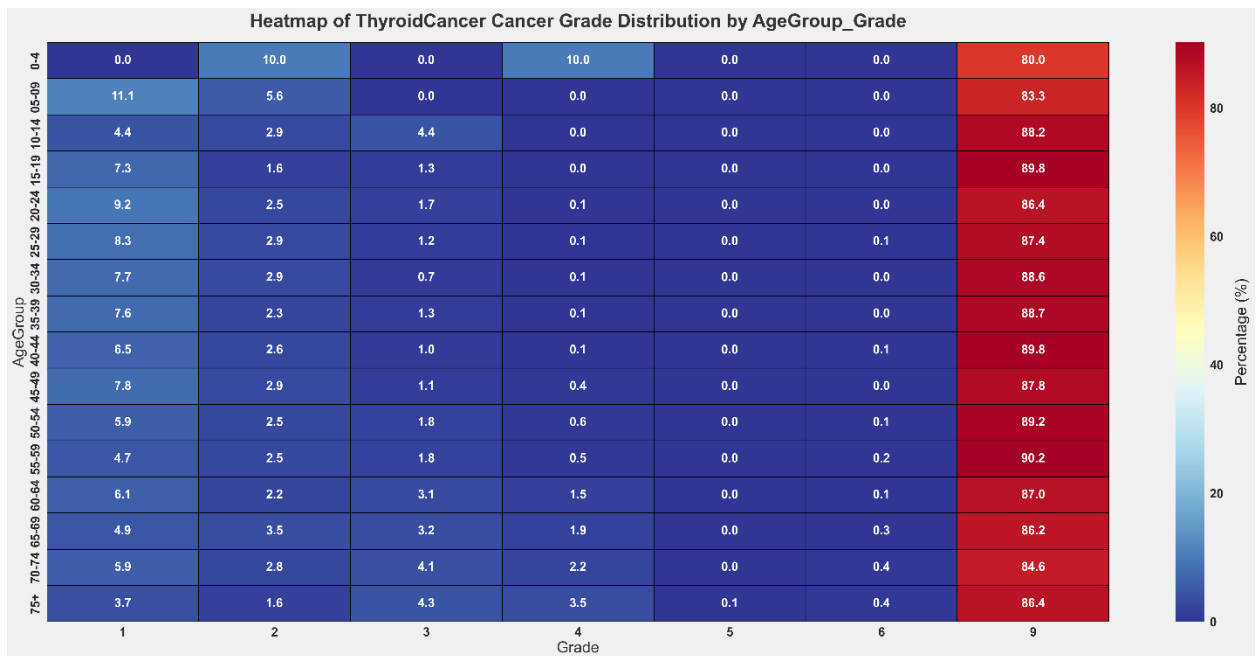
Supplementary Figure 1: Heatmap of Thyroid Cancer Grade Distribution by Province in Entire Population



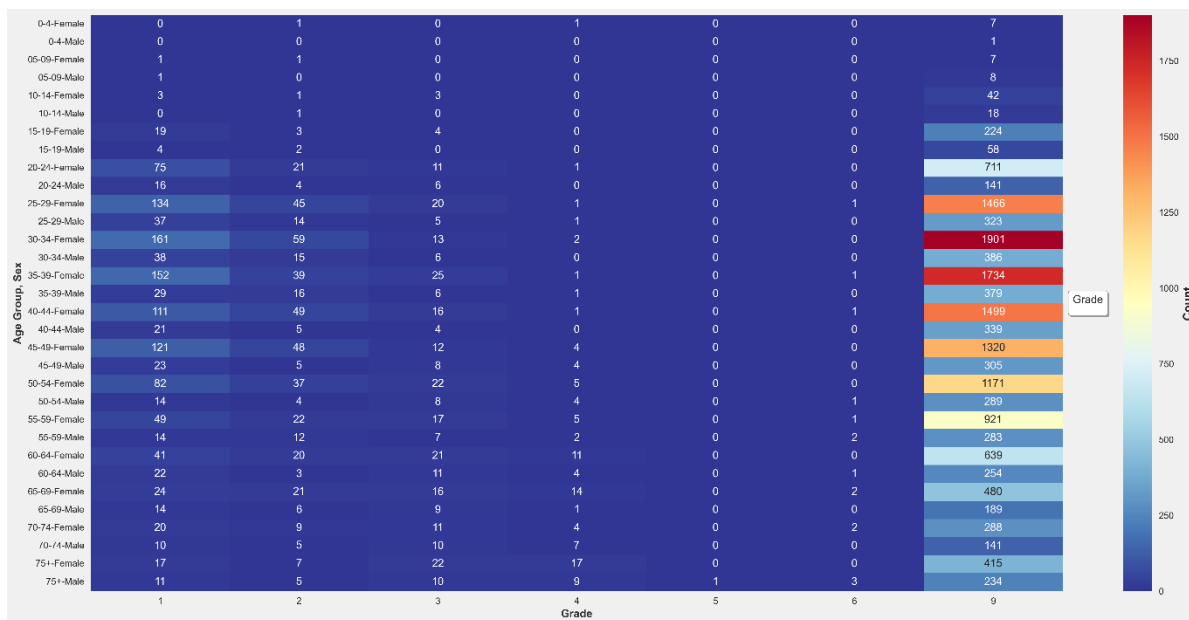
Supplementary Figure 2: Heatmap of Thyroid Cancer Grade Distribution by Province in Female



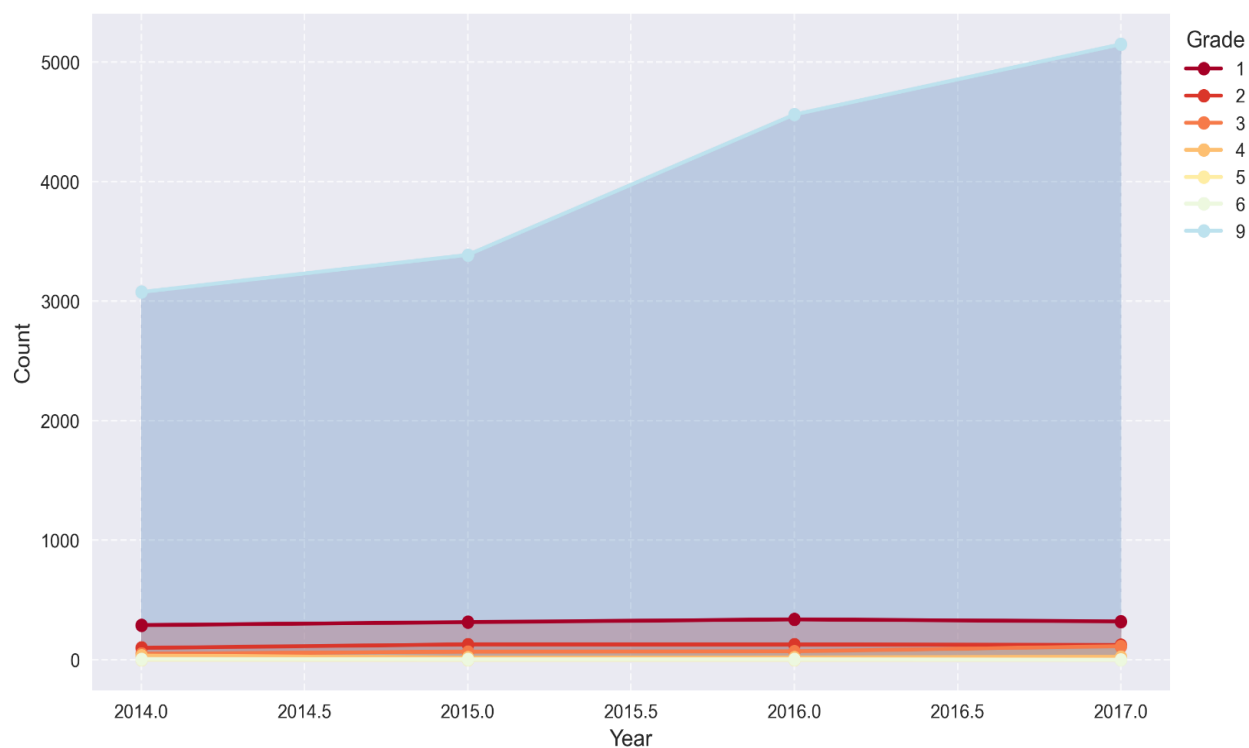
Supplementary Figure 3: Heatmap of Thyroid Cancer Grade Distribution by Province in Male



Supplementary Figure 4: Heatmap of Thyroid Cancer Grade Distribution by Age Group in Entire Population

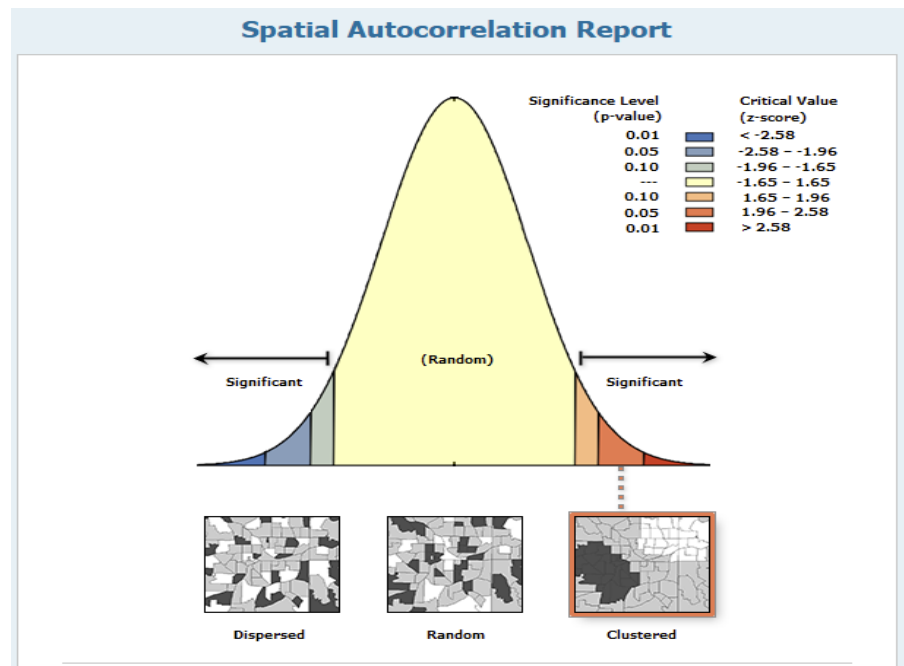


Supplementary Figure 5: Heatmap of Thyroid Cancer Grade Distribution by Age Group and Sex



Supplementary Figure 6: Heatmap of Thyroid Cancer Grade Distribution from 2014-2017

4. Thyroid Cancer Global Moran's I analysis by Sex and Year in Iran (2014-2017)



Supplementary Figure 7: Spatial Autocorrelation (Global Moran's I)

Supplementary Table 6: Global Moran's I analysis by Sex and Year in Iran (2014-2017)

Input Feature Class	Time Period	Moran's I	Variance	Z-Score	P-Value	Distribution Pattern	Confidence Interval
Entire Population	Four-Year	0.199872	0.010226	2.306133	0.021103	Clustered	95%
	2014	0.183762	0.011594	2.016218	0.043777	Clustered	95%
	2015	0.197812	0.010994	2.204518	0.027488	Clustered	95%
	2016	0.163916	0.009509	2.022811	0.043093	Clustered	95%
	2017	0.086781	0.010464	1.174224	0.240305	Random	-
	Average	0.175437	0.010822	2.006812	0.044770	Clustered	95%
	Difference	-0.132350	0.009140	-1.035685	0.300349	Random	-
Female	Four-Year	0.183362	0.009714	2.198631	0.027904	Clustered	95%
	2014	0.200452	0.011475	2.182456	0.029076	Clustered	95%
	2015	0.177293	0.010916	2.015960	0.043804	Clustered	95%
	2016	0.136584	0.009115	1.779724	0.075121	Clustered	90%
	2017	0.064931	0.009796	0.992835	0.320790	Random	-
	Average	0.158891	0.010395	1.885387	0.059378	Clustered	90%

	Difference	-0.153822	0.008933	-1.274820	0.202373	Random	-
	Four-Year	0.226484	0.011194	2.455720	0.014060	Clustered	95%
	2014	0.060557	0.011585	0.872320	0.383034	Random	-
	2015	0.270542	0.011650	2.815345	0.004872	Clustered	99%
	2016	0.252914	0.011472	2.672544	0.007528	Clustered	99%
	2017	0.118930	0.010344	1.497098	0.134368	Random	-
	Average	0.213927	0.011591	2.296656	0.021638	Clustered	95%
	Difference	-0.070803	0.010224	-0.370559	0.710966	Random	-
Male							

5. The Details of Age-Standardized Incidence Rates (ASR) of Thyroid Cancer in Iran (2014-2017)

Supplementary Table 7: The Four-Year Age-Standardized Incidence Rates (ASR) of Thyroid Cancer by Sex and Province in Iran (2014-2017)

Province	Entire Population (CI, 95%)	Female (CI, 95%)	Male (CI, 95%)
Alborz	6.63 (6.54-6.72)	20.13 (20.08-20.17)	6.6 (6.58-6.62)
Ardabil	8.54 (8.47-8.6)	27.06 (27.03-27.09)	7.23 (7.22-7.25)
Bushehr	13.86 (13.78-13.95)	47.55 (47.5-47.59)	10.37 (10.35-10.39)
Chaharmahal-and-Bakhtiari	21.92 (21.82-22.02)	65.29 (65.25-65.34)	23.48 (23.46-23.51)
East Azerbaijan	13.51 (13.36-13.67)	42.09 (42.01-42.16)	12.22 (12.18-12.26)
Fars	19.02 (18.81-19.24)	60.19 (60.09-60.3)	16.2 (16.15-16.25)
Gilan	15.83 (15.69-15.98)	52.13 (52.06-52.2)	11.02 (10.98-11.05)
Golestan	7.99 (7.91-8.08)	24.14 (24.1-24.18)	7.73 (7.71-7.75)
Hamedan	8.18 (8.1-8.26)	25.58 (25.54-25.62)	7.27 (7.25-7.29)
Hormozgan	6.67 (6.6-6.74)	20.72 (20.68-20.75)	6.01 (6-6.03)
Ilam	9.65 (9.6-9.7)	31.75 (31.73-31.77)	6.71 (6.69-6.72)
Isfahan	21.32 (21.08-21.57)	69.96 (69.84-70.08)	16.06 (16-16.11)
Kerman	11.67 (11.53-11.8)	38.52 (38.46-38.59)	8.73 (8.7-8.76)
Kermanshah	10.31 (10.21-10.41)	31.53 (31.49-31.58)	9.72 (9.69-9.74)
Khuzestan	5.75 (5.64-5.86)	17.94 (17.89-17.99)	5.18 (5.15-5.21)
Kohgiluyeh-va Boyer-Ahmad	24.84 (24.74-24.95)	81.9 (81.84-81.95)	18.5 (18.47-18.52)
Kurdistan	5.22 (5.15-5.28)	16.48 (16.45-16.51)	4.37 (4.35-4.38)
Lorestan	6.38 (6.31-6.45)	19.07 (19.04-19.1)	6.62 (6.6-6.63)
Markazi	9.67 (9.58-9.75)	27.61 (27.58-27.65)	11.18 (11.16-11.2)
Mazandaran	11.06 (10.92-11.21)	36.55 (36.48-36.62)	7.93 (7.9-7.96)
North-Khorasan	6.31 (6.26-6.36)	19.01 (18.99-19.03)	6.21 (6.19-6.22)
Qazvin	8.54 (8.47-8.61)	26.45 (26.42-26.48)	7.89 (7.87-7.91)
Qom	12.13 (12.04-12.21)	39.82 (39.78-39.86)	9.28 (9.26-9.3)
Razavi-Khorasan	9.84 (9.68-10)	29.1 (29.02-29.18)	10.27 (10.23-10.31)
Semnan	4.8 (4.76-4.84)	13.74 (13.72-13.76)	5.62 (5.61-5.63)
Sistan-and-Baluchestan	6.22 (6.13-6.3)	18.14 (18.1-18.18)	6.64 (6.62-6.66)
South-Khorasan	7.46 (7.41-7.51)	21.74 (21.72-21.77)	7.99 (7.98-8)
Tehran	8.69 (8.45-8.94)	26.72 (26.61-26.84)	8.12 (8.06-8.18)
West Azerbaijan	5.18 (5.1-5.26)	14.58 (14.54-14.62)	6.19 (6.17-6.21)
Yazd	36.64 (36.49-36.79)	128.28 (128.21-128.36)	22.36 (22.33-22.39)
Zanjan	5.9 (5.85-5.95)	18.68 (18.65-18.7)	5.09 (5.08-5.1)

Supplementary Table 8: The Average Age-Standardized Incidence Rates (ASR) of Thyroid Cancer by Sex and Province in Iran (2014-2017)

Province	Entire Population	Female	Male
Alborz	1.66	5.03	1.65
Ardabil	2.14	6.76	1.81
Bushehr	3.47	11.89	2.59
Chaharmahal-and-Bakhtiari	5.48	16.33	5.87
East Azerbaijan	3.38	10.52	3.05
Fars	4.76	15.05	4.05
Gilan	3.96	13.04	2.76
Golestan	2.01	6.03	1.93
Hamedan	2.05	6.39	1.82
Hormozgan	1.68	5.19	1.51
Ilam	2.41	7.94	1.67
Isfahan	5.34	17.5	4.02
Kerman	2.93	9.63	2.19
Kermanshah	2.59	7.88	2.43
Khuzestan	1.45	4.48	1.3
Kohgiluyeh-va Boyer-Ahmad	6.22	20.47	4.62
Kurdistan	1.3	4.13	1.1
Lorestan	1.6	4.77	1.66
Markazi	2.41	6.9	2.8
Mazandaran	2.76	9.13	1.98
North-Khorasan	1.58	4.75	1.55
Qazvin	2.14	6.61	1.97
Qom	6.08	19.91	4.65
Razavi-Khorasan	2.45	7.27	2.57
Semnan	1.21	3.44	1.41
Sistan-and-Baluchestan	1.56	4.54	1.67
South-Khorasan	1.86	5.44	2
Tehran	2.18	6.68	2.03
West Azerbaijan	1.3	3.65	1.55
Yazd	9.17	32.07	5.58
Zanjan	1.47	4.67	1.27

Supplementary Table 9: The Age-Standardized Incidence Rates (ASR) of Thyroid Cancer by Province in entire Population in Iran (2014-2017)

Province	2014 (CI, 95%)	2015 (CI, 95%)	2016 (CI, 95%)	2017 (CI, 95%)
Alborz	1.06 (1.05-1.06)	1.36 (1.35-1.36)	2.03 (2.02-2.03)	2.19 (2.18-2.2)
Ardabil	1.79 (1.78-1.8)	1.79 (1.78-1.79)	2.03 (2.02-2.03)	2.93 (2.92-2.94)
Bushehr	1.95 (1.94-1.95)	2.17 (2.17-2.18)	4.65 (4.64-4.65)	5.11 (5.11-5.12)
Chaharmahal-and-Bakhtiari	4.06 (4.06-4.07)	4.76 (4.76-4.77)	6.28 (6.27-6.29)	6.8 (6.79-6.81)
East Azerbaijan	2.42 (2.41-2.44)	2.28 (2.26-2.29)	3.47 (3.45-3.48)	5.36 (5.34-5.37)
Fars	3.95 (3.94-3.97)	4.31 (4.29-4.33)	4.88 (4.86-4.9)	5.89 (5.87-5.92)
Gilan	2.81 (2.8-2.82)	3.08 (3.07-3.1)	4.29 (4.28-4.3)	5.64 (5.62-5.65)
Golestan	1.2 (1.2-1.21)	2.06 (2.06-2.07)	2.46 (2.46-2.47)	2.3 (2.29-2.31)
Hamedan	1.93 (1.93-1.94)	1.85 (1.85-1.86)	2.07 (2.07-2.08)	2.34 (2.33-2.35)
Hormozgan	1.47 (1.46-1.47)	1.27 (1.27-1.28)	1.91 (1.9-1.91)	2.05 (2.04-2.05)
Ilam	1.55 (1.55-1.56)	1.67 (1.66-1.67)	2.9 (2.9-2.91)	3.51 (3.5-3.51)
Isfahan	4.11 (4.09-4.13)	4.71 (4.69-4.73)	6.28 (6.26-6.31)	6.24 (6.21-6.26)
Kerman	3.09 (3.08-3.1)	2.7 (2.69-2.71)	2.71 (2.7-2.72)	3.21 (3.19-3.22)
Kermanshah	1.8 (1.79-1.8)	2.51 (2.5-2.52)	2.88 (2.87-2.89)	3.17 (3.16-3.18)
Khuzestan	1.43 (1.42-1.44)	1.3 (1.29-1.31)	1.7 (1.69-1.71)	1.35 (1.34-1.36)
Kohgiluyeh-va Boyer-Ahmad	4.57 (4.56-4.58)	6.8 (6.79-6.81)	5.97 (5.97-5.98)	7.53 (7.52-7.54)
Kurdistan	0.65 (0.64-0.65)	1.22 (1.22-1.23)	1.28 (1.27-1.28)	2.05 (2.04-2.06)
Lorestan	1.53 (1.52-1.54)	1.21 (1.2-1.21)	1.73 (1.72-1.73)	1.93 (1.92-1.94)
Markazi	1.04 (1.04-1.05)	2.29 (2.28-2.29)	2.99 (2.98-3)	3.31 (3.3-3.32)
Mazandaran	1.58 (1.57-1.59)	2.75 (2.73-2.76)	3.06 (3.04-3.07)	3.66 (3.65-3.68)
North-Khorasan	0.99 (0.98-0.99)	1.74 (1.73-1.74)	1.54 (1.54-1.55)	2.03 (2.03-2.04)
Qazvin	2.38 (2.38-2.39)	1.48 (1.47-1.48)	2.15 (2.15-2.16)	2.54 (2.54-2.55)
Qom	6.08 (6.07-6.09)	6.08 (6.07-6.09)	5.93 (5.92-5.94)	6.23 (6.22-6.24)
Razavi-Khorasan	2.68 (2.67-2.7)	2.1 (2.08-2.11)	2.55 (2.53-2.56)	2.47 (2.45-2.48)
Semnan	0.64 (0.64-0.64)	1.72 (1.71-1.72)	1.34 (1.33-1.34)	1.12 (1.11-1.12)
Sistan-and-Baluchestan	1.19 (1.19-1.2)	1.34 (1.33-1.35)	1.54 (1.53-1.55)	2.18 (2.17-2.19)
South-Khorasan	1.76 (1.75-1.76)	1.57 (1.56-1.57)	2.73 (2.72-2.73)	1.39 (1.39-1.39)
Tehran	1.94 (1.92-1.96)	1.84 (1.82-1.86)	2.43 (2.41-2.45)	2.51 (2.49-2.53)
West Azerbaijan	1.39 (1.38-1.4)	1.24 (1.24-1.25)	1.34 (1.33-1.35)	1.23 (1.23-1.24)
Yazd	4.49 (4.49-4.5)	8.03 (8.01-8.04)	11.87 (11.86-11.89)	12.27 (12.25-12.28)
Zanjan	1.81 (1.8-1.81)	1.19 (1.18-1.19)	1.22 (1.22-1.23)	1.65 (1.65-1.66)

Supplementary Table 10: The Age-Standardized Incidence Rates (ASR) of Thyroid Cancer by Province among Females in Iran (2014-2017)

Province	2014 (CI, 95%)	2015 (CI, 95%)	2016 (CI, 95%)	2017 (CI, 95%)
Alborz	2.83 (2.82-2.83)	4.22 (4.22-4.23)	5.96 (5.95-5.97)	7.11 (7.1-7.11)
Ardabil	5.84 (5.84-5.85)	5.94 (5.93-5.94)	6.42 (6.42-6.43)	8.85 (8.84-8.86)
Bushehr	6.91 (6.9-6.91)	6.57 (6.56-6.57)	16.64 (16.64-16.65)	17.43 (17.43-17.44)
Chaharmahal-and-Bakhtiari	11.86 (11.86-11.87)	15.94 (15.93-15.95)	20.3 (20.29-20.31)	17.2 (17.19-17.21)
East Azerbaijan	7.14 (7.13-7.15)	6.57 (6.56-6.58)	11.48 (11.47-11.49)	16.9 (16.89-16.92)
Fars	12 (11.99-12.02)	14.07 (14.05-14.08)	15.42 (15.4-15.44)	18.69 (18.67-18.71)
Gilan	8.67 (8.66-8.67)	10.7 (10.69-10.71)	14 (13.98-14.01)	18.79 (18.78-18.81)
Golestan	3.16 (3.15-3.16)	5.68 (5.67-5.68)	7.71 (7.7-7.71)	7.58 (7.57-7.58)
Hamedan	5.72 (5.71-5.72)	5.68 (5.67-5.69)	6.76 (6.75-6.76)	7.41 (7.41-7.42)
Hormozgan	4.5 (4.49-4.5)	4.49 (4.48-4.49)	5.53 (5.52-5.53)	6.23 (6.23-6.24)
Ilam	4.72 (4.72-4.72)	5.54 (5.54-5.54)	9.86 (9.86-9.87)	11.63 (11.63-11.64)
Isfahan	13.58 (13.57-13.6)	15.1 (15.08-15.11)	20.68 (20.66-20.7)	20.64 (20.62-20.66)
Kerman	10.18 (10.17-10.19)	9.33 (9.32-9.34)	9.36 (9.35-9.37)	9.65 (9.64-9.66)
Kermanshah	4.63 (4.62-4.64)	7.83 (7.83-7.84)	9.51 (9.5-9.52)	9.54 (9.53-9.54)
Khuzestan	4.43 (4.42-4.44)	3.95 (3.94-3.95)	5.2 (5.19-5.21)	4.34 (4.34-4.35)
Kohgiluyeh-va Boyer-Ahmad	13.2 (13.19-13.2)	23.34 (23.33-23.35)	21.14 (21.13-21.15)	24.2 (24.2-24.21)
Kurdistan	1.51 (1.5-1.51)	3.94 (3.93-3.94)	3.9 (3.9-3.91)	7.15 (7.14-7.15)
Lorestan	4.66 (4.65-4.66)	3.25 (3.25-3.25)	5.32 (5.31-5.33)	5.83 (5.83-5.84)
Markazi	2.79 (2.79-2.8)	6.15 (6.15-6.16)	8.41 (8.4-8.42)	10.26 (10.25-10.27)
Mazandaran	4.89 (4.88-4.9)	8.93 (8.92-8.94)	10.57 (10.56-10.59)	12.14 (12.12-12.15)
North-Khorasan	3.01 (3-3.01)	5.32 (5.31-5.32)	5.49 (5.49-5.5)	5.17 (5.17-5.18)
Qazvin	8.02 (8.01-8.02)	4.63 (4.63-4.64)	5.83 (5.82-5.83)	7.97 (7.96-7.98)
Qom	19.91 (19.9-19.92)	19.91 (19.9-19.92)	19.15 (19.14-19.16)	20.67 (20.66-20.68)
Razavi-Khorasan	7.89 (7.87-7.9)	5.83 (5.82-5.84)	7.83 (7.81-7.84)	7.53 (7.52-7.54)
Semnan	2.37 (2.36-2.37)	4.82 (4.81-4.82)	3.26 (3.26-3.26)	3.32 (3.32-3.33)
Sistan-and-Baluchestan	2.6 (2.59-2.6)	3.64 (3.63-3.64)	4.61 (4.6-4.62)	7.31 (7.31-7.32)
South-Khorasan	5.7 (5.69-5.7)	3.69 (3.68-3.69)	8.28 (8.27-8.28)	4.07 (4.07-4.07)
Tehran	5.74 (5.72-5.75)	5.73 (5.71-5.75)	7.18 (7.16-7.2)	8.06 (8.04-8.08)
West Azerbaijan	4.01 (4.01-4.02)	3.41 (3.4-3.41)	3.42 (3.41-3.43)	3.74 (3.73-3.74)
Yazd	15.74 (15.73-15.75)	27.54 (27.53-27.55)	42.33 (42.31-42.34)	42.68 (42.66-42.69)
Zanjan	5.12 (5.12-5.13)	3.58 (3.57-3.58)	4.65 (4.65-4.65)	5.32 (5.31-5.32)

Supplementary Table 11: The Age-Standardized Incidence Rates (ASR) of Thyroid Cancer by Province among Males in Iran (2014-2017)

Province	2014 (CI, 95%)	2015 (CI, 95%)	2016 (CI, 95%)	2017 (CI, 95%)
Alborz	1.46 (1.45-1.46)	1.22 (1.22-1.22)	2.23 (2.23-2.24)	1.7 (1.7-1.71)
Ardabil	1.29 (1.29-1.3)	1.27 (1.27-1.27)	1.75 (1.74-1.75)	2.93 (2.93-2.93)
Bushehr	1.28 (1.28-1.28)	2.32 (2.32-2.32)	2.67 (2.67-2.67)	4.1 (4.09-4.1)
Chaharmahal-and-Bakhtiari	4.4 (4.39-4.4)	3.47 (3.47-3.47)	5.16 (5.16-5.17)	10.46 (10.46-10.46)
East Azerbaijan	2.6 (2.59-2.6)	` (2.49-2.51)	2.5 (2.49-2.5)	4.61 (4.6-4.62)
Fars	3.84 (3.83-3.84)	3.2 (3.19-3.21)	4.22 (4.21-4.23)	4.94 (4.93-4.95)
Gilan	2.55 (2.54-2.55)	1.63 (1.63-1.64)	3.16 (3.15-3.16)	3.68 (3.67-3.68)
Golestan	1.62 (1.61-1.62)	2.53 (2.53-2.54)	2.05 (2.05-2.05)	1.51 (1.51-1.52)
Hamedan	1.98 (1.97-1.98)	1.81 (1.81-1.81)	1.52 (1.52-1.52)	1.98 (1.98-1.98)
Hormozgan	1.37 (1.37-1.37)	0.53 (0.52-0.53)	2.17 (2.16-2.17)	1.95 (1.94-1.95)
Ilam	1.47 (1.47-1.47)	1.04 (1.04-1.04)	1.73 (1.73-1.73)	2.45 (2.45-2.45)
Isfahan	3 (2.99-3)	3.89 (3.88-3.9)	4.73 (4.72-4.74)	4.46 (4.45-4.46)
Kerman	2.3 (2.3-2.31)	1.6 (1.59-1.6)	1.56 (1.56-1.57)	3.28 (3.28-3.29)
Kermanshah	2.52 (2.52-2.52)	2.15 (2.15-2.16)	1.85 (1.84-1.85)	3.18 (3.18-3.19)
Khuzestan	1.24 (1.24-1.25)	1.25 (1.25-1.25)	1.64 (1.64-1.65)	1.07 (1.06-1.07)
Kohgiluyeh-va Boyer-Ahmad	5.15 (5.14-5.15)	3.93 (3.93-3.93)	3.12 (3.12-3.12)	6.27 (6.27-6.28)
Kurdistan	1.1 (1.1-1.11)	0.98 (0.98-0.98)	1.18 (1.18-1.18)	1.12 (1.11-1.12)
Lorestan	1.52 (1.52-1.52)	1.68 (1.68-1.68)	1.54 (1.54-1.54)	1.88 (1.88-1.89)
Markazi	1.36 (1.36-1.36)	3.08 (3.08-3.08)	3.69 (3.69-3.69)	3.05 (3.05-3.06)
Mazandaran	1.52 (1.52-1.53)	2.08 (2.07-2.08)	1.73 (1.73-1.74)	2.58 (2.58-2.59)
North-Khorasan	0.92 (0.92-0.92)	1.64 (1.64-1.64)	0.72 (0.72-0.72)	2.92 (2.92-2.92)
Qazvin	1.56 (1.56-1.56)	1.33 (1.33-1.34)	2.77 (2.77-2.78)	2.23 (2.23-2.23)
Qom	4.65 (4.64-4.65)	4.65 (4.64-4.65)	4.78 (4.77-4.78)	4.52 (4.51-4.52)
Razavi-Khorasan	2.91 (2.9-2.92)	2.59 (2.59-2.6)	2.4 (2.39-2.41)	2.37 (2.37-2.38)
Semnan	0.2 (0.2-0.2)	2.08 (2.07-2.08)	2.16 (2.15-2.16)	1.19 (1.19-1.19)
Sistan-and-Baluchestan	2.13 (2.13-2.13)	1.69 (1.68-1.69)	1.52 (1.52-1.53)	1.32 (1.32-1.33)
South-Khorasan	1.36 (1.36-1.36)	2.54 (2.54-2.54)	2.53 (2.53-2.54)	1.56 (1.56-1.57)
Tehran	2.06 (2.05-2.07)	1.61 (1.6-1.62)	2.44 (2.43-2.45)	2.02 (2.01-2.03)
West Azerbaijan	1.45 (1.45-1.46)	1.52 (1.51-1.52)	2.03 (2.03-2.03)	1.2 (1.19-1.2)
Yazd	2.79 (2.79-2.8)	5.32 (5.31-5.32)	6.48 (6.48-6.49)	7.73 (7.72-7.74)
Zanjan	2.15 (2.15-2.15)	1.25 (1.25-1.25)	0.31 (0.31-0.31)	1.37 (1.37-1.38)

Supplementary Table 12: The Difference in Age-Standardized Incidence Rates (ASR) Between 2017 and 2014 by Sex in Iran

Province	Entire Population	Female	Male
Alborz	1.13	4.28	0.24
Ardabil	1.14	3.01	1.64
Bushehr	3.16	10.52	2.82
Chaharmahal-and-Bakhtiari	2.74	5.34	6.06
East Azerbaijan	2.94	9.76	2.01
Fars	1.94	6.69	1.1
Gilan	2.83	10.12	1.13
Golestan	1.1	4.42	-0.11
Hamedan	0.41	1.69	0
Hormozgan	0.58	1.73	0.58
Ilam	1.96	6.91	0.98
Isfahan	2.13	7.06	1.46
Kerman	0.12	-0.53	0.98
Kermanshah	1.37	4.91	0.66
Khuzestan	-0.08	-0.09	-0.17
Kohgiluyeh-va Boyer-Ahmad	2.96	11	1.12
Kurdistan	1.4	5.64	0.02
Lorestan	0.4	1.17	0.36
Markazi	2.27	7.47	1.69
Mazandaran	2.08	7.25	1.06
North-Khorasan	1.04	2.16	2
Qazvin	0.16	-0.05	0.67
Qom	0.15	0.76	-0.13
Razavi-Khorasan	-0.21	-0.36	-0.54
Semnan	0.48	0.95	0.99
Sistan-and-Baluchestan	0.99	4.71	-0.81
South-Khorasan	-0.37	-1.63	0.2
Tehran	0.57	2.32	-0.04
West Azerbaijan	-0.16	-0.27	-0.25
Yazd	7.78	26.94	4.94
Zanjan	-0.16	0.2	-0.78