

## Appendix

**Table 1.** Status of infection of Iranian dogs with *Echinococcus granulosus* during the years 1985-2019.

#	Region	No of dogs	Prevalence (%) (No of cases)	Year	Reference
1	Tehran	60	48	2000	19
2	Esfahan	105	12.3	2002 2003	20
3	Sari	30	46.7	1993	20
4	Iran (13 cities)	290	27.17	1998	21
5	Tabriz	81	71.6	1991	22
6	Kerman	6500	7.4	1994	20
7	West of Iran	115	19.1	2002	23
8	Mazandaran	35	43.7	1989	24
9	Khorasan	266	18.8	2000	25
10	Sari	30	46.7	2010	26
1	Mashhad	100	22	2006	27
1	East Azerbaijan	80	20 (16)	2015	28
1	Khorasan Razavi	77	18 (14)	2013	29
1	East Azerbaijan Kermanshah Kurdistan	83	13.25 (11)	2006	30
1	Garmsar Semnan	50	64 (n = 32)	2015	31
1	Ilam	65	9 (6)	2013	32
1	Mashhad	90	38	2013	33
1	Kermanshah	301	9.3 (28)	2017	34
1	Khorasan Razavi	100	10	2013	35
2	Hamadan	1500	2.9 (44)	2014	36
2	Khorasan Razavi	100	38	2015	37
2	Khuzestan	167	4.2 (7)	2018	38
2	Tabriz	100	8	2011	39
2	Mazandaran	42	28.57 (12)	2017	40
2	Garmsar	50	64 32	2010	31
2	Esfahan	96	22.92	2012	41
2	Ilam	64	15.4	2013	42

			10		
2	Galan	27	25.9 7	2017	43
2	Kerman	84	10.7 9	2019	44
3	Ilam	75	26.66 20	2017	45
3	Moghan	59	27.1	2009	46
3	Mashhad	15	26.6	2009	47
3	Esfahan	105	34.2 36	2004	48
3	Kashan	70	55.7	2006	49
3	Kermanshah	83	13.25	2006	30
3	Khorasan Razavi	77	16.9	2011	50
3	Zanjan	450	7.3	2017	51

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**Table 2.** Status of Iranian livestock infection with hydatid cyst during the years 1985-2019 according to reports collected from different parts of the country.

#	Region	Year	Animal	No of tested	Prevalence (%)	Reference
1	Urmia	2011	Sheep Cattle Buffalo	2855 1192 517	76 (2.7) 102 (8.6) 67 (12.9)	52
2	Qom	2007	Sheep Cattle Goat	3000 200 200	9.3 3.5 2	50
3	Kermanshah	2015	Sheep Cattle Goat	35010 24507 10503	2.78 2.20 0.13	51
4	Kohgiluyeh and Boyer-Ahmad	2018	Sheep Cattle Goat	24449 21114 12804	30-20 20-15 4.5-6.5	52
5	Khomein – Markazi	2013	Sheep Cattle Goat	12860 3840 12060	1.73 2.94 1.55	53
6	Sari	2011	Sheep Cattle Goat	17399 362 985	65.2 40.1 37.8	54
7	Kashan	2006	Sheep Cattle Goat	170510 13059 162665	2.25 4 3.1	46
8	Esfahan	2014	Sheep Cattle Goat	2058 663 1341	6.12 1.05 0.5	55
9	Tabriz	2014	Camel	198	14.64	56
10	Khorasan Razavi	2010-2011	Camel	136	40.40	52
11	Yazd	2010-2011	Camel	80	31.2	51
12	South Khorasan	2010-2011	Camel	120	26.6	51
13	Semnan	2010-2011	Camel	27	22.2	51
14	Sistan Baluchistan	2010-2011	Camel	75	24	51
15	Kerman	2011	Camel	217	20.73	58
16	Alborz	2018	Cattle	131668	9.95	59
17	Esfahan	2013	Sheep Cattle Cattle Goat	89651 9112 4512 93050	16.4 6.5 3.1 8.2	53

18	Ardebil	2017	Sheep Cattle Buffalo Goat	3765 928 243 445	74.4 38.3 11.9 20	53
19	Tehran	2018	Sheep Cattle	571991 80001	2.48 2.25	61
20	Kermanshah	2015	Sheep Cattle Goat	19950 7000 5180	6.3 7.4 5.1	62
21	Lorestan	2014	Cattle	869150	9.4	63
22	Neishabour	2017	Sheep and goat	130107	1.5	64
23	Urmia- Tabriz- Ardebil- Gilan- Ahvaz	2011	Buffalo	3832	9	65
24	Kerman	2011	Cattle	1000	8.6	66
25	Kurdistan	2005	Sheep Cattle	1242 104	51.9 28.02	54
26	Hamadan	2017	Sheep Cattle Goat	8684 832 1110	3 5.3 1	68
27	Torbat Heydarieh	2016	Sheep Cattle	867015 137843	7.95 8.05	69
28	Kerman	2012	Goat	2002	3.69	70
29	Lorestan – Delfan	2013	Sheep Cattle Goat	2150 4101 634	0.6 2.9 0.1	71
30	Kermanshah	2017	Sheep Cattle Goat	6720 4713 980	1.97 3.21 1.86	72
31	Tabriz	2015	Sheep Cattle Goat Buffalo	5000 6125 2600 1103	22.2 28.32 25.03 26.92	55
32	Gilan Mazandaran Golestan	2011	Sheep Cattle Goat	1719725 621686 1006386	14.6 12 10.1	56
33	Lorestan	2012	Sheep Cattle Goat	14084 6993 19351	21.22 26.71 12.97	57
34	Mazandaran amol	2012	Sheep Goat	1200 1200	45.5 27.9	57
35	Kerman	2013	Sheep	1643	10.04	58
36	Fars	2012	Sheep Cattle Goat	1050 500 950	45.52 11.6 10	59

37	Ardebil	2007	Sheep	3765	74.4	60
			Cattle	928	38.3	
			Goat	445	20	
			Buffalo	243	11.9	
38	Mazandaran	2013	Goat	120	33.33	61

Non commercial use only

**Table 3.** Studies on seroepidemiology of hydatid cyst in Iran during 1991-2019.

#	Region	Year	Test	No. of the people tested	Studied population	Prevalence (%)	Reference
1	Zanjan Islamabad	2002	ELISA	2367	Inhabitants of Islamabad	71 (3)	10
2	Chaharmahal and Bakhtiari	2000	Immunoelectrophoresis	2500	Blood donors and patients referred to clinical laboratories of the province	120 (4.8)	20
3	Urmia	1993	IFA	300	Rural population around Urmia	5 (1.7)	20
4	Villages around Karaj	1995	IFA	1154	Population of villages around Karaj	6 (0.5)	20
5	Kermanshah	2001	IFA	1072	Population of Kermanshah	86 (8.02)	20
6	Hamadan	1991	IFA	1530	Inhabitants covered by urban health centers and rural health houses	46 (3)	20
7	Varamin	1991-1997	IFA	700	Population of Varamin	69 (9.9)	10
8	Sarab	2007	IFA	200	Rural inhabitants of Sarab, Meshkin Shahr, Moghan, and Uremia	12 (6)	62
9	Alborz	2018	ELISA	680	People referred to different health centers	33 (3.4)	63
10	Khoramabad	2013	immunoassay	617	Khoram Abad inhabitants	95 (15.4)	64
11	Sanandaj	2005	IFA	397	Population	13 (3.3)	54

	Divandareh			714	in Kordestan Province	68 (9.5)	
12	Arak	2013	AgB-ELISA	578	Patients referred to hospitals and different health centers in the city	20 (3.46)	65
13	Kohgiluyeh and Boyer-Ahmad	2018	AgB-ELISA	1005	Nomads of nomadic tribes of Boyer-Ahmad District	81 (8.1)	66
14	Fars	2017	AgB-ELISA	1068	Blood donors in Fars province	60 (5.6)	67
15	Tehran	2008	Dot-ELISA	1010	People Referred to Blood Transfusion Center	18 (1.63)	68
16	Moghan	2010	ELISA	1003	Population screened for CE by abdominal ultrasound scan	92 (9.6)	69
17	Golestan	2007	IFA ELISA	1024	Patients referred to different health centers	24 (2.34) 22 (2.15)	70
18	Esfahan	2015	ELISA	635	Individuals referred to different health centers in urban and rural regions of the city	7 (1.1)	65
19	Lorestan	2017	ELISA	927	Doroud population	25 (2.6)	71
20	Kashan	2010	ELISA IFA	361	Adult referring to	11 (3.05)	72

					the city and rural health centers of Kashan		
21	Qom	2012	ELISA	1564	Rural and urban population in Qom	25 (1.6)	73
22	Yasouj	2010	ELISA	500	Local hospital records of CE patients between 1997 and 2006.	36 (7.2)	74
23	Meshkin Shahr Ardebil	2011	ELISA	670	Patients referred to different health centers of the region	12 (1.79)	75
24	Gorgan	2019	ELISA	612	People referring to the Reference laboratory of Golestan University of Medical sciences in 2017	16 (2.6)	76
25	Khuzestan	2019	ELISA	314	The population of villages of Shushtar County	3 (1)	9
26	Kerman	2011	ELISA	1140	The population of Rural Communities of Kerman	83 (7.3)	77
27	Lorestan	2018	ELISA	315	In-migration and out-migration nomads of Lorestan province	18 (5.7)	78
28	Mazandaran, Gilan	2016	ELISA	160	Greengroceries in two Provinces	4 (2.4)	79



					(Mazandaran and Gilan)		
29	Hamadan	2018	ELISA	1000	Individuals referring to health centers in Hamadan in 2017	4 (0.4)	80
30	Tehran	2019	ELISA	909	Patients referred to Baqiyatallah Hospital, Tehran, Iran	7 (0.8)	81
31	Kermanshah Shahrebabak	2015	ELISA	536	Habitats of Shahrebabak	1 (0.18)	82
32	Ahvaz	2019	ELISA	400	Workers in Ahvaz	15 (3.7%)	82
33	Kordestan	2008	ELISA	1979	Rural and urban population of Kordestan Province	22 (1.12)	83
34	Chaharmahal and Bakhtiari	2001	Immunoelectrophoresis	2524	Blood donors and patients referred to clinical laboratories of the province	120 (4.8)	1
35	Chaharmahal and Bakhtiari	2015	ELISA	1280	Patients referred to different clinical laboratories of the province	26 (2.1)	84
36	Khorasan Razavi	2015	ELISA	1033	Torbat Jam habitat	55 (5.3)	85
37	Kerman	2014	ELISA	486	Patients referred to different health centers of the region	9 (1.8)	86
38	Lorestan	2013	ELISA	617	Individuals attending district	95 (15.3)	64

					health center		
39	Sarab	2011	IFA	250	Population in Sarab city	8 (3.2%)	87
40	East Azerbaijan	2009	ELISA	1500	Patients are referred to different health centers.	19 (1.2%)	88
41	Kerman	2011	ELISA	1062	People in rural communities	77 (7.2%)	77
42	Fars	2010	ELISA	1096	People who referred to clinical laboratories.	69 (6.2%)	89
43	Kohgiluyeh and Boyer-Ahmad	2010	ELISA	500	Individuals attending Yasouj health centers	36 (7.2)	74
44	Ardebil	2010	ELISA	2008	People of the Moghan plain	184 (9.1)	90
45	Esfahan	2008	ELISA	361	People who referred to health care centers	11(3.1)	72
46	Kerman	2009	ELISA	451	The population of rural regions of Shahdad and Chatroud, Kerman	37 (8.2)	91
47	Southwest regions	2007	ELISA	3446	Nomads of Southwest Iran	475 (7.13)	92
48	Chaharmahal and Bakhtiari	2015	IHA	388	Patients referred to different clinical laboratories of the province	44 (11.3)	84
49	Kermanshah	2007	IFA	1072	The population of	86 (8)	93

					Kermanshah Province		
50	Tehran	2007	IFA	1842	Patients referred to the health faculty of Tehran University of Medical Sciences	340 (18.4)	94
51	Tehran	2007	CIE	233	Patients referred to the Pasteur Institute of Iran	39 (16.7)	94
52	Kashan	2006	IHA	500	Hospitalized patients	12 (2.4)	49
53	Tehran	2006	IFA	437	People in rural area of Shemiranat	1 (0.2)	95
54	Ilam	2005	Dot-ELISA	3000	Population of Ilam province	37 (1/2)	96
55	Zanjan	2004	ELISA	2367	The population of Islam-Abad.	71 (2.9)	97
56	Chaharmahal and Bakhtiari	2003	CIE	2524	Patients referred to clinical laboratories and blood donors	120 (4.75)	98
57	Tehran	2001	IFA	1052	Population of Shahriar region	62 (5.8)	99
58	Kordestan	2001	IFA	1114	The population of Kurdistan province	143 (12.8)	100
59	Khorasan Razavi	2001	IFA	1100	The population of Mashhad city	41 (3.7)	94
60	West regions	1999	ELISA	4138	Healthy volunteers who living	230 (5.5)	101

					in 8 different provinces in the western part of Iran		
61	Hamadan	1998	IFA	1530	Inhabitants covered by urban and rural health and hygiene system	46 (3)	102
62	Fars	1998	ELISA	1000	Nomadic tribes of Southern Iran	127 (12.7)	103
63	Fars	1998	CIE	1000	Nomadic tribes of Southern Iran	68 (6.8)	103
64	Meshkin Shahr	2007	IFA	200	Rural inhabitants of Sarab, Meshkin Shahr, Moghan, and Uremia	7 (5.3)	7
65	Moghan	2007	IFA	152	Rural inhabitants of Moghan	6 (9.3)	7
66	Urmia	2007	IFA	300	Rural inhabitants of Uremia	5 (6.1)	7
67	Qaemshahr	2019	ELISA	403	Habitants of rural areas	11 (2.73)	104