

Table 1: MACS cohort cancers from 14 sites of interest

<i>Cancer Site</i>	<i>Total</i>	<i>With Pre-Diagnostic Serum</i>	<i>With Pre- and Post-Diagnostic Serum</i>	<i>Male</i>	<i>Female</i>	<i>Air Crew</i>	<i>Ground Crew</i>
<i>All Sites*</i>	28,322	18,381	3,089	26,713	1,609	8,289	20,033
<i>Bladder</i>	2,042	1,151	95	2,017	25	494	1,548
<i>Breast (Female)</i>	829	649	125	0	829	181	648
<i>Brain</i>	545	419	131	515	30	136	409
<i>Cervical</i>	65	55	25	0	65	12	53
<i>Colorectal</i>	2,758	1,778	265	2,666	92	663	2,095
<i>Liver</i>	239	151	10	236	3	39	200
<i>Lung</i>	1,491	878	41	1,412	79	219	1,272
<i>Melanoma</i>	3,102	2,159	610	2,931	171	1,303	1,799
<i>Non-Hodgkin Lymphoma</i>	2,236	1,517	392	2,145	91	627	1,609
<i>Pancreatic</i>	979	599	23	957	22	264	715
<i>Prostate</i>	11,768	7,147	355	11,768	0	3,773	7,995
<i>Renal</i>	1,917	1,222	154	1,865	52	451	1,466
<i>Testicular</i>	1,194	916	602	1,194	0	358	836
<i>Thyroid</i>	1,137	874	320	922	215	360	777

\*Additional cancers may be present in the cohort but are not included in this table.

Table 2: Percentage of Cohort with Cancer

<i>Cancer Site</i>	<i>Male</i>	<i>Female</i>	<i>Air Crew</i>	<i>Ground Crew</i>
<i>All Sites*</i>	3.30%	1.92%	5.31%	2.71%
<i>Bladder</i>	0.25%	0.03%	0.32%	0.21%
<i>Breast (Female)</i>	0.00%	0.99%	0.12%	0.09%
<i>Brain</i>	0.06%	0.04%	0.09%	0.06%
<i>Cervical</i>	0.00%	0.08%	0.01%	0.01%
<i>Colorectal</i>	0.33%	0.11%	0.42%	0.28%
<i>Liver</i>	0.03%	0.00%	0.02%	0.03%
<i>Lung</i>	0.17%	0.09%	0.14%	0.17%
<i>Melanoma</i>	0.36%	0.20%	0.83%	0.24%
<i>Non-Hodgkin Lymphoma</i>	0.26%	0.11%	0.40%	0.22%
<i>Pancreatic</i>	0.12%	0.03%	0.17%	0.10%
<i>Prostate</i>	1.45%	0.00%	2.42%	1.08%
<i>Renal</i>	0.23%	0.06%	0.29%	0.20%
<i>Testicular</i>	0.15%	0.00%	0.23%	0.11%
<i>Thyroid</i>	0.11%	0.26%	0.23%	0.11%

\*Additional cancers may be present in the cohort but are not included in this table.

**Table 3: Cancer Site Demographics and Occupation**  
All Individuals

	<i>All Sites*</i>	<i>Bladder</i>	<i>Breast (Female)</i>	<i>Brain</i>	<i>Cervical</i>	<i>Colorectal</i>	<i>Liver</i>	<i>Lung</i>	<i>Melanoma</i>	<i>Non-Hodgkin Lymphoma</i>	<i>Pancreatic</i>	<i>Prostate</i>	<i>Renal</i>	<i>Testicular</i>	<i>Thyroid</i>
<i>All</i>	28,322	2,042	829	545	65	2,758	239	1,491	3,102	2,236	979	11,768	1,917	1,194	1,137
<b>Sex</b>															
<i>Male</i>	26,713	2,017	0	515	0	2,666	236	1,412	2,931	2,145	957	11,768	1,865	1,194	922
<i>Female</i>	1,609	25	829	30	65	92	3	79	171	91	22	0	52	0	215
<b>Study Subpopulation</b>															
<i>Air Crew</i>	8,289	494	181	136	12	663	39	219	1,303	627	264	3,773	451	358	360
<i>Ground Crew</i>	20,033	1,548	648	409	53	2,095	200	1,272	1,799	1,609	715	7,995	1,466	836	777
<b>Race/Ethnicity</b>															
<i>Hispanic</i>	1,174	63	48	29	6	128	23	39	40	110	58	392	96	130	72
<i>Non-Hispanic White</i>	22,884	1,822	647	443	52	2,206	171	1,234	2,997	1,856	775	8,887	1,544	993	928
<i>Non-Hispanic Black</i>	3,281	111	111	50	6	303	23	167	11	177	112	2,087	210	26	73
<i>Non-Hispanic Other</i>	983	46	23	23	1	121	22	51	54	93	34	402	67	45	64
<b>Highest Education</b>															
<i>Did not Graduate High School</i>	249	26	1	1	0	18	8	39	16	16	10	92	25	6	2
<i>High School</i>	10,865	917	315	230	35	1,190	114	828	897	849	418	4,262	815	442	371
<i>Some College</i>	8,590	593	271	168	15	853	86	433	865	697	298	3,537	617	356	356
<i>Bachelor's Degree</i>	3,659	226	131	77	12	335	18	92	481	275	110	1,564	218	170	179
<i>Advanced Degree</i>	4,758	258	108	62	3	339	12	82	819	385	139	2,227	234	217	221
<i>Unknown</i>	201	22	3	7	0	23	1	17	24	14	4	86	8	3	8
<b>Age at Diagnosis</b>															
<i>0 - 24</i>	496	5	8	43	2	20	5	5	76	79	6	2	5	199	48
<i>25 - 34</i>	1,718	40	57	118	25	93	6	17	325	236	14	9	68	535	204
<i>35 - 44</i>	2,513	85	197	128	25	295	17	86	501	318	51	142	164	278	292
<i>45 - 54</i>	5,148	273	277	97	6	782	49	287	619	433	127	1,636	379	115	257
<i>55 - 64</i>	9,659	676	217	111	7	858	91	640	853	568	360	4,925	682	47	222
<i>65 - 74</i>	7,466	731	66	45	0	585	59	401	573	481	345	4,346	519	15	104
<i>75+</i>	1,322	232	7	3	0	125	12	55	155	121	76	708	100	5	10
<b>Year of Diagnosis</b>															
<i>&lt; 1990</i>	201	11	2	0	1	15	1	3	47	17	0	2	6	82	14
<i>1990 - 1994</i>	541	29	16	38	3	54	5	23	91	59	6	19	27	128	51
<i>1995 - 1999</i>	1,050	48	30	54	3	106	6	66	182	116	24	162	48	151	76
<i>2000 - 2004</i>	2,400	118	74	93	6	269	15	182	296	255	41	730	131	147	125
<i>2005 - 2009</i>	4,136	222	97	88	14	463	38	274	426	356	115	1,627	247	190	175
<i>2010 - 2014</i>	6,162	397	184	125	16	604	67	347	744	435	195	2,542	424	204	277
<i>2015 - 2019</i>	7,479	630	254	91	16	700	60	385	732	548	298	3,395	575	176	232
<i>2020+</i>	6,353	587	172	56	6	547	47	211	584	450	300	3,291	459	116	187
<b>Number of Available Serums</b>															
<i>0</i>	9,377	862	169	109	8	939	86	598	828	653	376	4,550	679	133	219
<i>1</i>	3,219	254	80	59	3	281	30	217	293	236	129	1,521	232	68	82
<i>2</i>	2,068	136	65	45	3	210	21	157	220	141	63	903	143	61	72



	<i>All Sites*</i>	<i>Bladder</i>	<i>Breast (Female)</i>	<i>Brain</i>	<i>Cervical</i>	<i>Colorectal</i>	<i>Liver</i>	<i>Lung</i>	<i>Melanoma</i>	<i>Non-Hodgkin Lymphoma</i>	<i>Pancreatic</i>	<i>Prostate</i>	<i>Renal</i>	<i>Testicular</i>	<i>Thyroid</i>
<b>Yes</b>	10,494	610	277	246	22	1,060	67	392	1,405	898	310	3,754	684	727	587
<b>No</b>	17,828	1,432	552	299	43	1,698	172	1,099	1,697	1,338	669	8,014	1,233	467	550
<b>Any Deployment Health Assessments</b>															
<b>Yes</b>	5,415	250	176	143	16	508	24	121	847	516	132	1,612	323	552	395
<b>No</b>	22,907	1,792	653	402	49	2,250	215	1,370	2,255	1,720	847	10,156	1,594	642	742
<b>Any Periodic Health Assessment (PHA)</b>															
<b>Yes</b>	1,517	37	89	38	12	148	1	13	304	179	15	119	90	335	164
<b>No</b>	26,805	2,005	740	507	53	2,610	238	1,478	2,798	2,057	964	11,649	1,827	859	973

\*An individual may appear more than once in this column.

**Table 4: Cancer Site Demographics and Occupation  
Individuals with Pre-Diagnostic Serum Available**

	<i>All Sites*</i>	<i>Bladder</i>	<i>Breast (Female)</i>	<i>Brain</i>	<i>Cervical</i>	<i>Colorectal</i>	<i>Liver</i>	<i>Lung</i>	<i>Melanoma</i>	<i>Non-Hodgkin Lymphoma</i>	<i>Pancreatic</i>	<i>Prostate</i>	<i>Renal</i>	<i>Testicular</i>	<i>Thyroid</i>
<i>All</i>	18,381	1,151	649	419	55	1,778	151	878	2,159	1,517	599	7,147	1,222	916	874
<b>Sex</b>															
<i>Male</i>	17,102	1,130	0	393	0	1,710	149	821	2,024	1,447	578	7,147	1,184	916	691
<i>Female</i>	1,279	21	649	26	55	68	2	57	135	70	21	0	38	0	183
<b>Study Subpopulation</b>															
<i>Air Crew</i>	5,591	291	155	102	12	443	25	112	945	438	157	2,417	299	265	268
<i>Ground Crew</i>	12,790	860	494	317	43	1,335	126	766	1,214	1,079	442	4,730	923	651	606
<b>Race/Ethnicity</b>															
<i>Hispanic</i>	841	35	44	26	6	93	16	24	34	78	34	239	65	118	62
<i>Non-Hispanic White</i>	14,792	1,028	505	336	44	1,399	102	728	2,080	1,236	473	5,399	980	742	694
<i>Non-Hispanic Black</i>	2,051	59	80	40	4	204	18	93	6	135	68	1,241	128	21	62
<i>Non-Hispanic Other</i>	697	29	20	17	1	82	15	33	39	68	24	268	49	35	56
<b>Highest Education</b>															
<i>Did not Graduate High School</i>	220	22	1	1	0	11	8	36	14	15	10	80	24	6	2
<i>High School</i>	6,614	472	270	192	30	715	76	473	583	542	250	2,289	488	380	286
<i>Some College</i>	5,421	343	177	117	11	553	53	247	581	466	171	2,155	384	233	261
<i>Bachelor's Degree</i>	2,692	146	104	60	11	248	10	58	380	207	72	1,090	161	134	149
<i>Advanced Degree</i>	3,261	154	94	42	3	231	3	51	580	275	92	1,458	157	160	169
<i>Unknown</i>	173	14	3	7	0	20	1	13	21	12	4	75	8	3	7
<b>Age at Diagnosis</b>															
<i>0 - 24</i>	423	3	8	40	2	19	5	4	67	70	6	2	5	159	40
<i>25 - 34</i>	1,408	25	57	99	22	82	6	13	258	206	13	9	64	409	173
<i>35 - 44</i>	2,055	64	171	109	22	231	13	57	415	259	41	129	139	218	243
<i>45 - 54</i>	3,942	196	225	73	4	591	36	193	504	327	95	1,252	292	86	214
<i>55 - 64</i>	6,273	432	143	75	5	524	56	396	546	375	232	3,248	441	33	144
<i>65 - 74</i>	3,833	357	38	23	0	287	32	195	317	241	182	2,258	253	10	53
<i>75+</i>	447	74	7	0	0	44	3	20	52	39	30	249	28	1	7
<b>Year of Diagnosis</b>															
<i>&lt; 1996</i>	261	11	11	20	2	17	4	14	51	25	0	8	15	57	28
<i>1996 - 1999</i>	434	15	16	26	1	38	2	22	77	59	14	50	17	73	34
<i>2000 - 2004</i>	1,377	56	51	76	4	145	7	88	206	163	19	305	73	135	88
<i>2005 - 2009</i>	2,516	121	75	73	12	275	24	155	310	254	64	802	142	177	138
<i>2010 - 2014</i>	4,051	214	139	106	16	399	45	213	531	288	118	1,512	270	190	227
<i>2015 - 2019</i>	5,126	364	207	73	16	488	43	237	540	392	181	2,194	382	170	195
<i>2020+</i>	4,616	370	150	45	4	416	26	149	444	336	203	2,276	323	114	164
<b>Number of Available Serums</b>															
<i>1</i>	2,985	237	71	47	3	255	29	205	262	216	126	1,458	220	36	74
<i>2</i>	2,004	135	63	45	3	203	20	156	201	133	63	897	142	45	69
<i>3</i>	1,655	123	58	36	4	165	15	120	162	125	65	680	119	34	53
<i>4+</i>	11,737	656	457	291	45	1,155	87	397	1,534	1,043	345	4,112	741	801	678

	<i>All Sites*</i>	<i>Bladder</i>	<i>Breast (Female)</i>	<i>Brain</i>	<i>Cervical</i>	<i>Colorectal</i>	<i>Liver</i>	<i>Lung</i>	<i>Melanoma</i>	<i>Non-Hodgkin Lymphoma</i>	<i>Pancreatic</i>	<i>Prostate</i>	<i>Renal</i>	<i>Testicular</i>	<i>Thyroid</i>
<b><i>Serum Status</i></b>															
<i>Pre-Diagnostic Only</i>	15,292	1,056	524	288	30	1,513	141	837	1,549	1,125	576	6,792	1,068	314	554
<i>Pre- and Post-Diagnostic Available</i>	3,089	95	125	131	25	265	10	41	610	392	23	355	154	602	320
<b><i>Time from Last Pre-Diagnostic Serum to Diagnosis</i></b>															
<i>&lt; 1 Year</i>	2,521	76	96	133	17	207	21	54	491	327	33	324	116	472	231
<i>1 to &lt; 5 Years</i>	2,866	97	137	141	16	324	18	75	446	326	63	582	191	297	243
<i>5 to &lt; 10 Years</i>	2,953	163	111	45	7	323	17	148	331	207	85	1,232	193	72	140
<i>10 to &lt; 20 Years</i>	6,458	460	203	80	12	599	57	344	629	431	248	3,160	452	54	191
<i>20+ Years</i>	3,583	355	102	20	3	325	38	257	262	226	170	1,849	270	21	69
<b><i>Cancer Occurred During Military Service</i></b>															
<i>Yes</i>	3,765	103	171	209	28	339	20	65	739	485	51	373	182	705	383
<i>No</i>	14,616	1,048	478	210	27	1,439	131	813	1,420	1,032	548	6,774	1,040	211	491
<b><i>Service Duration</i></b>															
<i>&lt; 4 Years</i>	534	25	48	43	9	41	7	41	58	66	19	70	39	52	43
<i>4 to &lt; 8 Years</i>	898	30	85	47	11	65	12	34	108	99	16	105	62	158	95
<i>8 to &lt; 18 Years</i>	1,479	64	122	74	13	155	16	66	192	152	43	216	80	221	128
<i>18 to &lt; 25 Years</i>	9,045	585	263	172	18	950	85	516	1,022	755	318	3,530	635	344	406
<i>25+ Years</i>	6,425	447	131	83	4	567	31	221	779	445	203	3,226	406	141	202
<b><i>Enlistment Year</i></b>															
<i>Missing</i>	1	0	0	0	0	0	0	0	0	1	0	0	0	0	0
<i>&lt; 1970</i>	2,528	266	7	32	0	229	17	158	220	169	106	1,365	183	7	36
<i>1970s</i>	6,922	476	127	87	7	619	76	454	637	449	264	3,512	467	73	178
<i>1980s</i>	5,637	328	274	121	12	600	38	210	729	474	179	2,100	381	187	286
<i>1990s</i>	1,903	56	140	100	17	225	14	40	358	221	38	158	126	258	203
<i>2000s</i>	1,102	24	86	58	14	87	5	13	184	162	9	10	55	283	136
<i>2010+</i>	288	1	15	21	5	18	1	3	31	41	3	2	10	108	35
<b><i>First Military Service Branch</i></b>															
<i>Air Force</i>	9,735	554	305	213	19	872	67	329	1,226	841	299	3,990	595	496	507
<i>Navy</i>	6,380	429	285	153	31	701	67	435	676	494	227	2,250	458	299	278
<i>Army</i>	1,348	112	48	27	3	113	11	74	126	103	41	610	95	40	42
<i>Marines</i>	916	56	11	26	2	92	6	40	131	79	32	297	73	80	47
<i>Coast Guard</i>	2	0	0	0	0	0	0	0	0	0	0	0	1	1	0
<b><i>Career Status</i></b>															
<i>Enlisted</i>	13,591	905	521	341	50	1,430	139	808	1,328	1,129	470	5,000	965	698	644
<i>Officer</i>	4,301	209	124	70	5	317	7	58	769	354	120	1,883	220	211	221
<i>Warrant Officer</i>	489	37	4	8	0	31	5	12	62	34	9	264	37	7	9
<b><i>Any Known Deployment</i></b>															
<i>Yes</i>	9,106	497	256	224	21	918	61	313	1,244	779	269	3,179	602	632	538
<i>No</i>	9,275	654	393	195	34	860	90	565	915	738	330	3,968	620	284	336
<b><i>Any Deployment Health Assessments</i></b>															
<i>Yes</i>	5,269	243	176	139	16	503	24	120	818	499	130	1,598	322	500	379
<i>No</i>	13,112	908	473	280	39	1,275	127	758	1,341	1,018	469	5,549	900	416	495

	<i>All Sites*</i>	<i>Bladder</i>	<i>Breast (Female)</i>	<i>Brain</i>	<i>Cervical</i>	<i>Colorectal</i>	<i>Liver</i>	<i>Lung</i>	<i>Melanoma</i>	<i>Non- Hodgkin Lymphoma</i>	<i>Pancreatic</i>	<i>Prostate</i>	<i>Renal</i>	<i>Testicular</i>	<i>Thyroid</i>
<i>Any Periodic Health Assessment (PHA)</i>															
<i>Yes</i>	1,496	33	89	37	12	148	1	13	300	175	15	119	90	328	163
<i>No</i>	16,885	1,118	560	382	43	1,630	150	865	1,859	1,342	584	7,028	1,132	588	711

\*An individual may appear more than once in this column.