APPENDIX

We find that as the ϵ-perturbation magnitude increases from 0 to 1 for the worst-case adversarial attack, the relative percentage change from DRAFT to the adversarial training methods becomes larger and then smaller. The relative percent changes in CI from the DRAFT training objective to SAWAR training objective is shown in Table IV (where higher percentage change is better). We note that for very large ϵ, since our data is standard normalized all methods begin to fail.

ϵ	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
%Δ	72.8	79.69	92.54	90.82	81.56	66.21	41.01	12.83	3.19	1.88	1.72	1.6

TABLE IV: The relative percent change in the Concordance Index metric from the DRAFT model to the SAWAR training objective averaged across the *SurvSet* datasets for the worst-case adversarial attack. A higher relative percent change is better.

Dataset	ϵ / Algorithm	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
Aids2	DRAFT	0.516	0.519	0.522	0.525	0.527	0.53	0.536	0.551	0.566	0.572	0.572	0.57
	Noise	0.513	0.515	0.518	0.521	0.525	0.529	0.535	0.548	0.568	0.571	0.57	0.569
	FGSM	0.512	0.516	0.52	0.523	0.526	0.532	0.537	0.55	0.565	0.569	0.568	0.566
	PGD	0.506	0.509	0.513	0.518	0.523	0.528	0.535	0.552	0.567	0.569	0.568	0.567
	AAE-Cox	0.504	0.508	0.507	0.506	0.505	0.501	0.499	0.504	0.51	0.561	0.573	0.573
	SAWAR	0.565	0.568	0.568	0.569	0.569	0.57	0.57	0.57	0.57	0.57	0.569	0.569
Framingham	DRAFT	0.618	0.634	0.649	0.663	0.676	0.688	0.699	0.708	0.716	0.72	0.721	0.722
	Noise	0.606	0.622	0.637	0.653	0.666	0.679	0.691	0.703	0.713	0.718	0.719	0.719
	FGSM	0.582	0.598	0.611	0.626	0.641	0.655	0.671	0.691	0.708	0.715	0.715	0.715
	PGD	0.539	0.559	0.582	0.605	0.627	0.647	0.669	0.693	0.71	0.717	0.717	0.717
	AAE-Cox	0.514	0.522	0.529	0.533	0.539	0.553	0.569	0.57	0.582	0.73	0.733	0.733
	SAWAR	0.721	0.725	0.729	0.731	0.733	0.734	0.735	0.736	0.736	0.737	0.737	0.737
LeukSurv	DRAFT	0.589	0.593	0.596	0.598	0.601	0.602	0.608	0.62	0.63	0.632	0.633	0.633
	Noise	0.545	0.548	0.545	0.547	0.551	0.56	0.581	0.609	0.63	0.628	0.626	0.624
	FGSM	0.511	0.514	0.52	0.525	0.535	0.549	0.579	0.612	0.637	0.638	0.636	0.635
	PGD	0.498	0.498	0.501	0.51	0.521	0.543	0.576	0.616	0.64	0.643	0.64	0.638
	AAE-Cox	0.559	0.552	0.542	0.555	0.548	0.55	0.548	0.537	0.545	0.631	0.658	0.656
	SAWAR	0.495	0.51	0.524	0.536	0.552	0.57	0.588	0.609	0.633	0.658	0.669	0.673
TRACE	DRAFT	0.581	0.605	0.633	0.66	0.685	0.708	0.726	0.736	0.741	0.743	0.744	0.745
	Noise	0.576	0.598	0.621	0.645	0.669	0.691	0.712	0.728	0.737	0.742	0.744	0.745
	FGSM	0.581	0.603	0.629	0.653	0.674	0.697	0.717	0.732	0.739	0.743	0.744	0.744
	PGD	0.571	0.595	0.621	0.646	0.668	0.691	0.714	0.73	0.739	0.743	0.744	0.745
	AAE-Cox	0.432	0.44	0.447	0.451	0.46	0.47	0.489	0.524	0.628	0.743	0.746	0.747
	SAWAR	0.714	0.722	0.728	0.733	0.735	0.737	0.739	0.742	0.744	0.746	0.747	0.747
dataDIVAT1	DRAFT	0.573	0.585	0.598	0.611	0.625	0.636	0.646	0.653	0.657	0.657	0.656	0.655
	Noise	0.532	0.541	0.552	0.562	0.575	0.589	0.603	0.619	0.631	0.636	0.635	0.635
	FGSM	0.546	0.555	0.567	0.578	0.588	0.6	0.612	0.626	0.641	0.647	0.646	0.646
	PGD	0.523	0.534	0.545	0.557	0.569	0.581	0.599	0.621	0.641	0.648	0.648	0.648
	AAE-Cox	0.597	0.589	0.589	0.585	0.58	0.571	0.571	0.566	0.596	0.662	0.663	0.663
	SAWAR	0.64	0.645	0.649	0.654	0.658	0.661	0.664	0.665	0.667	0.668	0.669	0.67
flchain	DRAFT	0.109	0.111	0.115	0.122	0.133	0.158	0.239	0.566	0.905	0.917	0.92	0.921
	Noise	0.166	0.131	0.111	0.123	0.149	0.224	0.433	0.792	0.911	0.917	0.919	0.918
	FGSM	0.115	0.153	0.245	0.431	0.72	0.885	0.91	0.914	0.918	0.922	0.922	0.922
	PGD	0.165	0.268	0.457	0.744	0.876	0.904	0.912	0.917	0.92	0.923	0.923	0.923
	AAE-Cox	0.527	0.648	0.668	0.553	0.394	0.511	0.51	0.476	0.11	0.179	0.925	0.926
	SAWAR	0.593	0.684	0.866	0.918	0.922	0.925	0.926	0.927	0.927	0.927	0.927	0.927
prostate	DRAFT	0.402	0.416	0.428	0.444	0.469	0.505	0.542	0.585	0.627	0.653	0.661	0.668
	Noise	0.433	0.44	0.448	0.451	0.463	0.48	0.492	0.511	0.537	0.558	0.561	0.562
	FGSM	0.448	0.453	0.46	0.465	0.475	0.486	0.502	0.515	0.541	0.564	0.569	0.571
	PGD	0.447	0.455	0.459	0.467	0.474	0.487	0.509	0.53	0.564	0.585	0.588	0.588
	AAE-Cox	0.41	0.411	0.406	0.41	0.407	0.403	0.399	0.391	0.414	0.646	0.686	0.691
	SAWAR	0.608	0.623	0.637	0.652	0.665	0.671	0.672	0.673	0.667	0.663	0.66	0.657
retinopathy	DRAFT	0.553	0.568	0.578	0.597	0.616	0.632	0.645	0.653	0.663	0.666	0.667	0.669
	Noise	0.573	0.591	0.605	0.62	0.632	0.644	0.653	0.661	0.666	0.667	0.668	0.668
	FGSM	0.575	0.592	0.604	0.615	0.625	0.633	0.642	0.647	0.651	0.656	0.657	0.659
	PGD	0.571	0.589	0.599	0.61	0.621	0.63	0.64	0.647	0.651	0.655	0.656	0.657
	AAE-Cox	0.494	0.495	0.506	0.504	0.514	0.564	0.577	0.592	0.62	0.657	0.652	0.648
	SAWAR	0.668	0.669	0.67	0.666	0.662	0.66	0.656	0.654	0.653	0.65	0.648	0.647
stagec	DRAFT	0.358	0.378	0.382	0.406	0.425	0.449	0.454	0.475	0.489	0.504	0.507	0.512
	Noise	0.353	0.373	0.39	0.407	0.436	0.466	0.485	0.5	0.53	0.544	0.549	0.555
	FGSM	0.329	0.346	0.368	0.389	0.416	0.429	0.443	0.471	0.488	0.502	0.503	0.51
	PGD	0.341	0.352	0.381	0.399	0.419	0.431	0.442	0.47	0.49	0.496	0.498	0.505
	AAE-Cox	0.393	0.397	0.397	0.411	0.417	0.409	0.405	0.429	0.469	0.523	0.543	0.54
	SAWAR	0.393	0.401	0.413	0.425	0.436	0.461	0.488	0.506	0.534	0.543	0.548	0.558
zinc	DRAFT	0.262	0.27	0.284	0.296	0.317	0.355	0.44	0.579	0.712	0.755	0.765	0.77
	Noise	0.318	0.328	0.343	0.366	0.401	0.466	0.562	0.661	0.734	0.766	0.773	0.776
	FGSM	0.377	0.403	0.439	0.49	0.557	0.626	0.685	0.737	0.762	0.78	0.782	0.783
	PGD	0.384	0.406	0.443	0.495	0.559	0.632	0.695	0.741	0.77	0.778	0.78	0.781
	AAE-Cox	0.226	0.231	0.228	0.236	0.234	0.249	0.265	0.306	0.445	0.724	0.754	0.759
	SAWAR	0.667	0.725	0.763	0.785	0.785	0.785	0.781	0.778	0.778	0.776	0.776	0.774

TABLE V: Concordance Index metric for *SurvSet* datasets (higher is better) for each adversarial training method against the worst-case adversarial attack.

We find that as the ϵ-perturbation magnitude increases from 0 to 1 for the worst-case adversarial attack, the relative percentage change from DRAFT to the adversarial training methods becomes larger and then smaller. The relative percent changes in Integrated Brier Score metric from the DRAFT training objective to SAWAR training objective is shown in Table VI (where lower percentage change is better). We note that for very large ϵ, since our data is standard normalized all methods begin to fail.

ϵ	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
%Δ	-37.55	-42.51	-48.08	-53.15	-55.48	-55.34	-51.51	-42.94	-28.8	-10.87	-4.78	-0.65

TABLE VI: The relative percent change in Integrated Brier Score metric from the DRAFT model to the SAWAR training objective averaged across the *SurvSet* datasets for the worst-case adversarial attack. A lower relative percent change is better.

Dataset	ϵ / Algorithm	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
Aids2	DRAFT	0.265	0.262	0.258	0.252	0.242	0.228	0.207	0.18	0.151	0.138	0.137	0.137
	Noise	0.266	0.264	0.261	0.255	0.246	0.231	0.209	0.179	0.15	0.138	0.137	0.138
	FGSM	0.265	0.263	0.258	0.251	0.239	0.221	0.197	0.167	0.144	0.137	0.137	0.138
	PGD	0.265	0.262	0.257	0.248	0.235	0.216	0.19	0.161	0.141	0.137	0.138	0.138
	AAE-Cox	0.269	0.269	0.269	0.268	0.265	0.259	0.25	0.231	0.183	0.138	0.137	0.137
	SAWAR	0.14	0.139	0.138	0.138	0.137	0.137	0.137	0.137	0.137	0.137	0.137	0.137
Framingham	DRAFT	0.831	0.825	0.811	0.783	0.724	0.618	0.459	0.289	0.174	0.124	0.114	0.11
	Noise	0.836	0.834	0.83	0.82	0.79	0.709	0.543	0.331	0.185	0.126	0.115	0.11
	FGSM	0.836	0.836	0.835	0.831	0.817	0.765	0.605	0.336	0.162	0.118	0.113	0.112
	PGD	0.836	0.836	0.836	0.831	0.812	0.74	0.555	0.295	0.146	0.115	0.113	0.112
	AAE-Cox	0.836	0.836	0.836	0.836	0.836	0.836	0.834	0.775	0.385	0.116	0.109	0.108
	SAWAR	0.17	0.155	0.144	0.134	0.127	0.122	0.117	0.114	0.112	0.111	0.111	0.111
LeukSurv	DRAFT	0.206	0.206	0.205	0.205	0.203	0.2	0.195	0.185	0.17	0.158	0.154	0.153
	Noise	0.206	0.206	0.206	0.206	0.206	0.206	0.206	0.206	0.2	0.171	0.166	0.173
	FGSM	0.206	0.206	0.206	0.206	0.206	0.206	0.206	0.203	0.187	0.161	0.158	0.159
	PGD	0.206	0.206	0.206	0.206	0.206	0.206	0.206	0.202	0.183	0.16	0.157	0.158
	AAE-Cox	0.206	0.206	0.206	0.206	0.206	0.206	0.206	0.206	0.198	0.162	0.154	0.152
	SAWAR	0.194	0.19	0.184	0.178	0.171	0.165	0.16	0.155	0.151	0.148	0.147	0.146
TRACE	DRAFT	0.62	0.611	0.593	0.558	0.504	0.432	0.347	0.265	0.204	0.172	0.165	0.162
	Noise	0.627	0.626	0.623	0.611	0.579	0.518	0.426	0.317	0.225	0.176	0.166	0.162
	FGSM	0.627	0.625	0.619	0.596	0.545	0.46	0.351	0.248	0.188	0.167	0.163	0.162
	PGD	0.627	0.625	0.617	0.593	0.54	0.455	0.347	0.247	0.188	0.167	0.164	0.162
	AAE-Cox	0.627	0.627	0.627	0.627	0.627	0.623	0.588	0.471	0.284	0.172	0.165	0.163
	SAWAR	0.324	0.281	0.246	0.22	0.202	0.188	0.179	0.171	0.166	0.163	0.162	0.161
dataDIVAT1	DRAFT	0.702	0.689	0.663	0.614	0.527	0.405	0.285	0.21	0.177	0.17	0.172	0.177
	Noise	0.72	0.72	0.719	0.718	0.713	0.689	0.599	0.4	0.245	0.197	0.193	0.195
	FGSM	0.719	0.719	0.718	0.714	0.697	0.637	0.478	0.285	0.2	0.182	0.182	0.184
	PGD	0.719	0.719	0.716	0.71	0.687	0.613	0.442	0.261	0.191	0.18	0.181	0.182
	AAE-Cox	0.72	0.72	0.72	0.72	0.72	0.72	0.715	0.553	0.194	0.165	0.17	0.174
	SAWAR	0.189	0.184	0.181	0.179	0.177	0.177	0.177	0.177	0.177	0.178	0.179	0.179
flchain	DRAFT	0.816	0.816	0.816	0.816	0.816	0.816	0.814	0.797	0.46	0.093	0.069	0.054
	Noise	0.816	0.816	0.816	0.816	0.816	0.816	0.814	0.77	0.227	0.088	0.067	0.057
	FGSM	0.816	0.816	0.816	0.816	0.816	0.804	0.468	0.119	0.089	0.061	0.055	0.054
	PGD	0.817	0.817	0.817	0.816	0.81	0.638	0.162	0.107	0.076	0.057	0.054	0.053
	AAE-Cox	nan	nan	nan	nan	nan	nan	nan	nan	0.794	0.688	0.054	0.051
	SAWAR	0.445	0.363	0.241	0.094	0.067	0.059	0.057	0.055	0.054	0.053	0.053	0.053
prostate	DRAFT	0.517	0.517	0.516	0.513	0.508	0.495	0.466	0.408	0.322	0.234	0.202	0.181
	Noise	0.518	0.518	0.519	0.519	0.52	0.52	0.519	0.508	0.457	0.321	0.267	0.249
	FGSM	0.517	0.518	0.519	0.518	0.52	0.52	0.517	0.493	0.402	0.262	0.228	0.218
	PGD	0.518	0.518	0.518	0.518	0.517	0.518	0.515	0.486	0.383	0.248	0.219	0.209
	AAE-Cox	0.519	0.519	0.519	0.519	0.518	0.518	0.517	0.511	0.443	0.205	0.173	0.169
	SAWAR	0.37	0.334	0.291	0.262	0.236	0.218	0.204	0.192	0.184	0.178	0.176	0.175
retinopathy	DRAFT	0.728	0.722	0.71	0.687	0.647	0.579	0.48	0.364	0.266	0.204	0.188	0.179
	Noise	0.73	0.725	0.714	0.693	0.652	0.579	0.472	0.353	0.256	0.199	0.184	0.177
	FGSM	0.725	0.715	0.697	0.665	0.61	0.526	0.419	0.314	0.237	0.196	0.186	0.182
	PGD	0.724	0.714	0.695	0.662	0.606	0.521	0.413	0.309	0.235	0.195	0.186	0.182
	AAE-Cox	0.733	0.733	0.733	0.733	0.733	0.732	0.716	0.596	0.281	0.183	0.181	0.181
	SAWAR	0.588	0.548	0.499	0.44	0.378	0.317	0.265	0.224	0.197	0.184	0.181	0.181
stagec	DRAFT	0.556	0.549	0.544	0.543	0.539	0.517	0.468	0.404	0.332	0.274	0.256	0.245
	Noise	0.559	0.553	0.547	0.548	0.551	0.541	0.501	0.437	0.357	0.282	0.258	0.244
	FGSM	0.547	0.545	0.549	0.553	0.545	0.511	0.457	0.391	0.323	0.278	0.265	0.258
	PGD	0.547	0.546	0.549	0.553	0.542	0.507	0.453	0.388	0.322	0.278	0.267	0.26
	AAE-Cox	0.568	0.568	0.568	0.568	0.567	0.559	0.545	0.544	0.474	0.291	0.268	0.263
	SAWAR	0.521	0.497	0.469	0.436	0.401	0.365	0.334	0.303	0.276	0.256	0.249	0.243
zinc	DRAFT	0.847	0.847	0.846	0.843	0.831	0.787	0.641	0.376	0.184	0.119	0.109	0.107
	Noise	0.847	0.847	0.847	0.845	0.838	0.795	0.627	0.351	0.179	0.128	0.118	0.113
	FGSM	0.847	0.847	0.845	0.835	0.782	0.611	0.356	0.189	0.133	0.116	0.113	0.112
	PGD	0.847	0.847	0.845	0.834	0.777	0.6	0.341	0.182	0.132	0.116	0.113	0.112
	AAE-Cox	0.847	0.847	0.847	0.847	0.847	0.847	0.846	0.823	0.507	0.119	0.109	0.108
	SAWAR	0.654	0.532	0.401	0.289	0.21	0.161	0.133	0.118	0.111	0.109	0.109	0.109

TABLE VII: Integrated Brier Score metric for *SurvSet* datasets (lower is better) for each adversarial training method against the worst-case adversarial attack.

Dataset	ϵ / Algorithm	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
Aids2	DRAFT	7.88e+05	2.75e+05	9.79e+04	3.51e+04	1.31e+04	5.06e+03	2.06e+03	9.59e+02	6.16e+02	5.45e+02	5.41e+02	5.41e+02
	Noise	3.15e+05	1.30e+05	5.45e+04	2.30e+04	9.53e+03	4.06e+03	1.79e+03	9.02e+02	6.06e+02	5.44e+02	5.41e+02	5.41e+02
	FGSM	1.29e+05	5.99e+04	2.79e+04	1.29e+04	5.92e+03	2.72e+03	1.32e+03	7.49e+02	5.69e+02	5.42e+02	5.41e+02	5.41e+02
	PGD	7.29e+04	3.62e+04	1.80e+04	8.83e+03	4.29e+03	2.10e+03	1.09e+03	6.82e+02	5.57e+02	5.42e+02	5.41e+02	5.41e+02
	AAE-Cox	6.04e+12	2.43e+11	1.30e+10	6.94e+08	4.08e+07	2.64e+06	1.76e+05	1.27e+04	1.18e+03	5.41e+02	5.38e+02	5.39e+02
	SAWAR	5.53e+02	5.48e+02	5.45e+02	5.43e+02	5.42e+02	5.42e+02	5.41e+02	5.41e+02	5.40e+02	5.40e+02	5.40e+02	5.40e+02
Framingham	DRAFT	2.24e+07	4.61e+06	9.70e+05	2.13e+05	4.98e+04	1.33e+04	4.62e+03	2.35e+03	1.71e+03	1.52e+03	1.49e+03	1.48e+03
	Noise	3.13e+07	6.71e+06	1.48e+06	3.35e+05	7.98e+04	2.05e+04	6.23e+03	2.67e+03	1.76e+03	1.53e+03	1.49e+03	1.48e+03
	FGSM	8.34e+09	7.44e+08	6.79e+07	6.46e+06	6.50e+05	7.31e+04	1.05e+04	2.77e+03	1.67e+03	1.50e+03	1.49e+03	1.48e+03
	PGD	1.53e+11	7.60e+09	3.88e+08	2.07e+07	1.20e+06	8.59e+04	9.43e+03	2.46e+03	1.61e+03	1.49e+03	1.48e+03	1.48e+03
	AAE-Cox	1.38e+26	1.22e+23	1.20e+20	1.10e+17	1.21e+14	1.26e+11	1.63e+08	3.73e+05	3.68e+03	1.49e+03	1.47e+03	1.47e+03
	SAWAR	1.67e+03	1.62e+03	1.58e+03	1.55e+03	1.53e+03	1.51e+03	1.50e+03	1.49e+03	1.48e+03	1.48e+03	1.48e+03	1.48e+03
LeukSurv	DRAFT	2.10e+08	3.80e+07	7.18e+06	1.29e+06	2.41e+05	4.59e+04	9.21e+03	2.13e+03	6.86e+02	3.75e+02	3.28e+02	3.07e+02
	Noise	1.40e+20	1.48e+18	1.45e+16	1.63e+14	1.29e+12	9.53e+09	8.92e+07	1.13e+06	2.90e+04	2.62e+03	1.25e+03	7.75e+02
	FGSM	6.24e+12	4.01e+11	2.30e+10	1.27e+09	7.06e+07	4.34e+06	2.73e+05	2.04e+04	2.18e+03	5.11e+02	3.72e+02	3.25e+02
	PGD	4.11e+11	3.30e+10	2.53e+09	1.99e+08	1.58e+07	1.30e+06	1.12e+05	1.10e+04	1.50e+03	4.34e+02	3.39e+02	3.07e+02
	AAE-Cox	4.24e+28	2.71e+25	1.61e+34	7.46e+29	2.45e+25	7.92e+19	7.26e+14	3.55e+09	1.15e+05	4.18e+02	2.99e+02	2.84e+02
	SAWAR	3.30e+03	2.00e+03	1.23e+03	7.95e+02	5.43e+02	3.97e+02	3.38e+02	3.06e+02	2.87e+02	2.75e+02	2.72e+02	2.70e+02
TRACE	DRAFT	5.09e+05	1.75e+05	6.15e+04	2.23e+04	8.34e+03	3.31e+03	1.48e+03	8.34e+02	6.09e+02	5.38e+02	5.27e+02	5.24e+02
	Noise	2.14e+09	2.12e+08	2.24e+07	2.58e+06	3.25e+05	4.62e+04	7.86e+03	1.89e+03	7.98e+02	5.76e+02	5.46e+02	5.35e+02
	FGSM	4.68e+08	4.01e+07	3.85e+06	4.31e+05	5.82e+04	9.91e+03	2.30e+03	8.91e+02	6.03e+02	5.39e+02	5.31e+02	5.28e+02
	PGD	4.42e+07	6.51e+06	1.04e+06	1.82e+05	3.49e+04	7.47e+03	2.01e+03	8.54e+02	5.99e+02	5.39e+02	5.31e+02	5.27e+02
	AAE-Cox	1.06e+24	1.53e+21	2.08e+18	2.78e+15	2.40e+12	2.92e+09	5.29e+06	2.86e+04	9.75e+02	5.41e+02	5.31e+02	5.29e+02
	SAWAR	1.49e+03	1.01e+03	7.74e+02	6.57e+02	5.98e+02	5.67e+02	5.48e+02	5.35e+02	5.28e+02	5.24e+02	5.24e+02	5.24e+02
dataDIVAT1	DRAFT	2.97e+04	1.56e+04	8.36e+03	4.56e+03	2.59e+03	1.59e+03	1.11e+03	8.83e+02	7.91e+02	7.56e+02	7.51e+02	7.50e+02
	Noise	1.60e+10	1.12e+09	8.30e+07	6.62e+06	5.83e+05	5.99e+04	8.13e+03	1.87e+03	9.38e+02	7.78e+02	7.61e+02	7.59e+02
	FGSM	3.25e+08	3.59e+07	4.13e+06	5.10e+05	7.07e+04	1.17e+04	2.66e+03	1.10e+03	8.11e+02	7.58e+02	7.53e+02	7.52e+02
	PGD	1.22e+08	1.55e+07	2.06e+06	2.92e+05	4.56e+04	8.39e+03	2.15e+03	1.01e+03	7.94e+02	7.55e+02	7.52e+02	7.51e+02
	AAE-Cox	9.96e+18	6.79e+16	3.12e+14	1.88e+12	1.37e+10	1.14e+08	1.05e+06	1.57e+04	1.04e+03	7.50e+02	7.45e+02	7.45e+02
	SAWAR	7.89e+02	7.79e+02	7.70e+02	7.63e+02	7.58e+02	7.54e+02	7.51e+02	7.49e+02	7.47e+02	7.46e+02	7.46e+02	7.46e+02
flchain	DRAFT	1.57e+22	5.59e+19	2.03e+17	7.97e+14	3.37e+12	1.52e+10	7.49e+07	5.25e+05	1.45e+04	1.95e+03	1.25e+03	1.10e+03
	Noise	2.69e+32	2.90e+28	3.20e+24	5.94e+33	2.08e+27	7.50e+20	3.25e+14	2.31e+08	6.25e+04	2.40e+03	1.47e+03	1.24e+03
	FGSM	5.19e+19	7.59e+16	1.21e+14	2.16e+11	7.32e+08	9.31e+06	2.85e+05	1.58e+04	2.16e+03	1.18e+03	1.12e+03	1.10e+03
	PGD	3.10e+15	1.18e+13	6.11e+10	6.20e+08	1.63e+07	6.61e+05	3.81e+04	4.41e+03	1.43e+03	1.12e+03	1.09e+03	1.09e+03
	AAE-Cox	nan	nan	nan	nan	nan	nan	nan	nan	4.02e+33	2.23e+10	1.11e+03	1.08e+03
	SAWAR	5.84e+05	3.37e+04	4.04e+03	1.74e+03	1.31e+03	1.18e+03	1.13e+03	1.11e+03	1.10e+03	1.09e+03	1.09e+03	1.09e+03
prostate	DRAFT	5.92e+05	2.18e+05	8.11e+04	3.04e+04	1.16e+04	4.49e+03	1.83e+03	8.39e+02	4.86e+02	3.71e+02	3.48e+02	3.37e+02
	Noise	6.55e+23	1.63e+21	4.14e+18	1.02e+16	2.79e+13	8.22e+10	2.79e+08	1.36e+06	3.02e+04	3.29e+03	1.53e+03	9.01e+02
	FGSM	5.24e+15	9.63e+13	1.84e+12	3.69e+10	7.62e+08	1.69e+07	4.35e+05	1.56e+04	1.19e+03	4.22e+02	3.76e+02	3.63e+02
	PGD	1.20e+13	4.77e+11	1.96e+10	8.28e+08	3.66e+07	1.75e+06	9.45e+04	6.42e+03	8.39e+02	3.99e+02	3.67e+02	3.57e+02
	AAE-Cox	1.53e+20	9.61e+17	6.16e+15	4.00e+13	2.65e+11	1.87e+09	1.33e+07	1.16e+05	1.81e+03	3.47e+02	3.33e+02	3.31e+02
	SAWAR	6.21e+02	5.06e+02	4.28e+02	3.91e+02	3.67e+02	3.55e+02	3.47e+02	3.41e+02	3.37e+02	3.35e+02	3.34e+02	3.33e+02
retinopathy	DRAFT	1.21e+04	6.19e+03	3.21e+03	1.68e+03	9.15e+02	5.24e+02	3.31e+02	2.39e+02	1.96e+02	1.76e+02	1.71e+02	1.69e+02
	Noise	1.65e+04	8.10e+03	4.01e+03	2.03e+03	1.05e+03	5.83e+02	3.54e+02	2.47e+02	1.99e+02	1.77e+02	1.72e+02	1.69e+02
	FGSM	7.62e+03	4.03e+03	2.15e+03	1.18e+03	6.72e+02	4.10e+02	2.80e+02	2.16e+02	1.86e+02	1.73e+02	1.70e+02	1.69e+02
	PGD	7.32e+03	3.87e+03	2.08e+03	1.14e+03	6.55e+02	4.03e+02	2.75e+02	2.14e+02	1.85e+02	1.73e+02	1.70e+02	1.69e+02
	AAE-Cox	1.32e+13	3.68e+11	1.03e+10	2.98e+08	8.67e+06	2.82e+05	1.17e+04	8.14e+02	1.98e+02	1.68e+02	1.67e+02	1.67e+02
	SAWAR	6.10e+02	4.69e+02	3.69e+02	3.00e+02	2.51e+02	2.18e+02	1.96e+02	1.82e+02	1.74e+02	1.69e+02	1.68e+02	1.68e+02
stagec	DRAFT	1.17e+04	5.05e+03	2.20e+03	9.79e+02	4.44e+02	2.10e+02	1.07e+02	6.47e+01	4.80e+01	4.24e+01	4.15e+01	4.13e+01
	Noise	6.21e+04	2.17e+04	7.71e+03	2.72e+03	1.01e+03	3.86e+02	1.63e+02	8.11e+01	5.29e+01	4.44e+01	4.31e+01	4.27e+01
	FGSM	1.02e+04	4.31e+03	1.80e+03	7.90e+02	3.54e+02	1.69e+02	9.18e+01	5.99e+01	4.77e+01	4.40e+01	4.35e+01	4.36e+01
	PGD	8.55e+03	3.69e+03	1.60e+03	7.18e+02	3.32e+02	1.62e+02	8.89e+01	5.88e+01	4.73e+01	4.38e+01	4.34e+01	4.35e+01
	AAE-Cox	1.32e+20	6.14e+17	2.58e+15	1.21e+13	5.37e+10	2.81e+08	1.53e+06	1.01e+04	1.53e+02	4.20e+01	4.10e+01	4.09e+01
	SAWAR	2.52e+02	1.75e+02	1.26e+02	9.40e+01	7.32e+01	5.96e+01	5.14e+01	4.61e+01	4.28e+01	4.09e+01	4.04e+01	4.01e+01
zinc	DRAFT	1.34e+06	3.43e+05	8.95e+04	2.36e+04	6.49e+03	1.84e+03	5.72e+02	2.12e+02	1.11e+02	8.33e+01	7.84e+01	7.64e+01
	Noise	1.01e+07	2.02e+06	4.01e+05	8.52e+04	1.86e+04	4.26e+03	1.05e+03	3.06e+02	1.28e+02	8.63e+01	8.05e+01	7.86e+01
	FGSM	3.49e+05	9.39e+04	2.69e+04	7.98e+03	2.42e+03	8.00e+02	3.01e+02	1.41e+02	9.24e+01	7.95e+01	7.82e+01	7.82e+01
	PGD	4.28e+05	1.09e+05	2.89e+04	7.84e+03	2.37e+03	7.72e+02	2.87e+02	1.36e+02	9.09e+01	7.94e+01	7.83e+01	7.85e+01
	AAE-Cox	1.15e+24	1.54e+21	4.97e+18	8.90e+15	1.88e+13	2.84e+10	5.64e+07	1.63e+05	7.39e+02	8.21e+01	7.79e+01	7.76e+01
	SAWAR	5.06e+02	3.35e+02	2.31e+02	1.67e+02	1.28e+02	1.04e+02	9.02e+01	8.23e+01	7.82e+01	7.68e+01	7.68e+01	7.72e+01

TABLE VIII: Negative Log Likelihood metric for *SurvSet* datasets (lower is better) for each adversarial training method against the worst-case adversarial attack.

We find that as the ϵ-perturbation magnitude increases from 0 to 1 for the FGSM adversarial attack, the relative percentage change from DRAFT to the adversarial training methods becomes larger and then smaller. The relative percent changes in Concordance Index metric from the DRAFT training objective to SAWAR training objective is shown in Table IX (where higher percentage change is better). We note that for very large ϵ, since our data is standard normalized all methods begin to fail.

ϵ	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
%Δ	39.82	59.68	72.41	86.66	105.06	136.98	168.31	178.41	116.94	26.54	12.48	1.6

TABLE IX: The relative percent change in Concordance Index metric from the DRAFT model to the SAWAR training objective averaged across the *SurvSet* datasets for the FGSM adversarial attack. A lower relative percent change is better.

Dataset	ϵ / Algorithm	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
Aids2	DRAFT	0.232	0.233	0.235	0.238	0.243	0.25	0.259	0.274	0.3	0.376	0.458	0.57
	Noise	0.23	0.231	0.233	0.236	0.24	0.249	0.26	0.277	0.306	0.386	0.465	0.569
	FGSM	0.356	0.363	0.375	0.389	0.403	0.421	0.439	0.459	0.477	0.508	0.531	0.566
	PGD	0.326	0.336	0.35	0.367	0.385	0.409	0.434	0.46	0.486	0.515	0.534	0.567
	AAE-Cox	0.241	0.246	0.253	0.261	0.271	0.282	0.299	0.332	0.39	0.474	0.523	0.573
	SAWAR	0.259	0.265	0.276	0.289	0.306	0.327	0.352	0.385	0.43	0.493	0.53	0.569
Framingham	DRAFT	0.142	0.143	0.143	0.144	0.144	0.145	0.148	0.168	0.257	0.468	0.6	0.722
	Noise	0.143	0.144	0.144	0.145	0.145	0.146	0.15	0.173	0.265	0.473	0.601	0.719
	FGSM	0.149	0.152	0.156	0.164	0.18	0.208	0.257	0.332	0.437	0.57	0.643	0.715
	PGD	0.181	0.189	0.2	0.218	0.245	0.285	0.34	0.411	0.5	0.603	0.66	0.717
	AAE-Cox	0.148	0.152	0.162	0.181	0.216	0.269	0.34	0.427	0.53	0.636	0.687	0.733
	SAWAR	0.149	0.158	0.178	0.213	0.268	0.34	0.417	0.5	0.584	0.665	0.702	0.737
LeukSurv	DRAFT	0.378	0.38	0.381	0.383	0.387	0.394	0.407	0.432	0.475	0.544	0.587	0.633
	Noise	0.39	0.393	0.397	0.401	0.406	0.411	0.417	0.428	0.453	0.507	0.556	0.624
	FGSM	0.397	0.401	0.405	0.41	0.418	0.427	0.443	0.466	0.499	0.554	0.59	0.635
	PGD	0.399	0.402	0.407	0.411	0.419	0.431	0.447	0.473	0.508	0.562	0.597	0.638
	AAE-Cox	0.376	0.377	0.379	0.382	0.388	0.4	0.42	0.453	0.506	0.575	0.615	0.656
	SAWAR	0.392	0.399	0.409	0.423	0.442	0.465	0.494	0.529	0.574	0.623	0.649	0.673
TRACE	DRAFT	0.219	0.221	0.225	0.232	0.247	0.279	0.334	0.415	0.524	0.642	0.696	0.745
	Noise	0.234	0.236	0.24	0.246	0.259	0.286	0.336	0.414	0.52	0.639	0.695	0.745
	FGSM	0.29	0.311	0.336	0.369	0.408	0.454	0.507	0.565	0.625	0.685	0.715	0.744
	PGD	0.304	0.326	0.353	0.388	0.428	0.475	0.525	0.58	0.635	0.691	0.718	0.745
	AAE-Cox	0.251	0.273	0.302	0.339	0.384	0.438	0.498	0.563	0.63	0.692	0.721	0.747
	SAWAR	0.287	0.32	0.363	0.411	0.464	0.519	0.57	0.62	0.665	0.708	0.729	0.747
dataDIVAT1	DRAFT	0.097	0.098	0.099	0.1	0.101	0.103	0.105	0.122	0.214	0.414	0.53	0.655
	Noise	0.094	0.094	0.095	0.096	0.097	0.099	0.101	0.111	0.178	0.366	0.494	0.635
	FGSM	0.114	0.116	0.12	0.126	0.138	0.161	0.203	0.27	0.362	0.482	0.559	0.646
	PGD	0.137	0.143	0.152	0.167	0.188	0.22	0.265	0.33	0.409	0.511	0.574	0.648
	AAE-Cox	0.111	0.114	0.122	0.139	0.167	0.209	0.268	0.347	0.443	0.551	0.607	0.663
	SAWAR	0.156	0.201	0.253	0.311	0.368	0.422	0.461	0.506	0.555	0.609	0.637	0.67
flchain	DRAFT	0.152	0.153	0.154	0.155	0.156	0.157	0.159	0.164	0.197	0.895	0.903	0.921
	Noise	0.166	0.167	0.169	0.171	0.175	0.182	0.213	0.333	0.809	0.9	0.904	0.918
	FGSM	0.507	0.628	0.727	0.8	0.854	0.883	0.898	0.902	0.906	0.911	0.915	0.922
	PGD	0.539	0.717	0.824	0.876	0.896	0.9	0.903	0.905	0.908	0.913	0.917	0.923
	AAE-Cox	0.172	0.188	0.218	0.275	0.372	0.508	0.665	0.81	0.899	0.918	0.922	0.926
	SAWAR	0.628	0.831	0.894	0.9	0.904	0.907	0.909	0.912	0.916	0.921	0.924	0.927
prostate	DRAFT	0.308	0.311	0.314	0.318	0.321	0.326	0.333	0.339	0.357	0.435	0.531	0.668
	Noise	0.305	0.305	0.306	0.307	0.309	0.314	0.32	0.328	0.344	0.394	0.457	0.562
	FGSM	0.293	0.295	0.297	0.3	0.304	0.308	0.312	0.32	0.343	0.407	0.474	0.571
	PGD	0.299	0.301	0.303	0.305	0.308	0.312	0.318	0.331	0.36	0.431	0.502	0.588
	AAE-Cox	0.308	0.308	0.311	0.315	0.325	0.342	0.375	0.426	0.499	0.597	0.645	0.691
	SAWAR	0.288	0.292	0.299	0.31	0.326	0.349	0.384	0.432	0.499	0.579	0.618	0.657
retinopathy	DRAFT	0.139	0.141	0.145	0.15	0.152	0.152	0.153	0.158	0.209	0.425	0.554	0.669
	Noise	0.134	0.137	0.138	0.138	0.138	0.138	0.138	0.15	0.245	0.456	0.57	0.668
	FGSM	0.131	0.133	0.135	0.135	0.135	0.135	0.137	0.155	0.255	0.456	0.561	0.659
	PGD	0.13	0.13	0.131	0.131	0.131	0.131	0.134	0.154	0.254	0.456	0.56	0.657
	AAE-Cox	0.129	0.129	0.13	0.137	0.157	0.196	0.247	0.337	0.444	0.541	0.595	0.648
	SAWAR	0.131	0.13	0.13	0.131	0.135	0.149	0.178	0.251	0.371	0.51	0.584	0.647
stagec	DRAFT	0.137	0.136	0.136	0.132	0.136	0.135	0.151	0.174	0.23	0.34	0.407	0.512
	Noise	0.133	0.133	0.132	0.132	0.136	0.144	0.16	0.187	0.261	0.362	0.442	0.555
	FGSM	0.12	0.124	0.127	0.134	0.146	0.147	0.157	0.184	0.255	0.33	0.417	0.51
	PGD	0.115	0.117	0.122	0.128	0.141	0.144	0.154	0.181	0.259	0.327	0.412	0.505
	AAE-Cox	0.125	0.121	0.131	0.141	0.163	0.202	0.241	0.296	0.352	0.426	0.485	0.54
	SAWAR	0.123	0.124	0.127	0.139	0.149	0.179	0.239	0.281	0.347	0.425	0.486	0.558
zinc	DRAFT	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.068	0.155	0.485	0.646	0.77
	Noise	0.053	0.053	0.054	0.053	0.054	0.057	0.062	0.095	0.248	0.547	0.668	0.776
	FGSM	0.055	0.056	0.056	0.058	0.06	0.07	0.095	0.199	0.404	0.61	0.705	0.783
	PGD	0.056	0.056	0.057	0.058	0.064	0.078	0.113	0.22	0.42	0.615	0.706	0.781
	AAE-Cox	0.062	0.065	0.079	0.101	0.162	0.227	0.291	0.409	0.551	0.655	0.708	0.759
	SAWAR	0.055	0.056	0.058	0.073	0.111	0.213	0.325	0.446	0.556	0.679	0.729	0.774

TABLE X: Concordance Index metric for *SurvSet* datasets (higher is better) for each adversarial training method against the FGSM adversarial attack.

We find that as the ϵ-perturbation magnitude increases from 0 to 1 for the FGSM adversarial attack, the relative percentage change from DRAFT to the adversarial training methods becomes larger and then smaller. The relative percent changes in Integrated Brier Scores metric from the DRAFT training objective to SAWAR training objective is shown in Table XI (where lower percentage change is better). We note that for very large ϵ, since our data is standard normalized all methods begin to fail.

ϵ	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
%Δ	-44.57	-46.37	-47.93	-49.06	-49.43	-48.69	-46.35	-41.82	-33.56	-20.63	-11.37	-0.65

TABLE XI: The relative percent change in Integrated Brier Score metric from the DRAFT model to the SAWAR training objective averaged across the *SurvSet* datasets for the FGSM adversarial attack. A lower relative percent change is better.

Dataset	ϵ / Algorithm	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
Aids2	DRAFT	0.232	0.233	0.235	0.238	0.243	0.25	0.259	0.274	0.3	0.376	0.458	0.57
	Noise	0.23	0.231	0.233	0.236	0.24	0.249	0.26	0.277	0.306	0.386	0.465	0.569
	FGSM	0.356	0.363	0.375	0.389	0.403	0.421	0.439	0.459	0.477	0.508	0.531	0.566
	PGD	0.326	0.336	0.35	0.367	0.385	0.409	0.434	0.46	0.486	0.515	0.534	0.567
	AAE-Cox	0.241	0.246	0.253	0.261	0.271	0.282	0.299	0.332	0.39	0.474	0.523	0.573
	SAWAR	0.259	0.265	0.276	0.289	0.306	0.327	0.352	0.385	0.43	0.493	0.53	0.569
Framingham	DRAFT	0.142	0.143	0.143	0.144	0.144	0.145	0.148	0.168	0.257	0.468	0.6	0.722
	Noise	0.143	0.144	0.144	0.145	0.145	0.146	0.15	0.173	0.265	0.473	0.601	0.719
	FGSM	0.149	0.152	0.156	0.164	0.18	0.208	0.257	0.332	0.437	0.57	0.643	0.715
	PGD	0.181	0.189	0.2	0.218	0.245	0.285	0.34	0.411	0.5	0.603	0.66	0.717
	AAE-Cox	0.148	0.152	0.162	0.181	0.216	0.269	0.34	0.427	0.53	0.636	0.687	0.733
	SAWAR	0.149	0.158	0.178	0.213	0.268	0.34	0.417	0.5	0.584	0.665	0.702	0.737
LeukSurv	DRAFT	0.378	0.38	0.381	0.383	0.387	0.394	0.407	0.432	0.475	0.544	0.587	0.633
	Noise	0.39	0.393	0.397	0.401	0.406	0.411	0.417	0.428	0.453	0.507	0.556	0.624
	FGSM	0.397	0.401	0.405	0.41	0.418	0.427	0.443	0.466	0.499	0.554	0.59	0.635
	PGD	0.399	0.402	0.407	0.411	0.419	0.431	0.447	0.473	0.508	0.562	0.597	0.638
	AAE-Cox	0.376	0.377	0.379	0.382	0.388	0.4	0.42	0.453	0.506	0.575	0.615	0.656
	SAWAR	0.392	0.399	0.409	0.423	0.442	0.465	0.494	0.529	0.574	0.623	0.649	0.673
TRACE	DRAFT	0.219	0.221	0.225	0.232	0.247	0.279	0.334	0.415	0.524	0.642	0.696	0.745
	Noise	0.234	0.236	0.24	0.246	0.259	0.286	0.336	0.414	0.52	0.639	0.695	0.745
	FGSM	0.29	0.311	0.336	0.369	0.408	0.454	0.507	0.565	0.625	0.685	0.715	0.744
	PGD	0.304	0.326	0.353	0.388	0.428	0.475	0.525	0.58	0.635	0.691	0.718	0.745
	AAE-Cox	0.251	0.273	0.302	0.339	0.384	0.438	0.498	0.563	0.63	0.692	0.721	0.747
	SAWAR	0.287	0.32	0.363	0.411	0.464	0.519	0.57	0.62	0.665	0.708	0.729	0.747
dataDIVAT1	DRAFT	0.097	0.098	0.099	0.1	0.101	0.103	0.105	0.122	0.214	0.414	0.53	0.655
	Noise	0.094	0.094	0.095	0.096	0.097	0.099	0.101	0.111	0.178	0.366	0.494	0.635
	FGSM	0.114	0.116	0.12	0.126	0.138	0.161	0.203	0.27	0.362	0.482	0.559	0.646
	PGD	0.137	0.143	0.152	0.167	0.188	0.22	0.265	0.33	0.409	0.511	0.574	0.648
	AAE-Cox	0.111	0.114	0.122	0.139	0.167	0.209	0.268	0.347	0.443	0.551	0.607	0.663
	SAWAR	0.156	0.201	0.253	0.311	0.368	0.422	0.461	0.506	0.555	0.609	0.637	0.67
flchain	DRAFT	0.152	0.153	0.154	0.155	0.156	0.157	0.159	0.164	0.197	0.895	0.903	0.921
	Noise	0.166	0.167	0.169	0.171	0.175	0.182	0.213	0.333	0.809	0.9	0.904	0.918
	FGSM	0.507	0.628	0.727	0.8	0.854	0.883	0.898	0.902	0.906	0.911	0.915	0.922
	PGD	0.539	0.717	0.824	0.876	0.896	0.9	0.903	0.905	0.908	0.913	0.917	0.923
	AAE-Cox	0.172	0.188	0.218	0.275	0.372	0.508	0.665	0.81	0.899	0.918	0.922	0.926
	SAWAR	0.628	0.831	0.894	0.9	0.904	0.907	0.909	0.912	0.916	0.921	0.924	0.927
prostate	DRAFT	0.308	0.311	0.314	0.318	0.321	0.326	0.333	0.339	0.357	0.435	0.531	0.668
	Noise	0.305	0.305	0.306	0.307	0.309	0.314	0.32	0.328	0.344	0.394	0.457	0.562
	FGSM	0.293	0.295	0.297	0.3	0.304	0.308	0.312	0.32	0.343	0.407	0.474	0.571
	PGD	0.299	0.301	0.303	0.305	0.308	0.312	0.318	0.331	0.36	0.431	0.502	0.588
	AAE-Cox	0.308	0.308	0.311	0.315	0.325	0.342	0.375	0.426	0.499	0.597	0.645	0.691
	SAWAR	0.288	0.292	0.299	0.31	0.326	0.349	0.384	0.432	0.499	0.579	0.618	0.657
retinopathy	DRAFT	0.139	0.141	0.145	0.15	0.152	0.152	0.153	0.158	0.209	0.425	0.554	0.669
	Noise	0.134	0.137	0.138	0.138	0.138	0.138	0.138	0.15	0.245	0.456	0.57	0.668
	FGSM	0.131	0.133	0.135	0.135	0.135	0.135	0.137	0.155	0.255	0.456	0.561	0.659
	PGD	0.13	0.13	0.131	0.131	0.131	0.131	0.134	0.154	0.254	0.456	0.56	0.657
	AAE-Cox	0.129	0.129	0.13	0.137	0.157	0.196	0.247	0.337	0.444	0.541	0.595	0.648
	SAWAR	0.131	0.13	0.13	0.131	0.135	0.149	0.178	0.251	0.371	0.51	0.584	0.647
stagec	DRAFT	0.137	0.136	0.136	0.132	0.136	0.135	0.151	0.174	0.23	0.34	0.407	0.512
	Noise	0.133	0.133	0.132	0.132	0.136	0.144	0.16	0.187	0.261	0.362	0.442	0.555
	FGSM	0.12	0.124	0.127	0.134	0.146	0.147	0.157	0.184	0.255	0.33	0.417	0.51
	PGD	0.115	0.117	0.122	0.128	0.141	0.144	0.154	0.181	0.259	0.327	0.412	0.505
	AAE-Cox	0.125	0.121	0.131	0.141	0.163	0.202	0.241	0.296	0.352	0.426	0.485	0.54
	SAWAR	0.123	0.124	0.127	0.139	0.149	0.179	0.239	0.281	0.347	0.425	0.486	0.558
zinc	DRAFT	0.057	0.057	0.057	0.057	0.057	0.057	0.057	0.068	0.155	0.485	0.646	0.77
	Noise	0.053	0.053	0.054	0.053	0.054	0.057	0.062	0.095	0.248	0.547	0.668	0.776
	FGSM	0.055	0.056	0.056	0.058	0.06	0.07	0.095	0.199	0.404	0.61	0.705	0.783
	PGD	0.056	0.056	0.057	0.058	0.064	0.078	0.113	0.22	0.42	0.615	0.706	0.781
	AAE-Cox	0.062	0.065	0.079	0.101	0.162	0.227	0.291	0.409	0.551	0.655	0.708	0.759
	SAWAR	0.055	0.056	0.058	0.073	0.111	0.213	0.325	0.446	0.556	0.679	0.729	0.774

TABLE XII: Concordance Index metric for *SurvSet* datasets (higher is better) for each adversarial training method against the FGSM adversarial attack.

Dataset	ϵ / Algorithm	1.00	0.90	0.80	0.70	0.60	0.50	0.40	0.30	0.20	0.10	0.05	0.00
Aids2	DRAFT	1.04e+03	9.95e+02	9.48e+02	9.01e+02	8.54e+02	8.06e+02	7.56e+02	7.04e+02	6.49e+02	5.92e+02	5.66e+02	5.41e+02
	Noise	9.94e+02	9.53e+02	9.11e+02	8.69e+02	8.26e+02	7.82e+02	7.37e+02	6.89e+02	6.39e+02	5.88e+02	5.64e+02	5.41e+02
	FGSM	6.16e+02	6.10e+02	6.04e+02	5.97e+02	5.91e+02	5.84e+02	5.77e+02	5.70e+02	5.63e+02	5.54e+02	5.48e+02	5.41e+02
	PGD	6.20e+02	6.13e+02	6.05e+02	5.98e+02	5.91e+02	5.83e+02	5.76e+02	5.68e+02	5.60e+02	5.52e+02	5.47e+02	5.41e+02
	AAE-Cox	7.00e+02	6.83e+02	6.67e+02	6.51e+02	6.35e+02	6.19e+02	6.03e+02	5.87e+02	5.71e+02	5.55e+02	5.47e+02	5.39e+02
	SAWAR	5.84e+02	5.80e+02	5.76e+02	5.72e+02	5.68e+02	5.63e+02	5.59e+02	5.55e+02	5.50e+02	5.45e+02	5.43e+02	5.40e+02
Framingham	DRAFT	4.23e+03	4.10e+03	3.91e+03	3.65e+03	3.33e+03	2.97e+03	2.61e+03	2.26e+03	1.95e+03	1.68e+03	1.57e+03	1.48e+03
	Noise	4.00e+03	3.89e+03	3.73e+03	3.51e+03	3.23e+03	2.91e+03	2.57e+03	2.24e+03	1.94e+03	1.69e+03	1.58e+03	1.48e+03
	FGSM	2.11e+03	2.07e+03	2.03e+03	1.98e+03	1.93e+03	1.88e+03	1.82e+03	1.75e+03	1.67e+03	1.58e+03	1.53e+03	1.48e+03
	PGD	1.99e+03	1.95e+03	1.91e+03	1.87e+03	1.83e+03	1.79e+03	1.74e+03	1.68e+03	1.62e+03	1.56e+03	1.52e+03	1.48e+03
	AAE-Cox	2.38e+03	2.27e+03	2.16e+03	2.06e+03	1.96e+03	1.87e+03	1.78e+03	1.70e+03	1.62e+03	1.54e+03	1.51e+03	1.47e+03
	SAWAR	1.96e+03	1.90e+03	1.84e+03	1.79e+03	1.73e+03	1.68e+03	1.64e+03	1.59e+03	1.55e+03	1.51e+03	1.49e+03	1.48e+03
LeukSurv	DRAFT	2.66e+03	2.16e+03	1.77e+03	1.45e+03	1.19e+03	9.73e+02	7.93e+02	6.41e+02	5.10e+02	3.99e+02	3.50e+02	3.07e+02
	Noise	1.13e+06	5.84e+05	2.96e+05	1.52e+05	7.88e+04	4.05e+04	1.94e+04	9.21e+03	4.25e+03	1.89e+03	1.23e+03	7.75e+02
	FGSM	2.76e+03	2.33e+03	1.96e+03	1.65e+03	1.39e+03	1.16e+03	9.64e+02	7.82e+02	6.18e+02	4.64e+02	3.92e+02	3.25e+02
	PGD	1.79e+03	1.57e+03	1.38e+03	1.21e+03	1.05e+03	9.10e+02	7.76e+02	6.49e+02	5.30e+02	4.15e+02	3.60e+02	3.07e+02
	AAE-Cox	1.09e+03	9.83e+02	8.87e+02	7.97e+02	7.12e+02	6.32e+02	5.57e+02	4.84e+02	4.12e+02	3.43e+02	3.12e+02	2.84e+02
	SAWAR	5.40e+02	5.12e+02	4.85e+02	4.57e+02	4.29e+02	4.01e+02	3.73e+02	3.46e+02	3.20e+02	2.94e+02	2.82e+02	2.70e+02
TRACE	DRAFT	2.31e+03	2.09e+03	1.87e+03	1.64e+03	1.43e+03	1.22e+03	1.03e+03	8.69e+02	7.29e+02	6.14e+02	5.66e+02	5.24e+02
	Noise	4.55e+03	3.85e+03	3.20e+03	2.63e+03	2.14e+03	1.72e+03	1.36e+03	1.06e+03	8.29e+02	6.60e+02	5.93e+02	5.35e+02
	FGSM	1.23e+03	1.15e+03	1.07e+03	9.98e+02	9.26e+02	8.54e+02	7.82e+02	7.13e+02	6.47e+02	5.85e+02	5.56e+02	5.28e+02
	PGD	1.17e+03	1.10e+03	1.03e+03	9.59e+02	8.90e+02	8.21e+02	7.54e+02	6.93e+02	6.35e+02	5.80e+02	5.53e+02	5.27e+02
	AAE-Cox	1.07e+03	1.00e+03	9.38e+02	8.77e+02	8.19e+02	7.63e+02	7.09e+02	6.59e+02	6.11e+02	5.68e+02	5.48e+02	5.29e+02
	SAWAR	1.01e+03	9.32e+02	8.63e+02	8.01e+02	7.47e+02	6.99e+02	6.57e+02	6.19e+02	5.84e+02	5.53e+02	5.38e+02	5.24e+02
dataDIVAT1	DRAFT	1.78e+03	1.72e+03	1.64e+03	1.55e+03	1.44e+03	1.32e+03	1.20e+03	1.07e+03	9.55e+02	8.46e+02	7.96e+02	7.50e+02
	Noise	2.02e+03	1.96e+03	1.88e+03	1.78e+03	1.65e+03	1.50e+03	1.35e+03	1.19e+03	1.03e+03	8.87e+02	8.20e+02	7.59e+02
	FGSM	1.09e+03	1.07e+03	1.05e+03	1.02e+03	1.00e+03	9.72e+02	9.40e+02	9.03e+02	8.59e+02	8.09e+02	7.81e+02	7.52e+02
	PGD	1.01e+03	9.95e+02	9.78e+02	9.60e+02	9.41e+02	9.19e+02	8.94e+02	8.65e+02	8.32e+02	7.95e+02	7.74e+02	7.51e+02
	AAE-Cox	1.25e+03	1.18e+03	1.12e+03	1.06e+03	1.01e+03	9.55e+02	9.09e+02	8.65e+02	8.23e+02	7.83e+02	7.64e+02	7.45e+02
	SAWAR	9.24e+02	9.01e+02	8.79e+02	8.59e+02	8.39e+02	8.20e+02	8.04e+02	7.89e+02	7.74e+02	7.60e+02	7.53e+02	7.46e+02
flchain	DRAFT	2.56e+04	2.36e+04	2.15e+04	1.95e+04	1.73e+04	1.47e+04	1.11e+04	6.38e+03	2.91e+03	1.59e+03	1.27e+03	1.10e+03
	Noise	1.62e+05	1.27e+05	8.24e+04	4.85e+04	2.97e+04	1.81e+04	9.84e+03	5.14e+03	2.95e+03	1.80e+03	1.45e+03	1.24e+03
	FGSM	2.49e+03	2.17e+03	1.87e+03	1.62e+03	1.44e+03	1.34e+03	1.28e+03	1.23e+03	1.19e+03	1.14e+03	1.12e+03	1.10e+03
	PGD	2.07e+03	1.76e+03	1.53e+03	1.37e+03	1.28e+03	1.22e+03	1.19e+03	1.16e+03	1.14e+03	1.11e+03	1.10e+03	1.09e+03
	AAE-Cox	2.98e+03	2.85e+03	2.73e+03	2.62e+03	2.50e+03	2.38e+03	2.23e+03	1.97e+03	1.47e+03	1.12e+03	1.09e+03	1.08e+03
	SAWAR	2.18e+03	1.83e+03	1.55e+03	1.33e+03	1.20e+03	1.14e+03	1.13e+03	1.11e+03	1.10e+03	1.09e+03	1.09e+03	1.09e+03
prostate	DRAFT	1.50e+03	1.44e+03	1.36e+03	1.24e+03	1.10e+03	9.38e+02	7.70e+02	6.16e+02	4.90e+02	3.97e+02	3.63e+02	3.37e+02
	Noise	1.88e+06	1.21e+06	6.72e+05	3.64e+05	1.97e+05	9.86e+04	4.32e+04	1.69e+04	6.34e+03	2.38e+03	1.46e+03	9.01e+02
	FGSM	8.51e+02	8.48e+02	8.41e+02	8.25e+02	7.97e+02	7.47e+02	6.78e+02	5.92e+02	5.05e+02	4.25e+02	3.92e+02	3.63e+02
	PGD	7.46e+02	7.32e+02	7.17e+02	6.97e+02	6.69e+02	6.30e+02	5.79e+02	5.22e+02	4.63e+02	4.05e+02	3.79e+02	3.57e+02
	AAE-Cox	4.64e+02	4.47e+02	4.31e+02	4.16e+02	4.02e+02	3.89e+02	3.77e+02	3.64e+02	3.52e+02	3.41e+02	3.36e+02	3.31e+02
	SAWAR	4.40e+02	4.28e+02	4.15e+02	4.04e+02	3.92e+02	3.81e+02	3.70e+02	3.60e+02	3.51e+02	3.42e+02	3.37e+02	3.33e+02
retinopathy	DRAFT	5.04e+02	4.93e+02	4.70e+02	4.35e+02	3.93e+02	3.48e+02	3.02e+02	2.59e+02	2.22e+02	1.92e+02	1.80e+02	1.69e+02
	Noise	5.47e+02	5.29e+02	4.96e+02	4.54e+02	4.04e+02	3.54e+02	3.05e+02	2.62e+02	2.24e+02	1.94e+02	1.81e+02	1.69e+02
	FGSM	4.16e+02	4.09e+02	3.93e+02	3.69e+02	3.39e+02	3.06e+02	2.73e+02	2.41e+02	2.13e+02	1.89e+02	1.79e+02	1.69e+02
	PGD	4.11e+02	4.03e+02	3.88e+02	3.65e+02	3.37e+02	3.05e+02	2.71e+02	2.40e+02	2.12e+02	1.89e+02	1.78e+02	1.69e+02
	AAE-Cox	2.27e+02	2.21e+02	2.14e+02	2.09e+02	2.03e+02	1.97e+02	1.91e+02	1.85e+02	1.79e+02	1.73e+02	1.70e+02	1.67e+02
	SAWAR	3.27e+02	3.14e+02	2.99e+02	2.82e+02	2.65e+02	2.47e+02	2.29e+02	2.12e+02	1.96e+02	1.81e+02	1.74e+02	1.68e+02
stagec	DRAFT	1.38e+02	1.32e+02	1.24e+02	1.15e+02	1.04e+02	9.29e+01	8.09e+01	6.91e+01	5.82e+01	4.90e+01	4.49e+01	4.13e+01
	Noise	1.52e+02	1.44e+02	1.35e+02	1.24e+02	1.12e+02	9.97e+01	8.67e+01	7.39e+01	6.18e+01	5.13e+01	4.68e+01	4.27e+01
	FGSM	1.04e+02	1.01e+02	9.63e+01	9.11e+01	8.52e+01	7.85e+01	7.12e+01	6.37e+01	5.64e+01	4.96e+01	4.65e+01	4.36e+01
	PGD	1.01e+02	9.73e+01	9.31e+01	8.82e+01	8.27e+01	7.65e+01	6.97e+01	6.27e+01	5.58e+01	4.93e+01	4.63e+01	4.35e+01
	AAE-Cox	8.00e+01	7.47e+01	6.99e+01	6.55e+01	6.15e+01	5.77e+01	5.42e+01	5.07e+01	4.74e+01	4.41e+01	4.25e+01	4.09e+01
	SAWAR	9.46e+01	8.98e+01	8.41e+01	7.80e+01	7.17e+01	6.57e+01	6.03e+01	5.48e+01	4.95e+01	4.45e+01	4.23e+01	4.01e+01
zinc	DRAFT	5.01e+02	4.94e+02	4.77e+02	4.45e+02	3.93e+02	3.19e+02	2.39e+02	1.73e+02	1.27e+02	9.62e+01	8.52e+01	7.64e+01
	Noise	5.54e+02	5.34e+02	5.00e+02	4.52e+02	3.87e+02	3.10e+02	2.35e+02	1.75e+02	1.32e+02	1.01e+02	8.85e+01	7.86e+01
	FGSM	2.89e+02	2.79e+02	2.63e+02	2.39e+02	2.10e+02	1.79e+02	1.52e+02	1.28e+02	1.09e+02	9.21e+01	8.48e+01	7.82e+01
	PGD	2.77e+02	2.67e+02	2.51e+02	2.29e+02	2.02e+02	1.74e+02	1.48e+02	1.26e+02	1.07e+02	9.18e+01	8.48e+01	7.85e+01
	AAE-Cox	1.66e+02	1.57e+02	1.48e+02	1.38e+02	1.27e+02	1.17e+02	1.08e+02	9.94e+01	9.16e+01	8.44e+01	8.10e+01	7.76e+01
	SAWAR	2.11e+02	1.92e+02	1.73e+02	1.57e+02	1.42e+02	1.28e+02	1.15e+02	1.04e+02	9.42e+01	8.52e+01	8.11e+01	7.72e+01

TABLE XIII: Negative Log Likelihood metric for *SurvSet* datasets (lower is better) for each adversarial training method against the FGSM adversarial attack.