

自施設における高齢者機能評価

対 象

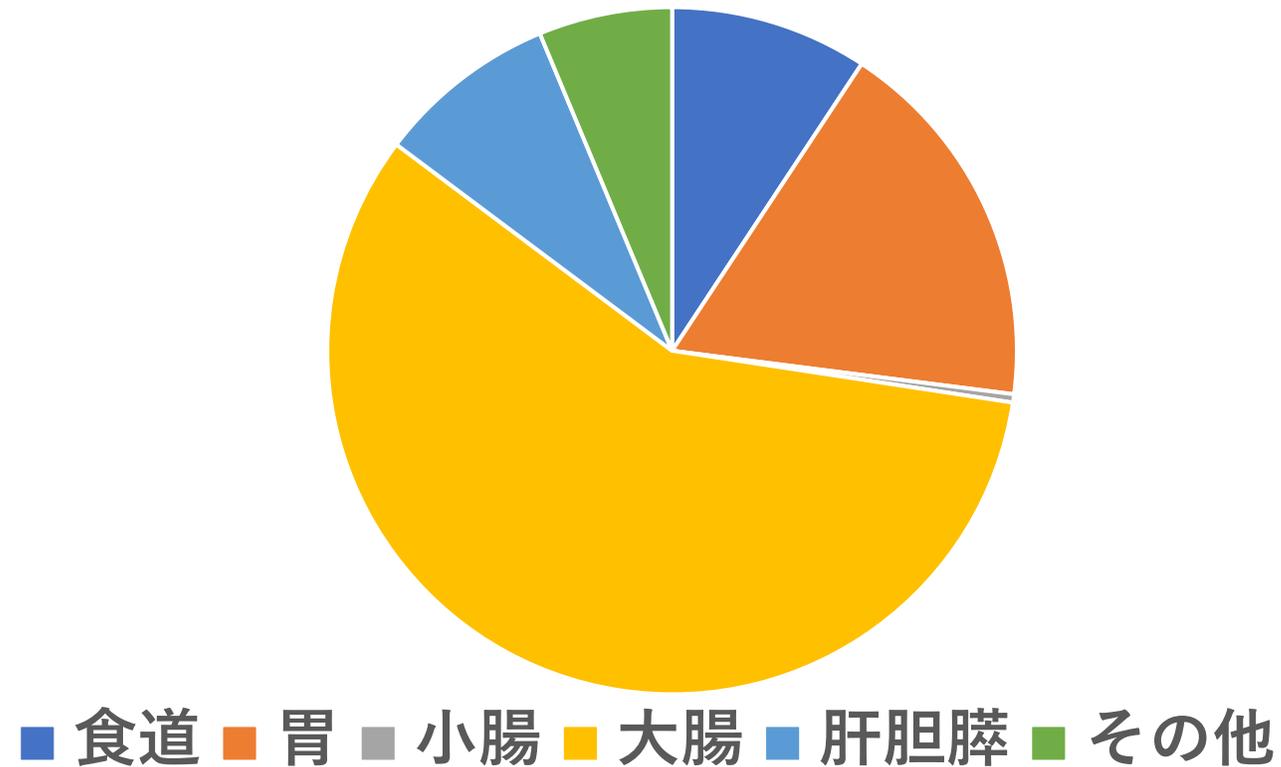
- ・ **消化器癌**の診断
- ・ **手術**を施行
- ・ **G8・ADL/IADL・CCI**の評価

**入院時のデータのみ（G8・ADL/IADL・CCIなど）を
使って、手術目的のがん患者の在院日数・転倒・
せん妄・転院をAIで予測可能か？**

【性別】 男性453 女性303

【年齢】 68 (21-98)

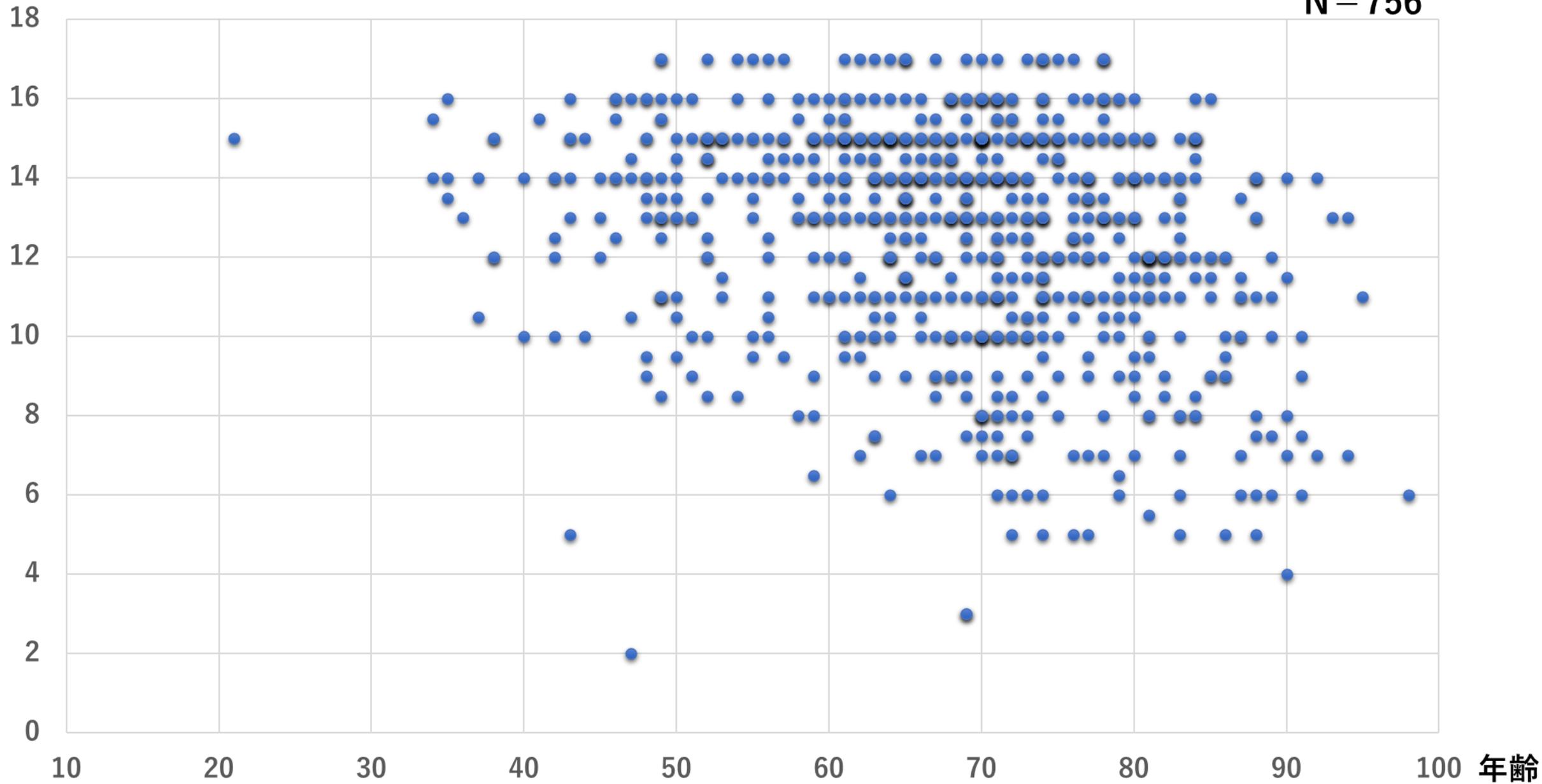
【癌腫】



G8スコア

G8と年齢の関係

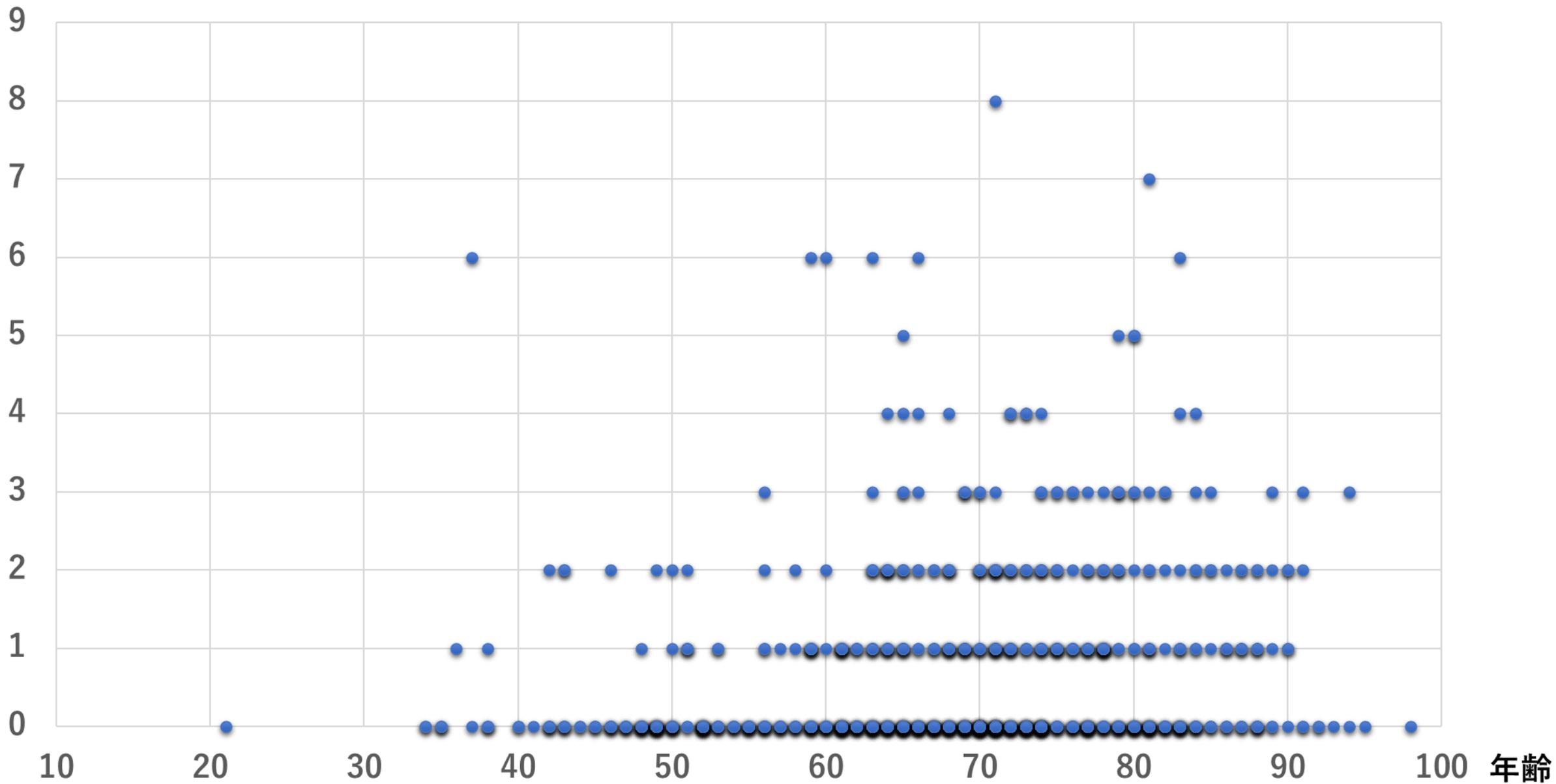
N = 756



CCIと年齢の関係

CCIスコア

N = 756



下記の全項目の相関係数でヒートマップを作製

基本情報: 年齢 性別 身長 体重 緊急入院 診断名 疾患名 ステージ 術式

G8: 過去3カ月の食事 過去3カ月の体重 歩行 神経・精神 BMI(実測値) BMI
内服薬4種 健康状態 年齢分類 G8合計点

ADL/IADL: 入浴 着替え トイレ 移動させる 排尿排便 食事 電話 買い物 食事
の準備 家事 洗濯 交通の利用 内服管理 金銭管理

CCI: 心筋梗塞 うっ血性心不全 末梢血管疾患 脳血管障害・後遺症なし 片麻痺
認知症 慢性肺疾患・軽労作で呼吸困難 膠原病 消化性潰瘍 肝疾患 糖尿
病 腎機能障害 固形癌 白血病 リンパ腫 AIDS CCI合計点

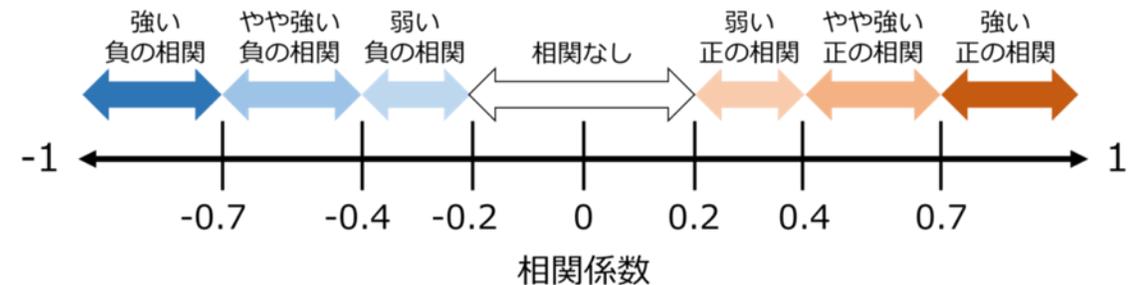
Outcome: 退院時先 転倒/転落 せん妄 在院日数

	Dx	Food intake	Weight loss	Mobility	Health status	G8	Hygiene	Dressing	Toileting	Ambulation	Continence	Eating	Telephone	Shopping	Food preparation	Housekeeping	Washing	Transport	Managing medication	Accounting	heart failure	Peripheral vascular disease	Cerebrovascular disease	Hemiplegia	Dementia	DM dysfunction	Renal dysfunction	Solid cancer	Lymphoma	CCI	Discharge destination	Falls	Delirium	Length of stay
Dx	1.000000	0.069844	-0.000816	-0.088819	-0.004305	0.044334	-0.004671	-0.010491	-0.010491	0.018123	-0.070780	-0.049402	0.023552	0.019350	0.020577	0.044403	0.040614	-0.016004	0.008383	-0.015007	0.006754	-0.159708	0.036825	0.060022	0.034425	0.029646	0.036398	-0.045948	-0.109910	-0.025142	-0.056913	0.037226	-0.051505	-0.399882
Food intake	0.069844	1.000000	0.591951	0.117102	0.240235	0.690263	0.041053	0.007204	0.007204	-0.204428	-0.031986	0.021799	-0.007241	-0.023560	-0.066878	-0.059998	-0.029255	-0.066878	0.028238	-0.017724	-0.160272	0.035130	0.020672	-0.007719	0.099197	-0.054655	-0.060490	0.027440	0.034615	-0.024586	-0.127368	-0.102439	0.013339	-0.170402
Weight loss	-0.000816	0.591951	1.000000	0.082284	0.198990	0.711111	-0.046727	-0.074016	-0.074016	-0.189946	-0.138959	-0.086622	-0.013534	-0.100411	-0.133814	-0.163201	-0.136593	-0.146949	-0.081274	-0.121358	-0.128153	-0.079275	-0.053976	-0.055606	0.064757	-0.063978	-0.003670	0.046334	0.048865	-0.046205	-0.120512	-0.129657	-0.066540	-0.123255
Mobility	-0.088819	0.117102	0.082284	1.000000	0.222389	0.361627	-0.490864	-0.521075	-0.521075	-0.575204	-0.429161	-0.423866	-0.397606	-0.563809	-0.449652	-0.408462	-0.447199	-0.393881	-0.449652	-0.416670	0.021385	-0.072788	-0.421165	-0.374284	-0.444158	-0.098571	0.012301	-0.083268	0.012301	-0.353928	-0.202978	-0.032035	0.054117	-0.230282
Health status	-0.004305	0.240235	0.198990	0.222389	1.000000	0.453604	-0.111155	-0.122440	-0.122440	-0.227379	-0.122440	-0.107455	-0.180430	-0.172787	-0.189007	-0.182564	-0.166716	-0.177286	-0.165564	-0.147511	-0.045344	-0.072839	-0.121378	-0.093961	-0.119526	-0.074502	-0.088590	-0.000128	-0.088590	-0.110881	-0.196851	-0.043622	0.114068	-0.130030
G8	0.044334	0.690263	0.717347	0.361627	0.453604	1.000000	-0.189953	-0.210604	-0.210604	-0.353210	-0.247178	-0.195487	-0.234947	-0.270937	-0.276532	-0.273271	-0.255923	-0.293176	-0.265436	-0.278367	-0.106296	-0.067758	-0.165195	-0.062760	-0.119578	-0.035333	-0.038954	-0.021042	0.027614	-0.127284	-0.277667	-0.114300	-0.051438	-0.256941
Hygiene	-0.004671	0.041053	-0.046727	-0.490864	-0.111155	-0.189953	1.000000	0.811879	0.811879	0.483726	0.671936	0.660418	0.633000	0.701101	0.631542	0.577891	0.639544	0.631542	0.716455	0.660891	-0.019536	0.127699	0.271852	0.433725	0.576063	0.013387	-0.011237	0.025541	-0.011237	0.285581	0.371878	0.182199	0.115962	0.234915
Dressing	-0.010491	0.007204	-0.074016	-0.521075	-0.122440	-0.210604	0.811879	1.000000	1.000000	0.604507	0.829574	0.813444	0.553032	0.644734	0.581675	0.533114	0.519233	0.581675	0.581675	0.699086	-0.015861	0.165790	0.253445	0.352132	0.418310	-0.066929	-0.009123	0.046375	-0.009123	0.224893	0.339764	0.103577	0.060575	0.202699
Toileting	-0.010491	0.007204	-0.074016	-0.521075	-0.122440	-0.210604	0.811879	1.000000	1.000000	0.604507	0.829574	0.813444	0.553032	0.644734	0.581675	0.533114	0.519233	0.581675	0.581675	0.699086	-0.015861	0.165790	0.253445	0.352132	0.418310	-0.066929	-0.009123	0.046375	-0.009123	0.224893	0.339764	0.103577	0.060575	0.202699
Ambulation	0.018123	-0.204428	-0.189946	-0.575204	-0.227379	-0.353210	0.483726	0.604507	0.604507	1.000000	0.604507	0.595095	0.391428	0.543435	0.563798	0.514206	0.499984	0.486598	0.409597	0.501184	0.157016	0.110842	0.236611	0.388712	0.295643	0.082529	-0.012471	0.072948	-0.012471	0.284045	0.224590	0.257307	-0.054864	0.222244
Continence	-0.070780	-0.031986	-0.138959	-0.429161	-0.122440	-0.247178	0.671936	0.829574	0.829574	0.604507	1.000000	0.813444	0.435696	0.644734	0.581675	0.533114	0.519233	0.581675	0.581675	0.699086	-0.015861	0.165790	0.253445	0.165790	0.270158	0.049768	-0.009123	-0.030539	-0.009123	0.141326	0.264076	0.103577	0.060575	0.133713
Eating	-0.049402	0.021799	-0.086622	-0.423866	-0.107455	-0.195487	0.660418	0.813444	0.813444	0.595095	0.813444	1.000000	0.543907	0.524455	0.473160	0.438659	0.422367	0.473160	0.473160	0.568658	-0.012902	0.210651	0.206163	0.210651	0.340272	-0.054443	-0.007421	-0.024842	-0.007421	0.106464	0.276379	0.138359	-0.032648	0.178329
Telephone	0.023552	-0.007241	-0.013534	-0.397606	-0.180430	-0.234947	0.633000	0.553032	0.553032	0.391428	0.435696	0.543907	1.000000	0.649777	0.654109	0.531142	0.580853	0.654109	0.725305	0.707157	-0.023660	0.225930	0.344264	0.354224	0.471000	-0.059667	-0.013609	0.113306	-0.013609	0.285134	0.415640	0.047656	0.078808	0.210512
Shopping	0.019350	-0.023560	-0.100411	-0.563809	-0.172787	-0.270937	0.701101	0.644734	0.644734	0.543435	0.644734	0.824455	0.649777	1.000000	0.833455	0.763124	0.805344	0.764717	0.833455	0.841228	-0.024600	0.091989	0.327823	0.339723	0.451849	0.051334	-0.014150	0.054886	-0.014150	0.293255	0.350891	0.131182	0.071643	0.127462
Food preparation	0.020577	-0.066878	-0.133814	-0.449652	-0.189007	-0.276532	0.631542	0.581675	0.581675	0.563798	0.581675	0.473160	0.654109	0.833455	1.000000	0.858324	0.835749	0.623529	0.811765	0.758090	-0.027267	0.190800	0.286753	0.303866	0.584307	0.025553	-0.015684	0.087504	-0.015684	0.304233	0.434856	0.191536	0.114333	0.253276
Housekeeping	0.044403	-0.059998	-0.163201	-0.408462	-0.182564	-0.273271	0.577891	0.533114	0.533114	0.514206	0.533114	0.433659	0.531142	0.763124	0.858324	1.000000	0.921189	0.567367	0.683749	0.693994	-0.029751	0.171170	0.254362	0.276031	0.451176	0.005794	-0.017118	0.029279	-0.017118	0.221989	0.360470	0.244219	0.038065	0.147564
Washing	0.040614	-0.029255	-0.136593	-0.447199	-0.166716	-0.255923	0.639544	0.519233	0.519233	0.499984	0.519233	0.422367	0.580853	0.805344	0.835749	0.921189	1.000000	0.608141	0.778847	0.679658	-0.030546	0.062955	0.353024	0.370567	0.520303	0.031635	-0.017571	0.068152	-0.017571	0.289427	0.352406	0.236108	0.088964	0.209675
Transport	-0.016004	-0.066878	-0.146949	-0.393881	-0.177286	-0.293176	0.631542	0.581675	0.581675	0.486598	0.581675	0.473160	0.654109	0.764717	0.623529	0.567367	0.608141	1.000000	0.749020	0.832050	0.118157	0.077733	0.286753	0.303866	0.314627	-0.008851	-0.015684	0.040835	-0.015684	0.215499	0.320043	0.030086	0.114333	0.087587
Managing medication	0.008383	0.028238	-0.081274	-0.449652	-0.165564	-0.265436	0.716455	0.581675	0.581675	0.409597	0.581675	0.473160	0.725305	0.833455	0.811765	0.683749	0.778847	0.749020	1.000000	0.832050	-0.027267	0.077733	0.405923	0.303866	0.584307	0.025553	-0.015684	0.087504	-0.015684	0.316910	0.411894	0.110811	0.114333	0.216650
Accounting	-0.015007	-0.017724	-0.121358	-0.416670	-0.147511	-0.278367	0.660891	0.699086	0.699086	0.501184	0.699086	0.568658	0.707157	0.841228	0.758090	0.693994	0.675658	0.832050	0.832050	1.000000	-0.022688	0.103877	0.292302	0.237152	0.386445	-0.012274	-0.013050	0.066336	-0.013050	0.232043	0.350577	0.053017	0.086552	0.120342
heart failure	0.006754	-0.160272	-0.128153	0.021385	-0.045344	-0.106296	-0.019536	-0.015861	-0.015861	0.157016	-0.015861	-0.012902	-0.023660	-0.024600	-0.027267	-0.029751	-0.030546	0.118157	-0.027267	-0.022688	1.000000	-0.014452	-0.028940	-0.014452	-0.018383	0.117050	0.575216	0.086691	-0.006415	0.231584	-0.000587	-0.020710	-0.028221	-0.032301
Peripheral vascular disease	-0.159708	0.035130	-0.079275	-0.072788	-0.072839	-0.067758	0.127699	0.165790	0.165790	0.110842	0.165790	0.210651	0.225930	0.091989	0.190800	0.171170	0.062955	0.077733	0.077733	0.103877	-0.014452	1.000000	0.069871	0.185019	-0.023822	0.066612	-0.008313	-0.027826	0.443901	0.193492	0.123376	-0.025836	-0.036570	0.091715
Cerebrovascular disease	0.036825	0.020672	-0.053976	-0.421165	-0.121378	-0.165195	0.271852	0.253445	0.253445	0.236611	0.253445	0.206163	0.344264	0.327823	0.286753	0.254362	0.353024	0.286753	0.405923	0.292302	-0.028940	0.069871	1.000000	0.391987	0.293759	0.012361	-0.016647	0.032913	-0.016647	0.404334	0.216539	0.022913	-0.015205	0.079321
Hemiplegia	0.060022	-0.007719	-0.055606	-0.374284	-0.093961	-0.062760	0.433725	0.352132	0.352132	0.388712	0.165790	0.210651	0.354224	0.339723	0.303866	0.276031	0.370567	0.303866	0.303866	0.237152	-0.014452	0.185019	0.391987	1.000000	0.138166	0.002815	-0.008313	0.056271	-0.008313	0.399077	0.123376	0.118617	-0.036570	0.044572
Dementia	0.034425	0.099197	0.064757	-0.444158	-0.119526	-0.119578	0.576063	0.418310	0.418310	0.295643	0.270158	0.340272	0.471000	0.451849	0.584307	0.451176	0.520303	0.314627	0.584307															

各因子の相関係数

	退院先	転倒	せん妄	在院日数
診断名	-0.056913	0.037226	-0.051505	-0.399882
G8	-0.277667	-0.114300	-0.051438	-0.256941
電話	0.415640	0.047656	0.078808	0.210512
食事の準備	0.434856	0.191536	0.114333	0.253276
内服管理	0.411894	0.110811	0.114333	0.216650
認知症	0.360911	0.081506	0.128577	0.231610
CCI	0.228683	-0.000782	0.003873	0.100454
退院先	1.000000	0.087527	0.199778	0.188828
転倒	0.087527	1.000000	-0.052210	0.272322
せん妄	0.199778	-0.052210	1.000000	0.049389
在院日数	0.188828	0.272322	0.049389	1.000000

年齢は、せん妄と弱い相関



自施設における高齢者機能評価

対象：消化器・手術

- ADL/IADLは退院先と相関してそう。
- G8は3か月の体重減少、CCIは固形癌と最も相関していそう。
- 2022年3月までの症例を解析中