

SUPPLEMENTAL DIGITAL CONTENT 2 : SURGERY SUBGROUPS DEFINITONS AND DISTRIBUTION

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
CARDIAC SURGERY															
05C021 to 05C034	Cardiac valve(s) replacement(s) and/or repair(s)	5831	0.21	2.76	1.26	11	12	81	8502	0.3	2.62	1.49	10	11	88.6
05C041 to 05C054	Coronary artery bypass graft(s)	7586	0.28	5.83	3.46	12	13	87.6	11230	0.4	5.5	4.14	11	12	90.3
05C061 to 05C064	Other cardiac surgery with cardio pulmonary bypass	1589	0.06	7.36	0.92	9	13	84.5	2562	0.09	6.71	1.15	9	12	90.9
05C081 to 05C084	Other cardiac surgery without cardio pulmonary bypass	1273	0.05	21.6	2.15	11	9	56.2	2090	0.07	20.77	2.91	11	9	56.5
	Any cardiac surgeries:	16279	0.6	6.11	7.78	11	12	82.5	24384	0.87	5.93	9.69	11	11	86.9
INTERVENTIONAL NEURORADIOLOGY															
01K021 to 01K034	Intracranial interventional neuroradiology	2122	0.08	2.59	0.43	8	4	14.8	1794	0.06	3.46	0.42	8	4	16.5
01K071 to 01K074	Bleeding related intracranial or spinal interventional neuroradiology.	804	0.03	2.36	0.15	6	13	59.1	706	0.03	2.41	0.11	6	14	52.1
	Any procedures:	2926	0.11	2.53	0.58	7	5.5	27	2500	0.09	3.16	0.53	7	5	26.6
INTERVENTIONAL CARDIORHYTHMOLOGY															
05C141 to 05C154 and 05C191 to 05C194	Pace maker or Cardiac defibrillator implantation	24602	0.91	0.75	1.45	12	4	2.7	28256	1.01	0.63	1.2	12	4	2.6
05C201 to 05C204 and 05C221 to 05C224	Pacemaker removal/replacement with or without leads removal. Cardiac defibrillator replacement	9422	0.35	0.34	0.25	12	2	0.6	10420	0.37	0.3	0.21	12	2	0.6
	Any procedures::	34024	1.25	0.64	1.7	12	4	2.1	38676	1.39	0.54	1.41	12	4	2.1

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
UROLOGIC SURGERY															
<i>Major urology surgery</i>															
11C021 to 11C034	<i>Kidney, upper urinary tract and bladder major surgeries (excl. transurethral procedures)</i>	10699	0.39	1.77	1.48	9	9	8.9	13713	0.49	1.53	1.41	9	8	9.2
12C111 to 12C124	<i>Male pelvic major procedures</i>	13781	0.51	0.1	0.11	9	8	0.9	17484	0.63	0.13	0.15	9	8	2.3
	Any major urology surgeries:	24480	0.9	0.83	1.59	9	8	4.4	31197	1.12	0.74	1.55	9	8	5.3
<i>Minor urology surgery</i>															
11C061 to 11C074	<i>Urethra procedures</i>	2319	0.09	0.04	0.01	8	1	0.2	2234	0.08	0.04	0.01	8	1	0.2
11C081 to 11C084	<i>Other kidney, upper urinary tract and urethra procedures</i>	1803	0.07	2.55	0.36	10	2	7.5	2249	0.08	2.85	0.43	10	2	7.1
12C031 to 12C034	<i>Penis procedures</i>	1559	0.06	0.26	0.03	7	2	0.6	2486	0.09	0.08	0.01	7	2	0.8
12C051 to 12C074	<i>Testis procedures</i>	10413	0.38	0.06	0.05	5	2	0.2	12336	0.44	0.09	0.07	5	2	0.4
12C081 to 12C084 and 12C091 to 12C104	<i>Circumcision</i>	10040	0.37	0.11	0.09	2	0	0.2	11505	0.41	0.03	0.03	2	0	0.2
11C041 to 11C044	<i>Other bladder procedures (excl. transurethral procedures)</i>	3323	0.12	0.81	0.21	9	3	2	4629	0.17	0.56	0.17	9	3	2
12C131 to 12C134	<i>Vas deferens procedures</i>	754	0.03	0	0	4	0	0	913	0.03	0	0	4	0	0
11C041 to 11C054	<i>Trans urethral procedures</i>	90315	3.32	0.37	2.64	9	3	0.9	106334	3.81	0.41	2.94	9	3	1.2
	Any minor urology surgeries:	120526	4.43	0.36	3.38	9	3	0.9	142686	5.11	0.38	3.66	9	3	1.2

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
VASCULAR SURGERY															
05C101 to 05C104	<i>Major vascular surgery</i>	14673	0.54	4.2	4.82	11	9	15.7	16303	0.58	4.19	4.57	11	9	19.3
05C121 to 05C134	<i>Vascular disease related amputations</i>	5488	0.2	6.65	2.85	13	13	9.8	5648	0.2	6.91	2.61	13	12	10.3
05C171 to 05C174	<i>Vein surgery</i>	60028	2.21	0.01	0.05	6	0	0	62408	2.24	0.01	0.03	6	0	0
05C181 to 05C184 and 05C111 to 05C114	<i>Other vascular surgeries</i>	8855	0.33	5.43	3.76	11	7	11.3	9869	0.35	5.63	3.72	11	7	13.2
05C211 to 05C214 and 11C091 to 11C094	<i>Creation or repair of arterio-venous fistula</i>	11429	0.42	0.74	0.66	12	2	4.7	10615	0.38	0.83	0.59	12	2	6.7
	Any minor vascular surgeries:	85800	3.16	1.09	7.34	7	1	2.4	88540	3.17	1.17	6.96	7	0	3
PLASTIC SURGERY															
09C021 to 09C034 and 21C021 to 21C054	<i>Skin graft and other skin surger.</i>	75538	2.78	0.24	1.43	6	1	1.1	79627	2.85	0.3	1.59	6	1	1.6
09C111 to 09C114	<i>Breast reconstruction</i>	1775	0.07	0	0	7	7	0.4	1544	0.06	0.06	0.01	6	7	3.8
09C101 to 09C104 and 09C091 to 09C094	<i>Other plastic surgeries</i>	62416	2.3	0.29	1.44	7	0	0.5	67540	2.42	0.36	1.61	7	0	0.9
	Any plastic surgeries:	139729	5.14	0.26	2.87	6	0	0.9	148711	5.33	0.32	3.21	6	0	1.3
OPHTHALMOLOGY															
02C021 to 02C114	<i>Any ophthalmology surgeries including orbital surgeries</i>	18872	0.69	0.02	0.03	10	0	0.1	13031	0.47	0.03	0.03	10	0	0.1

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
NEUROSURGERY															
01C031 to 01C034	<i>Trauma related craniotomies</i>	2461	0.09	10.77	2.07	11	10	44.9	2475	0.09	10.63	1.76	11	9	43.8
01C041 to 01C044	<i>Non-trauma related craniotomies</i>	9855	0.36	5.28	4.07	8	9	34.1	10229	0.37	5.12	3.51	8	9	30.8
01C051 to 01C054	<i>Spine surgery</i>	8091	0.3	0.8	0.51	8	6	4	8114	0.29	0.6	0.33	8	6	4.7
10C021 to 10C024	<i>Hypophyseal surgery</i>	609	0.02	0.66	0.03	6	8	14	641	0.02	0	0	6	7	8.7
01C081 to 01C84	<i>Cranial nerve procedures</i>	8834	0.33	0.26	0.18	5	0	0.9	8896	0.32	0.18	0.11	5	0	1.1
01C061 to 01C64	<i>Pre-cerebral vascular system procedures</i>	8013	0.29	0.6	0.38	11	5	6.3	9071	0.33	0.66	0.4	11	5	9.7
01C091 to 01C104	<i>Neuro-stimulator implantation</i>	1846	0.07	0.05	0.01	6	3	2.5	1930	0.07	0	0	6	3	3.3
	Any neurosurgeries:	39709	1.46	2.33	7.24	10	0	0.1	41356	1.48	2.21	6.11	8	5	13.8
EAR, NOSE AND THROAT (ENT) SURGERY															
03C251 to 03C254	<i>Major ENT surgery</i>	2413	0.09	3.23	0.61	11	19	16.8	2273	0.08	3.08	0.47	12	19	24.1
03C051 to 03C244 and 03C261 to 03C264	<i>Any other ENT surgery</i>	87459	3.22	0.11	0.74	4	2	0.5	86951	3.12	0.08	0.45	4	2	0.7
03K021 to 03K04J	<i>Oral and dental surgery</i>	85262	3.14	0	0.01	1	0	0	85446	3.06	0	0.03	1	0	0
	Any ENT surgeries:	175134	6.44	0.1	1.35	2	0	0.5	174670	6.26	0.08	0.94	2	0	0.7

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
ORTHOPEDIC SURGERY															
<i>Arthroplasty and Spine Surgeries</i>															
08C221 to 04C224	<i>Arthroplasty redo</i>	11383	0.42	1.05	0.94	11	10	2.1	11598	0.42	1.03	0.8	11	10	3
08C241 to 08C244	<i>Knee arthroplasty</i>	38308	1.41	0.1	0.3	10	9	0.3	36138	1.3	0.13	0.32	10	9	0.5
08C251 to 08C254	<i>Shoulder arthroplasty</i>	5296	0.19	0.3	0.13	11	7	0.7	4742	0.17	0.38	0.12	10	7	1.1
08C481 to 08C484	<i>Hip surgery not related to a recent trauma.</i>	44777	1.65	0.21	0.74	10	8	0.5	47806	1.71	0.21	0.67	10	8	0.9
08C511 to 08C524	<i>Major spine surgery.</i>	12917	0.48	0.5	0.51	7	7	3.3	11367	0.41	0.7	0.54	7	8	5.4
08c271 to 08C274	<i>Other spine surgery</i>	30703	1.13	0.1	0.23	5	4	0.4	29634	1.06	0.06	0.13	5	4	1.1
08C021 to 08C024	<i>Multiple major knee and/or hip surgery</i>	609	0.02	2.3	0.11	11	17	3.9	614	0.02	2.12	0.09	11	16	6
	Any arthroplasty and spine surgeries:	143993	5.3	0.26	2.96	9	8	0.8	141899	5.09	0.28	2.67	9	8	1.4
<i>Trauma related orthopedic surgeries</i>															
08C471 to 08C474	<i>Recent trauma related hip surgery</i>	16960	0.62	3.79	5.02	13	11	4.7	17577	0.63	3.73	4.39	13	11	5.5
08C491 to 08C494	<i>Hip and/or femur fractures</i>	26750	0.98	3.42	7.16	13	10	4.7	28809	1.03	3.28	6.33	13	11	5.6
08C501 to 08C504	<i>Other hip and femur surgery</i>	2294	0.08	1.57	0.28	7	7	2.3	2779	0.1	1.73	0.32	7	7	4.1
	Any trauma related orthopedic surgeries:	46004	1.69	3.46	12.46	13	11	4.6	49165	1.76	3.36	11.05	13	11	5.5

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
Other Orthopedic surgeries															
08C431 to 08C434	Major soft tissue surgery	10609	0.39	0.02	0.02	5	2	0.1	11063	0.4	0.05	0.04	5	2	0.1
08C061 to 08C064	Non vascular amputation	448	0.02	5.13	0.18	11	14	12.5	504	0.02	6.75	0.23	11	15.5	15.9
08C121 to 08C124	Osteoarticular biopsies	493	0.02	1.01	0.04	6	2	1	668	0.02	0.75	0.03	7	2	1.2
08C131 to 08C144	Bone resection or hardware removal	46934	1.73	0.01	0.04	5	0	0	47837	1.71	0.02	0.06	5	0	0.1
08C201 to 08C204	Non-burn related skin graft	900	0.03	0.11	0.01	6	0	1	985	0.04	0.2	0.01	6	0	1.4
08C211 to 08C214	Other orthopedic surgeries	5458	0.2	0.33	0.14	4	3	1.2	5451	0.2	0.18	0.07	4	2	1.7
08C281 to 08C284	Maxillofacial surgery	655	0.02	0.15	0.01	5	2	3.2	887	0.03	0.11	0.01	5	3	3.5
08C291 to 08C294	Soft tissue cancer surgery	879	0.03	0.8	0.05	9	3	1.6	841	0.03	0.48	0.03	9	3	1.5
08C321 to 08C324	Any leg surgery	29147	1.07	0.13	0.3	5	4	0.6	30094	1.08	0.16	0.31	5	5	0.9
08C331 to 08c334 and 08C371 to 08C374	Any ankle and/or foot surgeries	52758	1.94	0.02	0.1	7	3	0.1	51641	1.85	0.02	0.07	7	3	0.1
08C341 to 08C344 and 08C381 to 08C384 and 08C451 to 08C454	Any knee arthroscopy	85486	3.15	0	0.02	4	0	0	76113	2.73	0	0.01	4	0	0
08C391 to 08C394	Forearm surgeries	32843	1.21	0.08	0.21	8	2	0.2	34013	1.22	0.09	0.2	8	2	0.4
08C401 to 08C404	Other arthroscopy	32649	1.2	0.01	0.02	6	2	0	27134	0.97	0	0.01	6	2	0.1

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
08C411 to 08C414 and 08C441 to 08C444	Minor hand surgery	76115	2.8	0	0.02	6	0	0	63407	2.27	0.01	0.03	5	0	0.1
08C431 to 08C434	Major hand surgeries	12716	0.47	0.01	0.01	5	0	0	11055	0.4	0.01	0.01	5	1	0.2
08c461 to 08c464	Minor soft tissue	26511	0.98	0.13	0.27	5	0	0.3	25741	0.92	0.17	0.29	5	0	0.5
08C531 to 08C544	Other knee surgery	10262	0.38	0.07	0.05	4	4	0.3	10191	0.37	0.1	0.07	5	5	0.7
08C561 to 08C564	Osteoarticular infection related surgery	6232	0.23	1.51	0.74	9	10	4.1	7297	0.26	2.23	1.09	9	12	5.8
08C351 to 08C354	Arm or elbow shoulder	22921	0.84	0.35	0.63	7	4	0.7	22296	0.8	0.35	0.52	7	4	0.9
01C131 to 01C134	Nerve decompression	81123	2.98	0	0	6	0	0	71459	2.56	0.01	0.03	6	0	0
	Any other orthopedic surgeries:	535139	19.69	0.07	2.85	6	1	0.2	498677	17.87	0.09	3.12	6	1	0.3
TRANSPLANT SURGERY															
27C021 to 27C254	Transplant surgery	461	0.02	15.62	0.56	8	15	27	1182	0.04	10.07	0.8	9	31	96.8
27C261 to 27C264	Renal transplantation	1108	0.04	1.08	0.09	5	2	0.2	1549	0.06	0.97	0.1	8	15	50.3
DIGESTIVE SURGERIES															
Major Gastrointestinal Surgery															
06C031 to 06C034	Proctectomy	8580	0.32	2.67	1.79	10	13	9.1	9890	0.35	2.56	1.69	10	13	11.3

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
06C41 to 06C044 and 06C021 to 06C024	<i>Major surgery on small bowel or colon</i>	32133	1.18	5.97	15.01	11	12	13.6	36011	1.29	6.36	15.34	11	11	16.2
	Any major gastrointestinal surgery:	40713	1.5	5.28	16.8	11	12	12.7	45901	1.65	5.54	17.03	11	12	15.1
Minor gastrointestinal surgeries															
06C081 to 06C094	<i>Appendectomy</i>	22391	0.82	0.18	0.31	2	4	0.7	25111	0.9	0.16	0.27	2	4	1
06C101 to 06C124	<i>Hernia repairs</i>	92409	3.4	0.17	1.23	8	2	0.4	99086	3.55	0.17	1.15	8	2	0.6
06C191 to 06C194	<i>Hemorrhoids</i>	15845	0.58	0.01	0.01	5	2	0	18817	0.67	0.01	0.01	5	2	0
06C201 to 06C204	<i>Ulcer related surgery on esophageal, gastric, or duodenal</i>	1229	0.05	13.02	1.25	8	10	29.7	1415	0.05	11.45	1.08	8	11	32.7
06C211 to 06C214	<i>Other digestive surgery with laparotomy</i>	2192	0.08	14.05	2.41	11	10	23.4	2517	0.09	15.3	2.58	10	10	26.2
06C161 to 06C164 and 06C221 to 06C 224	<i>Other esophageal, gastric or duodenal surgery</i>	2269	0.08	7.4	1.31	12	16	27.5	2524	0.09	7.57	1.28	12	17	30.7
06C161 to 06C164	<i>Cancer related esophageal, gastric or duodenal surgery</i>	4151	0.15	1.25	0.41	6	5	4.7	4285	0.15	1.4	0.4	6	5	7.1
06C231 to 06C234	<i>Stoma repairs</i>	643	0.02	1.56	0.08	10	4	3.4	520	0.02	2.31	0.08	11	5	4.8
09C081 to 09C084 and 06C141 to 06C144	<i>Anal and perianal surgery</i>	20570	0.76	0.08	0.13	5	2	0.2	24649	0.88	0.11	0.17	5	2	0.4
16C021 to 16C034	<i>Spleen surgery</i>	491	0.02	3.87	0.15	6	8	17.7	625	0.02	3.68	0.15	6	8	21.4
10C031 to 10C034	<i>Adrenal gland surgery</i>	578	0.02	0.69	0.03	8	6	12.1	732	0.03	0.82	0.04	7	6	13.9
10C51 to 10C054	<i>Parathyroidectomy</i>	2304	0.08	0.09	0.02	8	3	1.2	2389	0.09	0.08	0.01	8	3	1.8

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
10C071 to 10C074	<i>Thyroglossal surgery</i>	281	0.01	0	0	4	3	0.4	257	0.01	0	0	5	3	0.4
10c081 to 10c104 and 10C131 to 10c134	<i>Endocrine, metabolic or nutritional surgery Other bariatric surgery</i>	1002	0.04	0.3	0.02	4	4	2.7	1250	0.04	0.48	0.04	4	5	4.8
10C111 to 10C114	<i>Cancer related thyroidectomy</i>	3397	0.12	0.24	0.06	6	3	1	3606	0.13	0.22	0.05	6	3	1.6
10C121 to 10C124	<i>Other thyroidectomy</i>	15122	0.56	0.03	0.04	6	3	0.5	12729	0.46	0.02	0.01	6	3	1
06C131 to 06C134	<i>Peritoneal adhesions</i>	2353	0.09	3.06	0.56	8	7	6.9	2490	0.09	3.21	0.54	8	7	7.9
06C151 to 06C154	<i>Other gastrointestinal surgeries excluding laparotomy</i>	3242	0.12	1.82	0.46	7	4	3.5	3473	0.12	2.07	0.48	7	5	4.8
06C071 to 06C074	<i>Minor surgery on small bowel or colon</i>	3791	0.14	2.64	0.78	10	7	5	4487	0.16	2.52	0.76	10	7	5.7
	Any minor gastrointestinal:	194260	7.15	0.61	9.26	7	3	1.6	210962	7.56	0.65	9.12	6	3	2.1
LIVER, BILIARY TRACT AND PANCREAS SURGERY															
<i>Minor liver, biliary tract and pancreas surgery:</i>															
07C061 to 07C074	<i>Diagnostic surgery on the hepatobiliary system</i>	524	0.02	8.02	0.33	11	7	13.2	620	0.02	8.06	0.33	11	7	17.9
07C111 to 07C114	<i>Biliary tract diversions</i>	937	0.03	6.3	0.46	12	16	15.4	1075	0.04	9.4	0.68	12	15	18.8
07C101 to 07C104	<i>Liver, pancreas, portal vein or cava vein surgeries</i>	1747	0.06	2.18	0.3	8	8	11.4	2326	0.08	2.92	0.46	7	9	16.7
07C121 to 07C124	<i>Other biliary surgery excluding cholecystectomy</i>	2842	0.1	1.44	0.32	9	8	4.2	3015	0.11	1.82	0.37	9	8	4.6
07C131 to 07C144	<i>Cholecystectomy</i>	50999	1.88	0.36	1.45	7	3	1.1	54215	1.94	0.37	1.36	7	3	1.5

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
	Any minor liver, biliary tract and pancreas surgery:	57049	2.1	0.64	2.86	7	3	1.9	61251	2.2	0.78	3.19	7	3	2.7
Major liver, biliary tract and pancreas surgery:															
07C081 to 07C084	<i>Other hepatobiliary surgeries</i>	252	0.01	13.1	0.26	11	12	18.7	315	0.01	13.65	0.29	11	14	22.2
07C091 to 07C094	<i>Cancer related liver, Pancreas, portal veins or cava vein surgeries</i>	3112	0.11	3.98	0.97	12	13	20.8	4186	0.15	4.49	1.26	12	13	31.2
	Any major liver, biliary tract and pancreas surgery:	3364	0.12	4.67	1.23	12	12	20.6	4501	0.16	5.13	1.55	12	13	30.5
THORACIC SURGERY															
04C021 to 04C24	<i>Major thoracic surgery</i>	7943	0.29	3.68	2.28	10	10	22.1	10764	0.39	3.99	2.88	10	9	25.7
04C031 to 04C034	<i>Others thoracic surgery</i>	1586	0.06	5.23	0.65	10	3	11.9	1824	0.07	4.33	0.53	9	3	14.2
04C041 to 04C044	<i>Thorascopic surgery</i>	4597	0.17	3.83	1.38	10	8	7.8	5180	0.19	3.38	1.17	9	8	8.6
	Any thoracic surgeries:	14126	0.52	3.9	4.31	10	9	16.3	17768	0.64	3.85	4.58	10	9	19.6
ENDOSCOPY															
06K02J. 06K04J. 06K06J. 06K02Z	<i>Gastrointestinal endoscopy under anesthesia</i>	625633	23.02	0.01	0.39	7	0	0	638631	22.89	0.01	0.4	7	0	0
07K02Z. 07K04J	<i>Endobiliary endoscopy under anesthesia</i>	11182	0.41	0.08	0.07	8	0	0.1	8451	0.3	0.07	0.04	8	0	0.1
13K02J 13K04J. 13K06J	<i>Genito-urinary endoscopy under anesthesia</i>	27228	1	0	0	5	0	0	29646	1.06	0	0.01	4	0	0

GHM codes*	Surgery description	Derivation Cohort N=2,717,902							Validation cohort N=2,789,932						
		N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)	N	Percent of patients (%)	In-hospital mortality (%)	Percent of in-hospital mortality (%)	Median comorbidities POSPOM** (points)	Median LOS (Days)	Percent of patients admitted for more than 24h in ICU (%)
	Any endoscopies:	664043	24.43	0.01	0.46	7	0	0	676728	24.26	0.01	0.44	7	0	0
MULTIPLE TRAUMA RELATED SURGERY															
26C021 to 26C024	<i>Multiple trauma related surgeries</i>	1907	0.07	7.39	1.1	4	20	70.3	2366	0.08	6.93	1.1	4	19	68.8
OTHERS															
	<i>Any other surgeries not listed above</i>	108595	4	0.63	5.32	7	0	1.5	110090	3.95	0.75	5.56	7	0	1.9

*GHM= *Groupes Homogènes de Malades – French Diagnosis Related Groups (DRG)* (<http://www.atih.sante.fr/>)

** *Comorbidities POSPOM* represent the value obtained by patients using the score presented in table 2. This part of the score does not include the surgical component and represent a summary of the medical history observed in the patients.