

**ONLINE SUPPLEMENTARY CONTENT**

**Table S1 - List of Structure Measures**

Structure Components	Structure Drivers	Structure Measures	
<b>Organization &amp; Governance</b>	PBM Workgroup	1 There is a PBM Workgroup (PBM WG) with a specific mandate to seek for PBM development	
		2 The PBM WG is multi-professional	
		3 There is a PBM Champion/s recognized by the organization	
		4 The PBM WG is officially authorized by hospital management	
		5 There is a decision-making process in place. PBM WG recommendations are applicable to the organization	
		6 The PBM WG adopts existing national and/or international guidelines and standards to set the local recommendations and clinical protocols	
		7 The performance of the PBM WG is periodically assessed	
		8 The PBM WG has dedicated time freed up	
		9 The PBM WG has budget resource allocation	
	Clinical Protocols	Pillar 1. Optimising red cell mass	10 There is a Preoperative anaemia management protocol in place, and it is in line with the national guidelines and standards
			11 The Preoperative anaemia management protocol is recent/updated
			12 The Preoperative anaemia management protocol is publicly recognized by the organization
			13 Required FTEs are allocated to support the execution of the protocol
			14 Required logistics and patient accessibility is granted to support the execution of the protocol
		Pillar 2. Minimising blood loss and bleeding	15 Required biomarkers and therapies are funded to support the execution of the protocol
			16 There is a Tranexamic protocol in place, and it is in line with the national guidelines and standards
			17 The Tranexamic protocol is recent/updated
			18 The Tranexamic protocol is publicly recognized by the organization
			19 There is an autotransfusion (predonation) protocol for high bleeding procedures (Escoliosis, review hip replacement etc.)
			20 The Autotransfusion protocol is recent/updated
			21 Required logistics and patient accessibility is granted to support the execution of the Autotransfusion protocol
			22 There is an Intra-operative autotransfusion protocol (Cell saver)
			23 The Intra-operative autotransfusion protocol is recent/updated
			24 The Intra-operative protocol is publicly recognized by the organization
	Pillar 3. Optimising the physiological reserve of anaemia	25 There is a Post-operative autotransfusion protocol (Recuperadores de drenaje)	
		26 The Post-operative autotransfusion protocol is recent/updated	
		27 The Post-operative autotransfusion protocol is publicly recognized by the organization	
		28 There is a Transfusion thresholds protocol in place, and it is in line with the national guidelines and standards	
		29 The Transfusion thresholds protocol is recent/updated	
		30 The Transfusion thresholds protocol is publicly recognized by the organization	
<b>Professionals &amp; Training</b>	Healthcare professionals' knowledge (hospital internal survey)	31 Do you know if there is a PBM program in your hospital?	
		32 Do you consider alternatives to avoid/minimize transfusion in your daily practice with your patients?	
		33 Are you familiar with the preoperative anaemia management protocol of your hospital?	
		34 Are you familiar with any blood loss minimization protocol of your hospital (i.e. us of antifibrinolytics)	
		35 Are you familiar with the transfusion protocol (transfusion thresholds) of your hospital?	
		36 Do you consider any other factors than Hb levels for transfusion decision?	
	PBM educational programs for clinicians	37 Do you regularly receive (or have access to) useful information of your transfusion related clinical practice?	
		38 PBM learning courses and/or clinical sessions are regularly offered to specialists involved in transfusion risk Surgery processes	
		39 PBM learning courses and/or clinical sessions are regularly offered to specialists involved in transfusion risk Medical processes	
		40 PBM learning courses and/or clinical sessions are offered to residents	
		41 PBM learning courses and/or clinical sessions are offered to nurses	
		42 PBM learning courses and/or clinical sessions are offered to GPs	
		43 PBM learnings provide credits and certificates are issued	
		44 There is a continuous learning system in place with an educational program, attendance registry and individual learning history record	
	PBM educational programs for patients	45 ID/IDA patients scheduled for surgery receive PBM information	
46 Informational material is made available to patients and patients associations concerning alternatives to transfusion			
<b>Information Systems</b>	PBM related computerized physician order entry (CPOE) systems	47 There is a PBM/alternatives to transfusion information consent form	
		48 Patient transfusion history records are accessible in the patient clinical history	
		49 CPOE includes a transfusion risk estimation model	
	Reporting capabilities	Surveillance and monitoring	50 CPOE supports clinical decision for prescribing transfusion and alternatives
			51 Automates follow-up of the appropriateness of RBC orders vs recommendations and clinical protocols
		Patient-level KPIs (with possibility to compare baseline)	52 Transfusion rate
			53 Transfusion index
			54 Use of single unit
			55 Use of pharmacological agents (i.e. quantity and doses of i.v. iron, erythropoietic agents, factor concentrates etc.)
			56 Use of cell salvage
			57 Use of point of care (POC) coagulation testing
			58 Haemoglobin concentration/haematocrit at hospital admission
			59 Haemoglobin/haematocrit at hospital discharge
			60 Transfusion related consumables and overhead
Activity Based consumptions	61 PBM related consumables (pharmacological agents) and overhead		
	62 In hospital mortality per clinical process, with the possibility to differentiate between transfused and non-transfused		
Patient-level outcomes	63 LOS per clinical process, with the possibility to differentiate between transfused and non-transfused		
	64 Readmission per clinical process, with the possibility to differentiate between transfused and non-transfused		
	65 Infections per clinical process, with the possibility to differentiate between transfused and non-transfused		
	66 MACE and cerebrovascular event per clinical process, with the possibility to differentiate between transfused and non-transfused		
Use of Informatio	67 Surveillance, monitoring and audit on adherence to protocols are periodically performed		
	68 Consumptions, outcomes and KPIs are periodically assessed		
	69 Results are made available to all involved professionals		
	70 Incentives schemes are set vs defined objectives		

Table SII - Definitions of Process and Outcomes KPIs

Dimension	Driver	KPI	Numerator	Denominator	Clinical procedures in scope	
Process	Pillar 1. Preoperative Anaemia management	1	% of patients with a Hb determination 21-90 days before surgery (1)	Patients with a Hb determination between 21-90 days before surgery (1)	All patients	TKR, THR, CRC, CAV
		2	% of patients with an iron metabolism determination 21-90 days before surgery (1)	Patients with a Ferritin determination 21-90 days before surgery (1)(2)	All patients	TKR, THR, CRC, CAV
		3	% of patients treated preoperatively 7-90 days before surgery	Patients who are anaemic and have an administration of intravenous iron (FeIV) and/or erythropoietin (EPO) between 90-7 days prior surgery (3)(4)	Anaemic patients between 90-7 days before surgery (4)	TKR, THR, CRC, CAV
		4	% of patients with anaemia prior to surgery	Patients who are anaemic as per the last Hb determination between 90 days and 1 hour before surgery (4)	Patients with a Hb determination between 90 days and 1 hour before to surgery	TKR, THR, CRC, CAV
		5	% of patients treated with IV iron during hospital stay	Patients with a prescription of FeIV during hospital stay	All patients	TKR, THR, CRC, CAV, HIF, GIB
		6	% of patients with preoperative transfusion	Patients with a red blood cell transfusion between 21 days and 1 hour before surgery	All patients	TKR, THR, CRC, CAV
	Pillar 2. Minimising blood loss and bleeding	7	% of patients under spinal anaesthesia	Patients with spinal anaesthesia	Patients with informed field	TKR, THR, HIF
		8	% of patients treated with antifibrinolytics perioperatively	Patients with an administration of antifibrinolytics	Patients with informed field	TKR, THR, CRC, CAV
		9	% of patients with blood recovery systems perioperatively	Patients for whom blood recovery system was used	Patients with informed field	TKR, THR, CRC, CAV
	Pillar 3. Optimising the physiological reserve of anaemia	10	Hb level prior to transfusion	Sum of latest Hb value prior transfusion for patients transfused between 1 hour after surgery and discharge	Patients transfused between 1 hour after surgery and discharge and with a Hb determination 1 day prior transfusion	TKR, THR, CRC, CAV, HIF, GIB
		11	% of patients transfused with Hb >= 8 g/dl	Patients transfused between 1 hour after surgery and discharge and with latest Hb value prior transfusion >= 8 g/dl	Patients transfused between 1 hour after surgery and discharge and with a Hb determination 1 day prior transfusion	TKR, THR, CRC, CAV, HIF, GIB
		12	% of single-unit transfused patients	Single-unit transfusion events	Total of transfusion events between 1 day after surgery and discharge	TKR, THR, CRC, CAV, HIF, GIB
Outcomes	Intermediate Outcomes	1	Transfusion Rate	Patients with a red blood cell transfusion during hospital stay	All patients	TKR, THR, CRC, CAV, HIF, GIB
		2	Transfusion Index	Total of red blood cell units transfused during hospital stay	Patients with a red blood cell transfusion during hospital stay	TKR, THR, CRC, CAV, HIF, GIB
		3	Total Transfusion Index	Total of red blood cell units transfused during hospital stay	All patients	TKR, THR, CRC, CAV, HIF, GIB
	Hard Outcomes	4	In-hospital Mortality	Patients with exitus during hospital stay	All patients	TKR, THR, CRC, CAV, HIF, GIB
		5	Complications	Patients with a PBM-related complications	All patients	TKR, THR, CRC, CAV, HIF, GIB
		6	Length of stay	Sum of hospital stay days for all patients	All patients	TKR, THR, CRC, CAV, HIF, GIB
		7	30-day related Readmissions	Patients with unscheduled 30 days related readmission	All patients	TKR, THR, CRC, CAV, HIF, GIB

1) In colorectal cancer resection 14-45 days before surgery

2) Ferritin as the determination which is always used in combination with others to assess iron metabolism

3) Only hospital use treatments are considered

4) Definition of anaemic patient follows current WHO criteria: Hb &lt;12 for women and 13 g/dL for men.

RC: colorectal cancer surgery, CAV: cardiac valve surgery; HIF: hip fracture; GIB: gastrointestinal bleeding; TKR: total knee replacement; THR: total hip replacement.

Table SIII - ICD10 Codes

**TOTAL KNEE REPLACEMENT (TKR) CODES**

Scheduled episodes (Circ. Admission = Scheduled) with knee replacement procedure. Episodes that also have a knee prosthesis removal procedure are excluded (since spare parts are excluded from the analysis).

**Knee replacement procedure codes**

OSRC0J9	Replace of R Knee Jt with Synth Sub, Cement, Open Approach
OSRC0JA	Replace of R Knee Jt with Synth Sub, Uncement, Open Approach
OSRC0JZ	Replacement of R Knee Jt with Synth Sub, Open Approach
OSRC0L9	Replace of R Knee Jt with Med Unicnd, Cement, Open Approach
OSRC0LA	Replace R Knee Jt w Med Unicnd, Uncement, Open
OSRC0LZ	Replacement of R Knee Jt with Med Unicnd, Open Approach
OSRC07Z	Replacement of R Knee Jt with Autol Sub, Open Approach
OSRC0KZ	Replacement of R Knee Jt with Nonaut Sub, Open Approach
OSRD0J9	Replace of L Knee Jt with Synth Sub, Cement, Open Approach
OSRD0JA	Replace of L Knee Jt with Synth Sub, Uncement, Open Approach
OSRD0JZ	Replacement of Left Knee Joint with Synth Sub, Open Approach
OSRD0L9	Replace of L Knee Jt with Med Unicnd, Cement, Open Approach
OSRD0LA	Replace L Knee Jt w Med Unicnd, Uncement, Open
OSRD0LZ	Replacement of L Knee Jt with Med Unicnd, Open Approach
OSRD07Z	Replacement of Left Knee Joint with Autol Sub, Open Approach
OSRD0KZ	Replacement of L Knee Jt with Nonaut Sub, Open Approach
OSRT0J9	Replace R Knee Jt, Femoral w Synth Sub, Cement, Open
OSRT0JA	Replace R Knee Jt, Femoral w Synth Sub, Uncement, Open
OSRT0JZ	Replace of R Knee Jt, Femoral with Synth Sub, Open Approach
OSRT07Z	Replace of R Knee Jt, Femoral with Autol Sub, Open Approach
OSRT0KZ	Replace of R Knee Jt, Femoral with Nonaut Sub, Open Approach
OSRU0J9	Replace L Knee Jt, Femoral w Synth Sub, Cement, Open
OSRU0JA	Replace L Knee Jt, Femoral w Synth Sub, Uncement, Open
OSRU0JZ	Replace of L Knee Jt, Femoral with Synth Sub, Open Approach
OSRU07Z	Replace of L Knee Jt, Femoral with Autol Sub, Open Approach
OSRU0KZ	Replace of L Knee Jt, Femoral with Nonaut Sub, Open Approach
OSRV0J9	Replace R Knee Jt, Tibial w Synth Sub, Cement, Open
OSRV0JA	Replace R Knee Jt, Tibial w Synth Sub, Uncement, Open
OSRV0JZ	Replace of R Knee Jt, Tibial with Synth Sub, Open Approach
OSRV07Z	Replace of R Knee Jt, Tibial with Autol Sub, Open Approach
OSRV0KZ	Replace of R Knee Jt, Tibial with Nonaut Sub, Open Approach
OSRW0J9	Replace L Knee Jt, Tibial w Synth Sub, Cement, Open
OSRW0JA	Replace L Knee Jt, Tibial w Synth Sub, Uncement, Open
OSRW0JZ	Replace of L Knee Jt, Tibial with Synth Sub, Open Approach
OSRW07Z	Replace of L Knee Jt, Tibial with Autol Sub, Open Approach
OSRW0KZ	Replace of L Knee Jt, Tibial with Nonaut Sub, Open Approach

**Knee replacement removal procedure codes**

OSPC07Z	Removal of Autol Sub from R Knee Jt, Open Approach
OSPC0JC	Removal of Synth Sub from R Knee Jt, Patella, Open Approach
OSPC0JZ	Removal of Synth Sub from R Knee Jt, Open Approach
OSPC0KZ	Removal of Nonaut Sub from R Knee Jt, Open Approach
OSPC37Z	Removal of Autol Sub from R Knee Jt, Perc Approach
OSPC3JC	Removal of Synth Sub from R Knee Jt, Patella, Perc Approach
OSPC3JZ	Removal of Synth Sub from R Knee Jt, Perc Approach
OSPC3KZ	Removal of Nonaut Sub from R Knee Jt, Perc Approach
OSPC47Z	Removal of Autol Sub from R Knee Jt, Perc Endo Approach
OSPC4JC	Remove Synth Sub from R Knee Jt, Patella, Perc Endo
OSPC4JZ	Removal of Synth Sub from R Knee Jt, Perc Endo Approach
OSPC4KZ	Removal of Nonaut Sub from R Knee Jt, Perc Endo Approach
OSPD07Z	Removal of Autol Sub from L Knee Jt, Open Approach
OSPD0JC	Removal of Synth Sub from L Knee Jt, Patella, Open Approach
OSPD0JZ	Removal of Synth Sub from L Knee Jt, Open Approach
OSPD0KZ	Removal of Nonaut Sub from L Knee Jt, Open Approach
OSPD37Z	Removal of Autol Sub from L Knee Jt, Perc Approach
OSPD3JC	Removal of Synth Sub from L Knee Jt, Patella, Perc Approach
OSPD3JZ	Removal of Synth Sub from L Knee Jt, Perc Approach
OSPD3KZ	Removal of Nonaut Sub from L Knee Jt, Perc Approach
OSPD47Z	Removal of Autol Sub from L Knee Jt, Perc Endo Approach
OSPD4JC	Remove Synth Sub from L Knee Jt, Patella, Perc Endo
OSPD4JZ	Removal of Synth Sub from L Knee Jt, Perc Endo Approach
OSPD4KZ	Removal of Nonaut Sub from L Knee Jt, Perc Endo Approach
OSPT0JZ	Removal of Synth Sub from R Knee Jt, Femoral, Open Approach
OSPT3JZ	Removal of Synth Sub from R Knee Jt, Femoral, Perc Approach
OSPT4JZ	Remove Synth Sub from R Knee Jt, Femoral, Perc Endo

OSPU0JZ	Removal of Synth Sub from L Knee Jt, Femoral, Open Approach
OSPU3JZ	Removal of Synth Sub from L Knee Jt, Femoral, Perc Approach
OSPU4JZ	Remove Synth Sub from L Knee Jt, Femoral, Perc Endo
OSPV0JZ	Removal of Synth Sub from R Knee Jt, Tibial, Open Approach
OSPV3JZ	Removal of Synth Sub from R Knee Jt, Tibial, Perc Approach
OSPV4JZ	Remove Synth Sub from R Knee Jt, Tibial, Perc Endo
OSPW0JZ	Removal of Synth Sub from L Knee Jt, Tibial, Open Approach
OSPW3JZ	Removal of Synth Sub from L Knee Jt, Tibial, Perc Approach
OSPW4JZ	Remove Synth Sub from L Knee Jt, Tibial, Perc Endo

**TOTAL HIP REPLACEMENT (THR) CODES**

Scheduled episodes (Circ. Admission = Scheduled) with hip replacement procedure. Episodes that also have hip fracture as primary diagnostic and/or hip prosthesis removal procedure are excluded (since spare parts are excluded from the analysis).

**Hip replacement procedure codes**

OSR9019	Replacement of R Hip Jt with Metal, Cement, Open Approach
OSR901A	Replacement of R Hip Jt with Metal, Uncement, Open Approach
OSR901Z	Replacement of Right Hip Joint with Metal, Open Approach
OSR9029	Replace R Hip Jt w Metal on Poly, Cement, Open
OSR902A	Replace R Hip Jt w Metal on Poly, Uncement, Open
OSR902Z	Replacement of R Hip Jt with Metal on Poly, Open Approach
OSR9039	Replacement of R Hip Jt with Ceramic, Cement, Open Approach
OSR903A	Replace of R Hip Jt with Ceramic, Uncement, Open Approach
OSR903Z	Replacement of Right Hip Joint with Ceramic, Open Approach
OSR9049	Replace R Hip Jt w Ceramic on Poly, Cement, Open
OSR904A	Replace R Hip Jt w Ceramic on Poly, Uncement, Open
OSR904Z	Replacement of R Hip Jt with Ceramic on Poly, Open Approach
OSR90J9	Replace of R Hip Jt with Synth Sub, Cement, Open Approach
OSR90JA	Replace of R Hip Jt with Synth Sub, Uncement, Open Approach
OSR90JZ	Replacement of Right Hip Joint with Synth Sub, Open Approach
OSR907Z	Replacement of Right Hip Joint with Autol Sub, Open Approach
OSR90KZ	Replacement of R Hip Jt with Nonaut Sub, Open Approach
OSRB019	Replacement of L Hip Jt with Metal, Cement, Open Approach
OSRB01A	Replacement of L Hip Jt with Metal, Uncement, Open Approach
OSRB01Z	Replacement of Left Hip Joint with Metal, Open Approach
OSRB029	Replace L Hip Jt w Metal on Poly, Cement, Open
OSRB02A	Replace L Hip Jt w Metal on Poly, Uncement, Open
OSRB02Z	Replacement of L Hip Jt with Metal on Poly, Open Approach
OSRB039	Replacement of L Hip Jt with Ceramic, Cement, Open Approach
OSRB03A	Replace of L Hip Jt with Ceramic, Uncement, Open Approach
OSRB03Z	Replacement of Left Hip Joint with Ceramic, Open Approach
OSRB049	Replace L Hip Jt w Ceramic on Poly, Cement, Open
OSRB04A	Replace L Hip Jt w Ceramic on Poly, Uncement, Open
OSRB04Z	Replacement of L Hip Jt with Ceramic on Poly, Open Approach
OSRB0J9	Replace of L Hip Jt with Synth Sub, Cement, Open Approach
OSRB0JA	Replace of L Hip Jt with Synth Sub, Uncement, Open Approach
OSRB0JZ	Replacement of Left Hip Joint with Synth Sub, Open Approach
OSRB07Z	Replacement of Left Hip Joint with Autol Sub, Open Approach
OSRB0KZ	Replacement of Left Hip Joint with Nonaut Sub, Open Approach
OSRR019	Replace R Hip Jt, Femoral w Metal, Cement, Open
OSRR01A	Replace R Hip Jt, Femoral w Metal, Uncement, Open
OSRR01Z	Replacement of R Hip Jt, Femoral with Metal, Open Approach
OSRR039	Replace R Hip Jt, Femoral w Ceramic, Cement, Open
OSRR03A	Replace R Hip Jt, Femoral w Ceramic, Uncement, Open
OSRR03Z	Replacement of R Hip Jt, Femoral with Ceramic, Open Approach
OSRR0J9	Replace R Hip Jt, Femoral w Synth Sub, Cement, Open
OSRR0JA	Replace R Hip Jt, Femoral w Synth Sub, Uncement, Open
OSRR0JZ	Replace of R Hip Jt, Femoral with Synth Sub, Open Approach
OSRS019	Replace L Hip Jt, Femoral w Metal, Cement, Open
OSRS01A	Replace L Hip Jt, Femoral w Metal, Uncement, Open
OSRS01Z	Replacement of L Hip Jt, Femoral with Metal, Open Approach
OSRS039	Replace L Hip Jt, Femoral w Ceramic, Cement, Open
OSRS03A	Replace L Hip Jt, Femoral w Ceramic, Uncement, Open
OSRS03Z	Replacement of L Hip Jt, Femoral with Ceramic, Open Approach
OSRS0J9	Replace L Hip Jt, Femoral w Synth Sub, Cement, Open
OSRS0JA	Replace L Hip Jt, Femoral w Synth Sub, Uncement, Open
OSRS0JZ	Replace of L Hip Jt, Femoral with Synth Sub, Open Approach
OSRA009	Replace R Hip Jt, Acetab w Polyeth, Cement, Open
OSRA00A	Replace R Hip Jt, Acetab w Polyeth, Uncement, Open
OSRA00Z	Replacement of R Hip Jt, Acetab with Polyeth, Open Approach
OSRA019	Replace R Hip Jt, Acetab w Metal, Cement, Open

0SRA01A	Replace R Hip Jt, Acetab w Metal, Uncement, Open	S72.035B	Nondisp midcervical fx left femur, init for opn fx type I/2
0SRA01Z	Replacement of R Hip Jt, Acetab with Metal, Open Approach	S72.035C	Nondisp midcervical fx l femur, init for opn fx type 3A/B/C
0SRA039	Replace R Hip Jt, Acetab w Ceramic, Cement, Open	S72.036A	Nondisplaced midcervical fracture of unsp femur, init
0SRA03A	Replace R Hip Jt, Acetab w Ceramic, Uncement, Open	S72.036B	Nondisp midcervical fx unsp femur, init for opn fx type I/2
0SRA03Z	Replacement of R Hip Jt, Acetab with Ceramic, Open Approach	S72.036C	Nondisp midcervical fx unsp femr, 7thC
0SRA0J9	Replace R Hip Jt, Acetab w Synth Sub, Cement, Open	S72.041A	Disp fx of base of neck of right femur, init for clos fx
0SRA0JA	Replace R Hip Jt, Acetab w Synth Sub, Uncement, Open	S72.041B	Disp fx of base of neck of r femur, init for opn fx type I/2
0SRA0JZ	Replace of R Hip Jt, Acetab with Synth Sub, Open Approach	S72.041C	Disp fx of base of nk of r femr, init for opn fx type 3A/B/C
0SRA07Z	Replace of R Hip Jt, Acetab with Autol Sub, Open Approach	S72.042A	Disp fx of base of neck of left femur, init for clos fx
0SRA0KZ	Replace of R Hip Jt, Acetab with Nonaut Sub, Open Approach	S72.042B	Disp fx of base of neck of l femur, init for opn fx type I/2
0SRE009	Replace L Hip Jt, Acetab w Polyeth, Cement, Open	S72.042C	Disp fx of base of nk of l femr, init for opn fx type 3A/B/C
0SRE00A	Replace L Hip Jt, Acetab w Polyeth, Uncement, Open	S72.043A	Disp fx of base of neck of unsp femur, init for clos fx
0SRE00Z	Replacement of L Hip Jt, Acetab with Polyeth, Open Approach	S72.043B	Disp fx of base of nk of unsp femr, init for opn fx type I/2
0SRE019	Replace L Hip Jt, Acetab w Metal, Cement, Open	S72.043C	Disp fx of base of nk of unsp femr, 7thC
0SRE01A	Replace L Hip Jt, Acetab w Metal, Uncement, Open	S72.044A	Nondisp fx of base of neck of right femur, init for clos fx
0SRE01Z	Replacement of L Hip Jt, Acetab with Metal, Open Approach	S72.044B	Nondisp fx of base of nk of r femr, init for opn fx type I/2
0SRE039	Replace L Hip Jt, Acetab w Ceramic, Cement, Open	S72.044C	Nondisp fx of base of nk of r femr, 7thC
0SRE03A	Replace L Hip Jt, Acetab w Ceramic, Uncement, Open	S72.045A	Nondisp fx of base of neck of unsp femur, init for clos fx
0SRE03Z	Replacement of L Hip Jt, Acetab with Ceramic, Open Approach	S72.045B	Nondisp fx of base of nk of l femr, init for opn fx type I/2
0SRE0J9	Replace L Hip Jt, Acetab w Synth Sub, Cement, Open	S72.045C	Nondisp fx of base of nk of l femr, 7thC
0SRE0JA	Replace L Hip Jt, Acetab w Synth Sub, Uncement, Open	S72.046A	Nondisp fx of base of neck of unsp femur, init for clos fx
0SRE0JZ	Replace of L Hip Jt, Acetab with Synth Sub, Open Approach	S72.046B	Nondisp fx of base of nk of unsp femr, 7thB
0SRE07Z	Replace of L Hip Jt, Acetab with Autol Sub, Open Approach	S72.046C	Nondisp fx of base of nk of unsp femr, 7thC
0SRE0KZ	Replace of L Hip Jt, Acetab with Nonaut Sub, Open Approach	S72.051A	Unsp fracture of head of right femur, init for clos fx
<b>Femur fracture diagnosis codes</b>			
S72.001A	Fracture of unsp part of neck of right femur, init	S72.051B	Unsp fx head of right femur, init for opn fx type I/2
S72.001B	Fx unsp part of neck of r femur, init for opn fx type I/2	S72.051C	Unsp fx head of right femur, init for opn fx type 3A/B/C
S72.001C	Fx unsp part of neck of r femur, init for opn fx type 3A/B/C	S72.052A	Unsp fracture of head of left femur, init for clos fx
S72.002A	Fracture of unsp part of neck of left femur, init	S72.052B	Unsp fx head of left femur, init for opn fx type I/2
S72.002B	Fx unsp part of neck of left femur, init for opn fx type I/2	S72.052C	Unsp fx head of left femur, init for opn fx type 3A/B/C
S72.002C	Fx unsp part of neck of l femur, init for opn fx type 3A/B/C	S72.059A	Unsp fracture of head of unsp femur, init for clos fx
S72.009A	Fracture of unsp part of neck of unsp femur, init	S72.059B	Unsp fx head of unsp femur, init for opn fx type I/2
S72.009B	Fx unsp part of neck of unsp femur, init for opn fx type I/2	S72.059C	Unsp fx head of unsp femur, init for opn fx type 3A/B/C
S72.009C	Fx unsp part of nk of unsp femr, init for opn fx type 3A/B/C	S72.061A	Displaced articular fracture of head of right femur, init
S72.011A	Unsp intracapsular fracture of right femur, init for clos fx	S72.061B	Displaced artic fx head of r femur, init for opn fx type I/2
S72.011B	Unsp intracap fx right femur, init for opn fx type I/2	S72.061C	Displ artic fx head of r femur, init for opn fx type 3A/B/C
S72.011C	Unsp intracap fx right femur, init for opn fx type 3A/B/C	S72.062A	Displaced articular fracture of head of left femur, init
S72.012A	Unsp intracapsular fracture of left femur, init for clos fx	S72.062B	Displaced artic fx head of l femur, init for opn fx type I/2
S72.012B	Unsp intracap fx left femur, init for opn fx type I/2	S72.062C	Displ artic fx head of l femur, init for opn fx type 3A/B/C
S72.012C	Unsp intracap fx left femur, init for opn fx type 3A/B/C	S72.063A	Displaced articular fracture of head of unsp femur, init
S72.019A	Unsp intracapsular fracture of unsp femur, init for clos fx	S72.063B	Displ artic fx head of unsp femr, init for opn fx type I/2
S72.019B	Unsp intracap fx unsp femur, init for opn fx type I/2	S72.063C	Displ artic fx head of unsp femr, 7thC
S72.019C	Unsp intracap fx unsp femur, init for opn fx type 3A/B/C	S72.064A	Nondisplaced articular fracture of head of right femur, init
S72.021A	Disp fx of epiphysis (separation) (upper) of r femur, init	S72.064B	Nondisp artic fx head of r femur, init for opn fx type I/2
S72.021B	Disp fx of epiphy (separation) (upper) of r femr, 7thB	S72.064C	Nondisp artic fx head of r femr, init for opn fx type 3A/B/C
S72.021C	Disp fx of epiphy (separation) (upper) of r femr, 7thC	S72.065A	Nondisplaced articular fracture of head of left femur, init
S72.022A	Disp fx of epiphysis (separation) (upper) of l femur, init	S72.065B	Nondisp artic fx head of l femur, init for opn fx type I/2
S72.022B	Disp fx of epiphy (separation) (upper) of l femr, 7thB	S72.065C	Nondisp artic fx head of l femr, init for opn fx type 3A/B/C
S72.022C	Disp fx of epiphy (separation) (upper) of l femr, 7thC	S72.066A	Nondisplaced articular fracture of head of unsp femur, init
S72.023A	Disp fx of epiphy (separation) (upper) of unsp femur, init	S72.066B	Nondisp artic fx head of unsp femr, init for opn fx type I/2
S72.023B	Disp fx of epiphy (separation) (upper) of unsp femr, 7thB	S72.066C	Nondisp artic fx head of unsp femr, 7thC
S72.023C	Disp fx of epiphy (separation) (upper) of unsp femr, 7thC	S72.091A	Oth fracture of head and neck of right femur, init
S72.024A	Nondisp fx of epiphy (separation) (upper) of r femur, init	S72.091B	Oth fx head/neck of right femur, init for opn fx type I/2
S72.024B	Nondisp fx of epiphy (separation) (upper) of r femr, 7thB	S72.091C	Oth fx head/neck of right femur, init for opn fx type 3A/B/C
S72.024C	Nondisp fx of epiphy (separation) (upper) of r femr, 7thC	S72.092A	Oth fracture of head and neck of left femur, init
S72.025A	Nondisp fx of epiphy (separation) (upper) of l femur, init	S72.092B	Oth fx head/neck of left femur, init for opn fx type I/2
S72.025B	Nondisp fx of epiphy (separation) (upper) of l femr, 7thB	S72.092C	Oth fx head/neck of left femur, init for opn fx type 3A/B/C
S72.025C	Nondisp fx of epiphy (separation) (upper) of l femr, 7thC	S72.099A	Oth fracture of head and neck of unsp femur, init
S72.026A	Nondisp fx of epiphy (separation) (upper) of unsp femr, init	S72.099B	Oth fx head/neck of unsp femur, init for opn fx type I/2
S72.026B	Nondisp fx of epiphys (separation) (upper) of unsp femr, 7thB	S72.099C	Oth fx head/neck of unsp femur, init for opn fx type 3A/B/C
S72.026C	Nondisp fx of epiphys (separation) (upper) of unsp femr, 7thC	S72.101A	Unsp trochanteric fracture of right femur, init for clos fx
S72.031A	Displaced midcervical fracture of right femur, init	S72.101B	Unsp trochan fx right femur, init for opn fx type I/2
S72.031B	Displaced midcervical fx r femur, init for opn fx type I/2	S72.101C	Unsp trochan fx right femur, init for opn fx type 3A/B/C
S72.031C	Displ midcervical fx r femur, init for opn fx type 3A/B/C	S72.102A	Unsp trochanteric fracture of left femur, init for clos fx
S72.032A	Displaced midcervical fracture of left femur, init	S72.102B	Unsp trochan fx left femur, init for opn fx type I/2
S72.032B	Displaced midcervical fx l femur, init for opn fx type I/2	S72.102C	Unsp trochan fx left femur, init for opn fx type 3A/B/C
S72.032C	Displ midcervical fx l femur, init for opn fx type 3A/B/C	S72.109A	Unsp trochanteric fracture of unsp femur, init for clos fx
S72.033A	Displaced midcervical fracture of unsp femur, init	S72.109B	Unsp trochan fx unsp femur, init for opn fx type I/2
S72.033B	Displ midcervical fx unsp femur, init for opn fx type I/2	S72.109C	Unsp trochan fx unsp femur, init for opn fx type 3A/B/C
S72.033C	Displ midcervical fx unsp femur, init for opn fx type 3A/B/C	S72.111A	Disp fx of greater trochanter of right femur, init
S72.034A	Nondisplaced midcervical fracture of right femur, init	S72.111B	Disp fx of greater trochanter of r femr, 7thB
S72.034B	Nondisp midcervical fx right femur, init for opn fx type I/2	S72.111C	Disp fx of greater trochanter of r femr, 7thC
S72.034C	Nondisp midcervical fx r femur, init for opn fx type 3A/B/C	S72.112A	Disp fx of greater trochanter of left femur, init
S72.035A	Nondisplaced midcervical fracture of left femur, init	S72.112B	Disp fx of greater trochanter of l femr, 7thB
		S72.112C	Disp fx of greater trochanter of l femr, 7thC
		S72.113A	Disp fx of greater trochanter of unsp femr, init

S72.113B Disp fx of greater trochanter of unsp femr, 7thB  
 S72.113C Disp fx of greater trochanter of unsp femr, 7thC  
 S72.114A Nondisp fx of greater trochanter of right femur, init  
 S72.114B Nondisp fx of greater trochanter of r femr, 7thB  
 S72.114C Nondisp fx of greater trochanter of r femr, 7thC  
 S72.115A Nondisp fx of greater trochanter of left femur, init  
 S72.115B Nondisp fx of greater trochanter of l femr, 7thB  
 S72.115C Nondisp fx of greater trochanter of l femr, 7thC  
 S72.116A Nondisp fx of greater trochanter of unsp femur, init  
 S72.116B Nondisp fx of greater trochanter of unsp femr, 7thB  
 S72.116C Nondisp fx of greater trochanter of unsp femr, 7thC  
 S72.121A Disp fx of lesser trochanter of right femur, init  
 S72.121B Disp fx of less trochanter of r femr, 7thB  
 S72.121C Disp fx of less trochanter of r femr, 7thC  
 S72.122A Disp fx of lesser trochanter of left femur, init for clos fx  
 S72.122B Disp fx of less trochanter of l femr, 7thB  
 S72.122C Disp fx of less trochanter of l femr, 7thC  
 S72.123A Disp fx of lesser trochanter of unsp femur, init for clos fx  
 S72.123B Disp fx of less trochanter of unsp femr, 7thB  
 S72.123C Disp fx of less trochanter of unsp femr, 7thC  
 S72.124A Nondisp fx of lesser trochanter of right femur, init  
 S72.124B Nondisp fx of less trochanter of r femr, 7thB  
 S72.124C Nondisp fx of less trochanter of r femr, 7thC  
 S72.125A Nondisp fx of lesser trochanter of left femur, init  
 S72.125B Nondisp fx of less trochanter of l femr, 7thB  
 S72.125C Nondisp fx of less trochanter of l femr, 7thC  
 S72.126A Nondisp fx of lesser trochanter of unsp femur, init  
 S72.126B Nondisp fx of less trochanter of unsp femr, 7thB  
 S72.126C Nondisp fx of less trochanter of unsp femr, 7thC  
 S72.131A Displaced apophyseal fracture of right femur, init  
 S72.131B Displaced apophyseal fx r femur, init for opn fx type 1/2  
 S72.131C Displaced apophyseal fx r femur, init for opn fx type 3A/B/C  
 S72.132A Displaced apophyseal fracture of left femur, init  
 S72.132B Displaced apophyseal fx left femur, init for opn fx type 1/2  
 S72.132C Displaced apophyseal fx l femur, init for opn fx type 3A/B/C  
 S72.133A Displaced apophyseal fracture of unsp femur, init  
 S72.133B Displaced apophyseal fx unsp femur, init for opn fx type 1/2  
 S72.133C Displ apophyseal fx unsp femur, init for opn fx type 3A/B/C  
 S72.134A Nondisplaced apophyseal fracture of right femur, init  
 S72.134B Nondisp apophyseal fx right femur, init for opn fx type 1/2  
 S72.134C Nondisp apophyseal fx r femur, init for opn fx type 3A/B/C  
 S72.135A Nondisplaced apophyseal fracture of left femur, init  
 S72.135B Nondisp apophyseal fx left femur, init for opn fx type 1/2  
 S72.135C Nondisp apophyseal fx l femur, init for opn fx type 3A/B/C  
 S72.136A Nondisplaced apophyseal fracture of unsp femur, init  
 S72.136B Nondisp apophyseal fx unsp femur, init for opn fx type 1/2  
 S72.136C Nondisp apophyseal fx unsp femr, init for opn fx type 3A/B/C  
 S72.141A Displaced intertrochanteric fracture of right femur, init  
 S72.141B Displaced intertroch fx r femur, init for opn fx type 1/2  
 S72.141C Displaced intertroch fx r femur, init for opn fx type 3A/B/C  
 S72.142A Displaced intertrochanteric fracture of left femur, init  
 S72.142B Displaced intertroch fx left femur, init for opn fx type 1/2  
 S72.142C Displaced intertroch fx l femur, init for opn fx type 3A/B/C  
 S72.143A Displaced intertrochanteric fracture of unsp femur, init  
 S72.143B Displaced intertroch fx unsp femur, init for opn fx type 1/2  
 S72.143C Displ intertroch fx unsp femur, init for opn fx type 3A/B/C  
 S72.144A Nondisplaced intertrochanteric fracture of right femur, init  
 S72.144B Nondisp intertroch fx right femur, init for opn fx type 1/2  
 S72.144C Nondisp intertroch fx r femur, init for opn fx type 3A/B/C  
 S72.145A Nondisplaced intertrochanteric fracture of left femur, init  
 S72.145B Nondisp intertroch fx left femur, init for opn fx type 1/2  
 S72.145C Nondisp intertroch fx l femur, init for opn fx type 3A/B/C  
 S72.146A Nondisplaced intertrochanteric fracture of unsp femur, init  
 S72.146B Nondisp intertroch fx unsp femur, init for opn fx type 1/2  
 S72.146C Nondisp intertroch fx unsp femr, init for opn fx type 3A/B/C  
 S72.21XA Displaced subtrochanteric fracture of right femur, init  
 S72.21XB Displaced subtrochnt fx r femur, init for opn fx type 1/2  
 S72.21XC Displaced subtrochnt fx r femur, init for opn fx type 3A/B/C  
 S72.22XA Displaced subtrochanteric fracture of left femur, init  
 S72.22XB Displaced subtrochnt fx left femur, init for opn fx type 1/2  
 S72.22XC Displaced subtrochnt fx l femur, init for opn fx type 3A/B/C  
 S72.23XA Displaced subtrochanteric fracture of unsp femur, init  
 S72.23XB Displaced subtrochnt fx unsp femur, init for opn fx type 1/2  
 S72.23XC Displ subtrochnt fx unsp femur, init for opn fx type 3A/B/C  
 S72.24XA Nondisplaced subtrochanteric fracture of right femur, init

S72.24XB Nondisp subtrochnt fx right femur, init for opn fx type 1/2  
 S72.24XC Nondisp subtrochnt fx r femur, init for opn fx type 3A/B/C  
 S72.25XA Nondisplaced subtrochanteric fracture of left femur, init  
 S72.25XB Nondisp subtrochnt fx left femur, init for opn fx type 1/2  
 S72.25XC Nondisp subtrochnt fx l femur, init for opn fx type 3A/B/C  
 S72.26XA Nondisplaced subtrochanteric fracture of unsp femur, init  
 S72.26XB Nondisp subtrochnt fx unsp femur, init for opn fx type 1/2  
 S72.26XC Nondisp subtrochnt fx unsp femr, init for opn fx type 3A/B/C

**Hip Replacement Removal Procedure Codes**

OSP907Z Removal of Autol Sub from R Hip Jt, Open Approach  
 OSP90BZ Removal of Resurfacing Device from R Hip Jt, Open Approach  
 OSP90JZ Removal of Synthetic Substitute from R Hip Jt, Open Approach  
 OSP90KZ Removal of Nonaut Sub from R Hip Jt, Open Approach  
 OSP937Z Removal of Autol Sub from R Hip Jt, Perc Approach  
 OSP93JZ Removal of Synthetic Substitute from R Hip Jt, Perc Approach  
 OSP93KZ Removal of Nonaut Sub from R Hip Jt, Perc Approach  
 OSP947Z Removal of Autol Sub from R Hip Jt, Perc Endo Approach  
 OSP94JZ Removal of Synth Sub from R Hip Jt, Perc Endo Approach  
 OSP94KZ Removal of Nonaut Sub from R Hip Jt, Perc Endo Approach  
 OSPA0JZ Removal of Synth Sub from R Hip Jt, Acetab, Open Approach  
 OSPA3JZ Removal of Synth Sub from R Hip Jt, Acetab, Perc Approach  
 OSPA4JZ Remove Synth Sub from R Hip Jt, Acetab, Perc Endo  
 OSPB07Z Removal of Autol Sub from L Hip Jt, Open Approach  
 OSPB0BZ Removal of Resurfacing Device from L Hip Jt, Open Approach  
 OSPB0JZ Removal of Synthetic Substitute from L Hip Jt, Open Approach  
 OSPB0KZ Removal of Nonaut Sub from L Hip Jt, Open Approach  
 OSPB37Z Removal of Autol Sub from L Hip Jt, Perc Approach  
 OSPB3JZ Removal of Synthetic Substitute from L Hip Jt, Perc Approach  
 OSPB3KZ Removal of Nonaut Sub from L Hip Jt, Perc Approach  
 OSPB47Z Removal of Autol Sub from L Hip Jt, Perc Endo Approach  
 OSPB4JZ Removal of Synth Sub from L Hip Jt, Perc Endo Approach  
 OSPB4KZ Removal of Nonaut Sub from L Hip Jt, Perc Endo Approach  
 OSPE0JZ Removal of Synth Sub from L Hip Jt, Acetab, Open Approach  
 OSPE3JZ Removal of Synth Sub from L Hip Jt, Acetab, Perc Approach  
 OSPE4JZ Remove Synth Sub from L Hip Jt, Acetab, Perc Endo  
 OSPR0JZ Removal of Synth Sub from R Hip Jt, Femoral, Open Approach  
 OSPR3JZ Removal of Synth Sub from R Hip Jt, Femoral, Perc Approach  
 OSPR4JZ Remove Synth Sub from R Hip Jt, Femoral, Perc Endo  
 OSPS0JZ Removal of Synth Sub from L Hip Jt, Femoral, Open Approach  
 OSPS3JZ Removal of Synth Sub from L Hip Jt, Femoral, Perc Approach  
 OSPS4JZ Remove Synth Sub from L Hip Jt, Femoral, Perc Endo

**OPEN COLORECTAL CANCER SURGERY (CRC)**

Scheduled episodes (Circ. Admission = Scheduled) with primary diagnosis of colon and rectal neoplasia and with open colon and rectal procedure. Those episodes that also have a secondary diagnosis of metastasis are excluded.

**Colon and rectal neoplasia diagnostic codes**

C18.0 Malignant neoplasm of cecum  
 C18.1 Malignant neoplasm of appendix  
 C18.2 Malignant neoplasm of ascending colon  
 C18.3 Malignant neoplasm of hepatic flexure  
 C18.4 Malignant neoplasm of transverse colon  
 C18.5 Malignant neoplasm of splenic flexure  
 C18.6 Malignant neoplasm of descending colon  
 C18.7 Malignant neoplasm of sigmoid colon  
 C18.8 Malignant neoplasm of overlapping sites of colon  
 C18.9 Malignant neoplasm of colon, unspecified  
 C19 Malignant neoplasm of rectosigmoid junction  
 C20 Malignant neoplasm of rectum  
 C21.0 Malignant neoplasm of anus, unspecified  
 C21.1 Malignant neoplasm of anal canal  
 C21.2 Malignant neoplasm of cloacogenic zone  
 C21.8 Malig neoplasm of ovrlp sites of rectum, anus and anal canal  
 C7A.020 Malignant carcinoid tumor of the appendix  
 C7A.021 Malignant carcinoid tumor of the cecum  
 C7A.022 Malignant carcinoid tumor of the ascending colon  
 C7A.023 Malignant carcinoid tumor of the transverse colon  
 C7A.024 Malignant carcinoid tumor of the descending colon  
 C7A.025 Malignant carcinoid tumor of the sigmoid colon  
 C7A.026 Malignant carcinoid tumor of the rectum  
 C7A.029 Malignant carcinoid tumor of the lg int, unsp portion

**Open colon and rectum procedure codes**

0DTE0ZZ	Resection of Large Intestine, Open Approach
0DTF0ZZ	Resection of Right Large Intestine, Open Approach
0DTG0ZZ	Resection of Left Large Intestine, Open Approach
0DTH0ZZ	Resection of Cecum, Open Approach
0DTJ0ZZ	Resection of Appendix, Open Approach
0DTK0ZZ	Resection of Ascending Colon, Open Approach
0DTL0ZZ	Resection of Transverse Colon, Open Approach
0DTM0ZZ	Resection of Descending Colon, Open Approach
0DTN0ZZ	Resection of Sigmoid Colon, Open Approach
0DTP0ZZ	Resection of Rectum, Open Approach
0DTQ0ZZ	Resection of Anus, Open Approach
0DBE0ZZ	Excision of Large Intestine, Open Approach
0DBF0ZZ	Excision of Right Large Intestine, Open Approach
0DBG0ZZ	Excision of Left Large Intestine, Open Approach
0DBH0ZZ	Excision of Cecum, Open Approach
0DBJ0ZZ	Excision of Appendix, Open Approach
0DBK0ZZ	Excision of Ascending Colon, Open Approach
0DBL0ZZ	Excision of Transverse Colon, Open Approach
0DBM0ZZ	Excision of Descending Colon, Open Approach
0DBN0ZZ	Excision of Sigmoid Colon, Open Approach
0DBP0ZZ	Excision of Rectum, Open Approach
0DBQ0ZZ	Excision of Anus, Open Approach

**Metastasis diagnostic codes**

C77.0	Sec and unsp malig neoplasm of nodes of head, face and neck
C77.1	Secondary and unsp malignant neoplasm of intrathorac nodes
C77.2	Secondary and unsp malignant neoplasm of intra-abd nodes
C77.3	Sec and unsp malig neoplasm of axilla and upper limb nodes
C77.4	Sec and unsp malig neoplasm of inguinal and lower limb nodes
C77.5	Secondary and unsp malignant neoplasm of intrapelv nodes
C77.8	Sec and unsp malig neoplasm of nodes of multiple regions
C77.9	Secondary and unsp malignant neoplasm of lymph node, unsp
C78.00	Secondary malignant neoplasm of unspecified lung
C78.01	Secondary malignant neoplasm of right lung
C78.02	Secondary malignant neoplasm of left lung
C78.1	Secondary malignant neoplasm of mediastinum
C78.2	Secondary malignant neoplasm of pleura
C78.30	Secondary malignant neoplasm of unsp respiratory organ
C78.39	Secondary malignant neoplasm of other respiratory organs
C78.4	Secondary malignant neoplasm of small intestine
C78.5	Secondary malignant neoplasm of large intestine and rectum
C78.6	Secondary malignant neoplasm of retroperiton and peritoneum
C78.7	Secondary malig neoplasm of liver and intrahepatic bile duct
C78.80	Secondary malignant neoplasm of unspecified digestive organ
C78.89	Secondary malignant neoplasm of other digestive organs
C79.00	Secondary malignant neoplasm of unsp kidney and renal pelvis
C79.01	Secondary malignant neoplasm of r kidney and renal pelvis
C79.02	Secondary malignant neoplasm of left kidney and renal pelvis
C79.10	Secondary malignant neoplasm of unspecified urinary organs
C79.11	Secondary malignant neoplasm of bladder
C79.19	Secondary malignant neoplasm of other urinary organs
C79.2	Secondary malignant neoplasm of skin
C79.31	Secondary malignant neoplasm of brain
C79.32	Secondary malignant neoplasm of cerebral meninges
C79.40	Secondary malignant neoplasm of unsp part of nervous system
C79.49	Secondary malignant neoplasm of oth parts of nervous system
C79.51	Secondary malignant neoplasm of bone
C79.52	Secondary malignant neoplasm of bone marrow
C79.60	Secondary malignant neoplasm of unspecified ovary
C79.61	Secondary malignant neoplasm of right ovary
C79.62	Secondary malignant neoplasm of left ovary
C79.70	Secondary malignant neoplasm of unspecified adrenal gland
C79.71	Secondary malignant neoplasm of right adrenal gland
C79.72	Secondary malignant neoplasm of left adrenal gland
C79.81	Secondary malignant neoplasm of breast
C79.82	Secondary malignant neoplasm of genital organs
C79.89	Secondary malignant neoplasm of other specified sites
C79.9	Secondary malignant neoplasm of unspecified site
C80.0	Disseminated malignant neoplasm, unspecified
C80.1	Malignant (primary) neoplasm, unspecified
C80.2	Malignant neoplasm associated with transplanted organ
C7B.00	Secondary carcinoid tumors, unspecified site
C7B.01	Secondary carcinoid tumors of distant lymph nodes

C7B.02	Secondary carcinoid tumors of liver
C7B.03	Secondary carcinoid tumors of bone
C7B.04	Secondary carcinoid tumors of peritoneum
C7B.09	Secondary carcinoid tumors of other sites
C7B.1	Secondary Merkel cell carcinoma
C7B.8	Other secondary neuroendocrine tumors

**LAPAROSCOPIC COLORECTAL CANCER SURGERY (CRC)**

Scheduled episodes (Circ. Admission = Scheduled) with primary diagnosis of colon and rectal neoplasia and with laparoscopic colon and rectal procedure. Those episodes that also have a secondary diagnosis of metastasis are excluded.

**Colon and rectal neoplasia diagnostic codes**

C18.0	Malignant neoplasm of cecum
C18.1	Malignant neoplasm of appendix
C18.2	Malignant neoplasm of ascending colon
C18.3	Malignant neoplasm of hepatic flexure
C18.4	Malignant neoplasm of transverse colon
C18.5	Malignant neoplasm of splenic flexure
C18.6	Malignant neoplasm of descending colon
C18.7	Malignant neoplasm of sigmoid colon
C18.8	Malignant neoplasm of overlapping sites of colon
C18.9	Malignant neoplasm of colon, unspecified
C19	Malignant neoplasm of rectosigmoid junction
C20	Malignant neoplasm of rectum
C21.0	Malignant neoplasm of anus, unspecified
C21.1	Malignant neoplasm of anal canal
C21.2	Malignant neoplasm of cloacogenic zone
C21.8	Malig neoplasm of overl sites of rectum, anus and anal canal
C7A.020	Malignant carcinoid tumor of the appendix
C7A.021	Malignant carcinoid tumor of the cecum
C7A.022	Malignant carcinoid tumor of the ascending colon
C7A.023	Malignant carcinoid tumor of the transverse colon
C7A.024	Malignant carcinoid tumor of the descending colon
C7A.025	Malignant carcinoid tumor of the sigmoid colon
C7A.026	Malignant carcinoid tumor of the rectum
C7A.029	Malignant carcinoid tumor of the lg int, unsp portion

**Laparoscopic colon and rectum procedure codes**

0DTE4ZZ	Resection of Large Intestine, Perc Endo Approach
0DTE7ZZ	Resection of Large Intestine, Via Opening
0DTE8ZZ	Resection of Large Intestine, Endo
0DTF4ZZ	Resection of Right Large Intestine, Perc Endo Approach
0DTF7ZZ	Resection of Right Large Intestine, Via Opening
0DTF8ZZ	Resection of Right Large Intestine, Endo
0DTG4ZZ	Resection of Left Large Intestine, Perc Endo Approach
0DTG7ZZ	Resection of Left Large Intestine, Via Opening
0DTG8ZZ	Resection of Left Large Intestine, Endo
0DTH4ZZ	Resection of Cecum, Percutaneous Endoscopic Approach
0DTH7ZZ	Resection of Cecum, Via Natural or Artificial Opening
0DTH8ZZ	Resection of Cecum, Endo
0DTJ4ZZ	Resection of Appendix, Percutaneous Endoscopic Approach
0DTJ7ZZ	Resection of Appendix, Via Natural or Artificial Opening
0DTJ8ZZ	Resection of Appendix, Endo
0DTK4ZZ	Resection of Ascending Colon, Perc Endo Approach
0DTK7ZZ	Resection of Ascending Colon, Via Opening
0DTK8ZZ	Resection of Ascending Colon, Endo
0DTL4ZZ	Resection of Transverse Colon, Perc Endo Approach
0DTL7ZZ	Resection of Transverse Colon, Via Opening
0DTL8ZZ	Resection of Transverse Colon, Endo
0DTM4ZZ	Resection of Descending Colon, Perc Endo Approach
0DTM7ZZ	Resection of Descending Colon, Via Opening
0DTM8ZZ	Resection of Descending Colon, Endo
0DTN4ZZ	Resection of Sigmoid Colon, Percutaneous Endoscopic Approach
0DTN7ZZ	Resection of Sigmoid Colon, Via Opening
0DTN8ZZ	Resection of Sigmoid Colon, Endo
0DTP4ZZ	Resection of Rectum, Percutaneous Endoscopic Approach
0DTP7ZZ	Resection of Rectum, Via Natural or Artificial Opening
0DTP8ZZ	Resection of Rectum, Endo
0DTQ4ZZ	Resection of Anus, Percutaneous Endoscopic Approach
0DTQ7ZZ	Resection of Anus, Via Natural or Artificial Opening
0DTQ8ZZ	Resection of Anus, Endo
0DBE3ZZ	Excision of Large Intestine, Percutaneous Approach

0DBE4ZZ	Excision of Large Intestine, Perc Endo Approach
0DBE7ZZ	Excision of Large Intestine, Via Opening
0DBE8ZZ	Excision of Large Intestine, Endo
0DBF3ZZ	Excision of Right Large Intestine, Percutaneous Approach
0DBF4ZZ	Excision of Right Large Intestine, Perc Endo Approach
0DBF7ZZ	Excision of Right Large Intestine, Via Opening
0DBF8ZZ	Excision of Right Large Intestine, Endo
0DBG3ZZ	Excision of Left Large Intestine, Percutaneous Approach
0DBG4ZZ	Excision of Left Large Intestine, Perc Endo Approach
0DBG7ZZ	Excision of Left Large Intestine, Via Opening
0DBG8ZZ	Excision of Left Large Intestine, Endo
0DBH3ZZ	Excision of Cecum, Percutaneous Approach
0DBH4ZZ	Excision of Cecum, Percutaneous Endoscopic Approach
0DBH7ZZ	Excision of Cecum, Via Natural or Artificial Opening
0DBH8ZZ	Excision of Cecum, Endo
0DBJ3ZZ	Excision of Appendix, Percutaneous Approach
0DBJ4ZZ	Excision of Appendix, Percutaneous Endoscopic Approach
0DBJ7ZZ	Excision of Appendix, Via Natural or Artificial Opening
0DBJ8ZZ	Excision of Appendix, Endo
0DBK3ZZ	Excision of Ascending Colon, Percutaneous Approach
0DBK4ZZ	Excision of Ascending Colon, Perc Endo Approach
0DBK7ZZ	Excision of Ascending Colon, Via Opening
0DBK8ZZ	Excision of Ascending Colon, Endo
0DBL3ZZ	Excision of Transverse Colon, Percutaneous Approach
0DBL4ZZ	Excision of Transverse Colon, Perc Endo Approach
0DBL7ZZ	Excision of Transverse Colon, Via Opening
0DBL8ZZ	Excision of Transverse Colon, Endo
0DBM3ZZ	Excision of Descending Colon, Percutaneous Approach
0DBM4ZZ	Excision of Descending Colon, Perc Endo Approach
0DBM7ZZ	Excision of Descending Colon, Via Opening
0DBM8ZZ	Excision of Descending Colon, Endo
0DBN3ZZ	Excision of Sigmoid Colon, Percutaneous Approach
0DBN4ZZ	Excision of Sigmoid Colon, Percutaneous Endoscopic Approach
0DBN7ZZ	Excision of Sigmoid Colon, Via Natural or Artificial Opening
0DBN8ZZ	Excision of Sigmoid Colon, Endo
0DBP3ZZ	Excision of Rectum, Percutaneous Approach
0DBP4ZZ	Excision of Rectum, Percutaneous Endoscopic Approach
0DBP7ZZ	Excision of Rectum, Via Natural or Artificial Opening
0DBP8ZZ	Excision of Rectum, Endo
0DBQ3ZZ	Excision of Anus, Percutaneous Approach
0DBQ4ZZ	Excision of Anus, Percutaneous Endoscopic Approach
0DBQ7ZZ	Excision of Anus, Via Natural or Artificial Opening
0DBQ8ZZ	Excision of Anus, Endo

**Metastasis diagnostic codes**

C77.0	Sec and unsp malig neoplasm of nodes of head, face and neck
C77.1	Secondary and unsp malignant neoplasm of intrathorac nodes
C77.2	Secondary and unsp malignant neoplasm of intra-abd nodes
C77.3	Sec and unsp malig neoplasm of axilla and upper limb nodes
C77.4	Sec and unsp malig neoplasm of inguinal and lower limb nodes
C77.5	Secondary and unsp malignant neoplasm of intrapelv nodes
C77.8	Sec and unsp malig neoplasm of nodes of multiple regions
C77.9	Secondary and unsp malignant neoplasm of lymph node, unsp
C78.00	Secondary malignant neoplasm of unspecified lung
C78.01	Secondary malignant neoplasm of right lung
C78.02	Secondary malignant neoplasm of left lung
C78.1	Secondary malignant neoplasm of mediastinum
C78.2	Secondary malignant neoplasm of pleura
C78.30	Secondary malignant neoplasm of unsp respiratory organ
C78.39	Secondary malignant neoplasm of other respiratory organs
C78.4	Secondary malignant neoplasm of small intestine
C78.5	Secondary malignant neoplasm of large intestine and rectum
C78.6	Secondary malignant neoplasm of retroperiton and peritoneum
C78.7	Secondary malig neoplasm of liver and intrahepatic bile duct
C78.80	Secondary malignant neoplasm of unspecified digestive organ
C78.89	Secondary malignant neoplasm of other digestive organs
C79.00	Secondary malignant neoplasm of unsp kidney and renal pelvis
C79.01	Secondary malignant neoplasm of r kidney and renal pelvis
C79.02	Secondary malignant neoplasm of left kidney and renal pelvis
C79.10	Secondary malignant neoplasm of unspecified urinary organs
C79.11	Secondary malignant neoplasm of bladder
C79.19	Secondary malignant neoplasm of other urinary organs
C79.2	Secondary malignant neoplasm of skin
C79.31	Secondary malignant neoplasm of brain
C79.32	Secondary malignant neoplasm of cerebral meninges

C79.40	Secondary malignant neoplasm of unsp part of nervous system
C79.49	Secondary malignant neoplasm of oth parts of nervous system
C79.51	Secondary malignant neoplasm of bone
C79.52	Secondary malignant neoplasm of bone marrow
C79.60	Secondary malignant neoplasm of unspecified ovary
C79.61	Secondary malignant neoplasm of right ovary
C79.62	Secondary malignant neoplasm of left ovary
C79.70	Secondary malignant neoplasm of unspecified adrenal gland
C79.71	Secondary malignant neoplasm of right adrenal gland
C79.72	Secondary malignant neoplasm of left adrenal gland
C79.81	Secondary malignant neoplasm of breast
C79.82	Secondary malignant neoplasm of genital organs
C79.89	Secondary malignant neoplasm of other specified sites
C79.9	Secondary malignant neoplasm of unspecified site
C80.0	Disseminated malignant neoplasm, unspecified
C80.1	Malignant (primary) neoplasm, unspecified
C80.2	Malignant neoplasm associated with transplanted organ
C7B.00	Secondary carcinoid tumors, unspecified site
C7B.01	Secondary carcinoid tumors of distant lymph nodes
C7B.02	Secondary carcinoid tumors of liver
C7B.03	Secondary carcinoid tumors of bone
C7B.04	Secondary carcinoid tumors of peritoneum
C7B.09	Secondary carcinoid tumors of other sites
C7B.1	Secondary Merkel cell carcinoma
C7B.8	Other secondary neuroendocrine tumors

**CARDIAC VALVE SURGERY**

Scheduled episodes (Circ. Admission = Scheduled) with open surgery. Episodes that also have a heart transplant or bypass procedure are excluded.

**Cardiac valve procedure codes (open surgery)**

02QF0ZJ	Repair Aortic Valve created from Trunc Vlv, Open Approach
02QF0ZZ	Repair Aortic Valve, Open Approach
02QGOZE	Repair Mitral Valve created from L AV Vlv, Open Approach
02QGOZZ	Repair Mitral Valve, Open Approach
02QH0ZZ	Repair Pulmonary Valve, Open Approach
02QJ0ZG	Repair Tricuspid Valve created from R AV Vlv, Open Approach
02QJ0ZZ	Repair Tricuspid Valve, Open Approach
02RF08Z	Replacement of Aortic Valve with Autol Sub, Open Approach
02RF08Z	Replacement of Aortic Valve with Zooplastic, Open Approach
02RF0JZ	Replacement of Aortic Valve with Synth Sub, Open Approach
02RF0KZ	Replacement of Aortic Valve with Nonaut Sub, Open Approach
02RG07Z	Replacement of Mitral Valve with Autol Sub, Open Approach
02RG08Z	Replacement of Mitral Valve with Zooplastic, Open Approach
02RG0JZ	Replacement of Mitral Valve with Synth Sub, Open Approach
02RG0KZ	Replacement of Mitral Valve with Nonaut Sub, Open Approach
02RH07Z	Replacement of Pulmonary Valve with Autol Sub, Open Approach
02RH08Z	Replacement of Pulm Valve with Zooplastic, Open Approach
02RH0JZ	Replacement of Pulmonary Valve with Synth Sub, Open Approach
02RH0KZ	Replacement of Pulm Valve with Nonaut Sub, Open Approach
02RJ07Z	Replacement of Tricuspid Valve with Autol Sub, Open Approach
02RJ08Z	Replacement of Tricuspid Valve with Zooplastic, Open Approach
02RJ0JZ	Replacement of Tricuspid Valve with Synth Sub, Open Approach
02RJ0KZ	Replacement of Tricuspid Valve with Nonaut Sub, Open Approach

**Heart transplant procedure codes**

02YA0Z0	Transplantation of Heart, Allogeneic, Open Approach
02YA0Z1	Transplantation of Heart, Syngeneic, Open Approach
02YA0Z2	Transplantation of Heart, Zooplastic, Open Approach

**Bypass procedure codes**

0210083	Bypass 1 Cor Art from Cor Art with Zooplastic, Open Approach
0210088	Bypass 1 Cor Art from R Int Mammary w Zooplastic, Open
0210089	Bypass 1 Cor Art from L Int Mammary w Zooplastic, Open
021008C	Bypass 1 Cor Art from Thor Art w Zooplastic, Open
021008F	Bypass 1 Cor Art from Abd Art with Zooplastic, Open Approach
021008W	Bypass 1 Cor Art from Aorta with Zooplastic, Open Approach
0210093	Bypass 1 Cor Art from Cor Art with Autol Vn, Open Approach
0210098	Bypass 1 Cor Art from R Int Mammary w Autol Vn, Open
0210099	Bypass 1 Cor Art from L Int Mammary w Autol Vn, Open
021009C	Bypass 1 Cor Art from Thor Art with Autol Vn, Open Approach
021009F	Bypass 1 Cor Art from Abd Art with Autol Vn, Open Approach
021009W	Bypass 1 Cor Art from Aorta with Autol Vn, Open Approach

02100A3	Bypass 1 Cor Art from Cor Art with Autol Art, Open Approach	02110A8	Bypass 2 Cor Art from R Int Mammary w Autol Art, Open
02100A8	Bypass 1 Cor Art from R Int Mammary w Autol Art, Open	02110A9	Bypass 2 Cor Art from L Int Mammary w Autol Art, Open
02100A9	Bypass 1 Cor Art from L Int Mammary w Autol Art, Open	02110AC	Bypass 2 Cor Art from Thor Art with Autol Art, Open Approach
02100AC	Bypass 1 Cor Art from Thor Art with Autol Art, Open Approach	02110AF	Bypass 2 Cor Art from Abd Art with Autol Art, Open Approach
02100AF	Bypass 1 Cor Art from Abd Art with Autol Art, Open Approach	02110AW	Bypass 2 Cor Art from Aorta with Autol Art, Open Approach
02100AW	Bypass 1 Cor Art from Aorta with Autol Art, Open Approach	02110J3	Bypass 2 Cor Art from Cor Art with Synth Sub, Open Approach
02100J3	Bypass 1 Cor Art from Cor Art with Synth Sub, Open Approach	02110J8	Bypass 2 Cor Art from R Int Mammary w Synth Sub, Open
02100J8	Bypass 1 Cor Art from R Int Mammary w Synth Sub, Open	02110J9	Bypass 2 Cor Art from L Int Mammary w Synth Sub, Open
02100J9	Bypass 1 Cor Art from L Int Mammary w Synth Sub, Open	02110JC	Bypass 2 Cor Art from Thor Art with Synth Sub, Open Approach
02100JC	Bypass 1 Cor Art from Thor Art with Synth Sub, Open Approach	02110JF	Bypass 2 Cor Art from Abd Art with Synth Sub, Open Approach
02100JF	Bypass 1 Cor Art from Aorta with Synth Sub, Open Approach	02110JW	Bypass 2 Cor Art from Aorta with Synth Sub, Open Approach
02100JW	Bypass 1 Cor Art from Aorta with Synth Sub, Open Approach	02110K3	Bypass 2 Cor Art from Cor Art with Nonaut Sub, Open Approach
02100K3	Bypass 1 Cor Art from Cor Art with Nonaut Sub, Open Approach	02110K8	Bypass 2 Cor Art from R Int Mammary w Nonaut Sub, Open
02100K8	Bypass 1 Cor Art from R Int Mammary w Nonaut Sub, Open	02110K9	Bypass 2 Cor Art from L Int Mammary w Nonaut Sub, Open
02100K9	Bypass 1 Cor Art from L Int Mammary w Nonaut Sub, Open	02110KC	Bypass 2 Cor Art from Thor Art w Nonaut Sub, Open
02100KC	Bypass 1 Cor Art from Thor Art w Nonaut Sub, Open	02110KF	Bypass 2 Cor Art from Abd Art with Nonaut Sub, Open Approach
02100KF	Bypass 1 Cor Art from Abd Art with Nonaut Sub, Open Approach	02110KW	Bypass 2 Cor Art from Aorta with Nonaut Sub, Open Approach
02100KW	Bypass 1 Cor Art from Aorta with Nonaut Sub, Open Approach	02110Z3	Bypass 2 Cor Art from Cor Art, Open Approach
02100Z3	Bypass 1 Cor Art from Cor Art, Open Approach	02110Z8	Bypass 2 Cor Art from R Int Mammary, Open Approach
02100Z8	Bypass 1 Cor Art from R Int Mammary, Open Approach	02110Z9	Bypass 2 Cor Art from L Int Mammary, Open Approach
02100Z9	Bypass 1 Cor Art from L Int Mammary, Open Approach	02110ZC	Bypass 2 Cor Art from Thor Art, Open Approach
02100ZC	Bypass 1 Cor Art from Thor Art, Open Approach	02110ZF	Bypass 2 Cor Art from Abd Art, Open Approach
02100ZF	Bypass 1 Cor Art from Abd Art, Open Approach	0211344	Bypass 2 Cor Art from Cor V w Drug-elut Intra, Perc
0210344	Bypass 1 Cor Art from Cor V w Drug-elut Intra, Perc	02113D4	Bypass 2 Cor Art from Cor V with Intralum Dev, Perc Approach
02103D4	Bypass 1 Cor Art from Cor V with Intralum Dev, Perc Approach	0211444	Bypass 2 Cor Art from Cor V w Drug-elut Intra, Perc Endo
0210444	Bypass 1 Cor Art from Cor V w Drug-elut Intra, Perc Endo	0211483	Bypass 2 Cor Art from Cor Art w Zooplastic, Perc Endo
0210483	Bypass 1 Cor Art from Cor Art w Zooplastic, Perc Endo	0211488	Bypass 2 Cor Art from R Int Mammary w Zooplastic, Perc Endo
0210488	Bypass 1 Cor Art from R Int Mammary w Zooplastic, Perc Endo	0211489	Bypass 2 Cor Art from L Int Mammary w Zooplastic, Perc Endo
0210489	Bypass 1 Cor Art from L Int Mammary w Zooplastic, Perc Endo	021148C	Bypass 2 Cor Art from Thor Art w Zooplastic, Perc Endo
021048C	Bypass 1 Cor Art from Thor Art w Zooplastic, Perc Endo	021148F	Bypass 2 Cor Art from Abd Art w Zooplastic, Perc Endo
021048F	Bypass 1 Cor Art from Abd Art w Zooplastic, Perc Endo	021148W	Bypass 2 Cor Art from Aorta w Zooplastic, Perc Endo
021048W	Bypass 1 Cor Art from Aorta w Zooplastic, Perc Endo	0211493	Bypass 2 Cor Art from Cor Art w Autol Vn, Perc Endo
0210493	Bypass 1 Cor Art from Cor Art w Autol Vn, Perc Endo	0211498	Bypass 2 Cor Art from R Int Mammary w Autol Vn, Perc Endo
0210498	Bypass 1 Cor Art from R Int Mammary w Autol Vn, Perc Endo	0211499	Bypass 2 Cor Art from L Int Mammary w Autol Vn, Perc Endo
0210499	Bypass 1 Cor Art from L Int Mammary w Autol Vn, Perc Endo	021149C	Bypass 2 Cor Art from Thor Art w Autol Vn, Perc Endo
021049C	Bypass 1 Cor Art from Thor Art w Autol Vn, Perc Endo	021149F	Bypass 2 Cor Art from Abd Art w Autol Vn, Perc Endo
021049F	Bypass 1 Cor Art from Abd Art w Autol Vn, Perc Endo	021149W	Bypass 2 Cor Art from Aorta w Autol Vn, Perc Endo
021049W	Bypass 1 Cor Art from Aorta w Autol Vn, Perc Endo	02114A3	Bypass 2 Cor Art from Cor Art w Autol Art, Perc Endo
02104A3	Bypass 1 Cor Art from Cor Art w Autol Art, Perc Endo	02114A8	Bypass 2 Cor Art from R Int Mammary w Autol Art, Perc Endo
02104A8	Bypass 1 Cor Art from R Int Mammary w Autol Art, Perc Endo	02114A9	Bypass 2 Cor Art from L Int Mammary w Autol Art, Perc Endo
02104A9	Bypass 1 Cor Art from L Int Mammary w Autol Art, Perc Endo	02114AC	Bypass 2 Cor Art from Thor Art w Autol Art, Perc Endo
02104AC	Bypass 1 Cor Art from Thor Art w Autol Art, Perc Endo	02114AF	Bypass 2 Cor Art from Abd Art w Autol Art, Perc Endo
02104AF	Bypass 1 Cor Art from Abd Art w Autol Art, Perc Endo	02114AW	Bypass 2 Cor Art from Aorta w Autol Art, Perc Endo
02104AW	Bypass 1 Cor Art from Aorta w Autol Art, Perc Endo	02114D4	Bypass 2 Cor Art from Cor V w Intralum Dev, Perc Endo
02104D4	Bypass 1 Cor Art from Cor V w Intralum Dev, Perc Endo	02114J3	Bypass 2 Cor Art from Cor Art w Synth Sub, Perc Endo
02104J3	Bypass 1 Cor Art from Cor Art w Synth Sub, Perc Endo	02114J8	Bypass 2 Cor Art from R Int Mammary w Synth Sub, Perc Endo
02104J8	Bypass 1 Cor Art from R Int Mammary w Synth Sub, Perc Endo	02114J9	Bypass 2 Cor Art from L Int Mammary w Synth Sub, Perc Endo
02104J9	Bypass 1 Cor Art from L Int Mammary w Synth Sub, Perc Endo	02114JC	Bypass 2 Cor Art from Thor Art w Synth Sub, Perc Endo
02104JC	Bypass 1 Cor Art from Thor Art w Synth Sub, Perc Endo	02114JF	Bypass 2 Cor Art from Abd Art w Synth Sub, Perc Endo
02104JF	Bypass 1 Cor Art from Abd Art w Synth Sub, Perc Endo	02114JW	Bypass 2 Cor Art from Aorta w Synth Sub, Perc Endo
02104JW	Bypass 1 Cor Art from Aorta w Synth Sub, Perc Endo	02114K3	Bypass 2 Cor Art from Cor Art w Nonaut Sub, Perc Endo
02104K3	Bypass 1 Cor Art from Cor Art w Nonaut Sub, Perc Endo	02114K8	Bypass 2 Cor Art from R Int Mammary w Nonaut Sub, Perc Endo
02104K8	Bypass 1 Cor Art from R Int Mammary w Nonaut Sub, Perc Endo	02114K9	Bypass 2 Cor Art from L Int Mammary w Nonaut Sub, Perc Endo
02104K9	Bypass 1 Cor Art from L Int Mammary w Nonaut Sub, Perc Endo	02114KC	Bypass 2 Cor Art from Thor Art w Nonaut Sub, Perc Endo
02104KC	Bypass 1 Cor Art from Thor Art w Nonaut Sub, Perc Endo	02114KF	Bypass 2 Cor Art from Abd Art w Nonaut Sub, Perc Endo
02104KF	Bypass 1 Cor Art from Abd Art w Nonaut Sub, Perc Endo	02114KW	Bypass 2 Cor Art from Aorta w Nonaut Sub, Perc Endo
02104KW	Bypass 1 Cor Art from Aorta w Nonaut Sub, Perc Endo	02114Z3	Bypass 2 Cor Art from Cor Art, Perc Endo Approach
02104Z3	Bypass 1 Cor Art from Cor Art, Perc Endo Approach	02114Z8	Bypass 2 Cor Art from R Int Mammary, Perc Endo Approach
02104Z8	Bypass 1 Cor Art from R Int Mammary, Perc Endo Approach	02114Z9	Bypass 2 Cor Art from L Int Mammary, Perc Endo Approach
02104Z9	Bypass 1 Cor Art from L Int Mammary, Perc Endo Approach	02114ZC	Bypass 2 Cor Art from Thor Art, Perc Endo Approach
02104ZC	Bypass 1 Cor Art from Thor Art, Perc Endo Approach	02114ZF	Bypass 2 Cor Art from Abd Art, Perc Endo Approach
02104ZF	Bypass 1 Cor Art from Abd Art, Perc Endo Approach	0212083	Bypass 3 Cor Art from Cor Art with Zooplastic, Open Approach
0211083	Bypass 2 Cor Art from Cor Art with Zooplastic, Open Approach	0212088	Bypass 3 Cor Art from R Int Mammary w Zooplastic, Open
0211088	Bypass 2 Cor Art from R Int Mammary w Zooplastic, Open	0212089	Bypass 3 Cor Art from L Int Mammary w Zooplastic, Open
0211089	Bypass 2 Cor Art from L Int Mammary w Zooplastic, Open	021208C	Bypass 3 Cor Art from Thor Art w Zooplastic, Open
021108C	Bypass 2 Cor Art from Thor Art w Zooplastic, Open	021208F	Bypass 3 Cor Art from Abd Art with Zooplastic, Open Approach
021108F	Bypass 2 Cor Art from Abd Art with Zooplastic, Open Approach	021208W	Bypass 3 Cor Art from Aorta with Zooplastic, Open Approach
021108W	Bypass 2 Cor Art from Aorta with Zooplastic, Open Approach	0212093	Bypass 3 Cor Art from Cor Art with Autol Vn, Open Approach
0211093	Bypass 2 Cor Art from Cor Art with Autol Vn, Open Approach	0212098	Bypass 3 Cor Art from R Int Mammary w Autol Vn, Open
0211098	Bypass 2 Cor Art from R Int Mammary w Autol Vn, Open	0212099	Bypass 3 Cor Art from L Int Mammary w Autol Vn, Open
0211099	Bypass 2 Cor Art from L Int Mammary w Autol Vn, Open	021209C	Bypass 3 Cor Art from Thor Art with Autol Vn, Open Approach
021109C	Bypass 2 Cor Art from Thor Art with Autol Vn, Open Approach	021209F	Bypass 3 Cor Art from Abd Art with Autol Vn, Open Approach
021109F	Bypass 2 Cor Art from Abd Art with Autol Vn, Open Approach	021209W	Bypass 3 Cor Art from Aorta with Autol Vn, Open Approach
021109W	Bypass 2 Cor Art from Aorta with Autol Vn, Open Approach	02120A3	Bypass 3 Cor Art from Cor Art with Autol Art, Open Approach
02110A3	Bypass 2 Cor Art from Cor Art with Autol Art, Open Approach	02120A8	Bypass 3 Cor Art from R Int Mammary w Autol Art, Open



02120A9	Bypass 3 Cor Art from L Int Mammary w Autol Art, Open	02130AC	Bypass 4+ Cor Art from Thor Art w Autol Art, Open
02120AC	Bypass 3 Cor Art from Thor Art with Autol Art, Open Approach	02130AF	Bypass 4+ Cor Art from Abd Art with Autol Art, Open Approach
02120AF	Bypass 3 Cor Art from Abd Art with Autol Art, Open Approach	02130AW	Bypass 4+ Cor Art from Aorta with Autol Art, Open Approach
02120AW	Bypass 3 Cor Art from Aorta with Autol Art, Open Approach	02130J3	Bypass 4+ Cor Art from Cor Art with Synth Sub, Open Approach
02120J3	Bypass 3 Cor Art from Cor Art with Synth Sub, Open Approach	02130J8	Bypass 4+ Cor Art from R Int Mammary w Synth Sub, Open
02120J8	Bypass 3 Cor Art from R Int Mammary w Synth Sub, Open	02130J9	Bypass 4+ Cor Art from L Int Mammary w Synth Sub, Open
02120J9	Bypass 3 Cor Art from L Int Mammary w Synth Sub, Open	02130JC	Bypass 4+ Cor Art from Thor Art w Synth Sub, Open
02120JC	Bypass 3 Cor Art from Thor Art with Synth Sub, Open Approach	02130JF	Bypass 4+ Cor Art from Abd Art with Synth Sub, Open Approach
02120JF	Bypass 3 Cor Art from Abd Art with Synth Sub, Open Approach	02130JW	Bypass 4+ Cor Art from Aorta with Synth Sub, Open Approach
02120JW	Bypass 3 Cor Art from Aorta with Synth Sub, Open Approach	02130K3	Bypass 4+ Cor Art from Cor Art w Nonaut Sub, Open
02120K3	Bypass 3 Cor Art from Cor Art with Nonaut Sub, Open Approach	02130K8	Bypass 4+ Cor Art from R Int Mammary w Nonaut Sub, Open
02120K8	Bypass 3 Cor Art from R Int Mammary w Nonaut Sub, Open	02130K9	Bypass 4+ Cor Art from L Int Mammary w Nonaut Sub, Open
02120K9	Bypass 3 Cor Art from L Int Mammary w Nonaut Sub, Open	02130KC	Bypass 4+ Cor Art from Thor Art w Nonaut Sub, Open
02120KC	Bypass 3 Cor Art from Thor Art w Nonaut Sub, Open	02130KF	Bypass 4+ Cor Art from Abd Art w Nonaut Sub, Open
02120KF	Bypass 3 Cor Art from Abd Art with Nonaut Sub, Open Approach	02130KW	Bypass 4+ Cor Art from Aorta with Nonaut Sub, Open Approach
02120KW	Bypass 3 Cor Art from Aorta with Nonaut Sub, Open Approach	02130Z3	Bypass 4+ Cor Art from Cor Art, Open Approach
02120Z3	Bypass 3 Cor Art from Cor Art, Open Approach	02130Z8	Bypass 4+ Cor Art from R Int Mammary, Open Approach
02120Z8	Bypass 3 Cor Art from R Int Mammary, Open Approach	02130Z9	Bypass 4+ Cor Art from L Int Mammary, Open Approach
02120Z9	Bypass 3 Cor Art from L Int Mammary, Open Approach	02130ZC	Bypass 4+ Cor Art from Thor Art, Open Approach
02120ZC	Bypass 3 Cor Art from Thor Art, Open Approach	02130ZF	Bypass 4+ Cor Art from Abd Art, Open Approach
02120ZF	Bypass 3 Cor Art from Abd Art, Open Approach	0213344	Bypass 4+ Cor Art from Cor V w Drug-elut Intra, Perc
0212344	Bypass 3 Cor Art from Cor V w Drug-elut Intra, Perc	02133D4	Bypass 4+ Cor Art from Cor V w Intralum Dev, Perc
02123D4	Bypass 3 Cor Art from Cor V with Intralum Dev, Perc Approach	0213444	Bypass 4+ Cor Art from Cor V w Drug-elut Intra, Perc Endo
0212444	Bypass 3 Cor Art from Cor V w Drug-elut Intra, Perc Endo	0213483	Bypass 4+ Cor Art from Cor Art w Zooplastic, Perc Endo
0212483	Bypass 3 Cor Art from Cor Art w Zooplastic, Perc Endo	0213488	Bypass 4+ Cor Art from R Int Mammary w Zooplastic, Perc Endo
0212488	Bypass 3 Cor Art from R Int Mammary w Zooplastic, Perc Endo	0213489	Bypass 4+ Cor Art from L Int Mammary w Zooplastic, Perc Endo
0212489	Bypass 3 Cor Art from L Int Mammary w Zooplastic, Perc Endo	021348C	Bypass 4+ Cor Art from Thor Art w Zooplastic, Perc Endo
021248C	Bypass 3 Cor Art from Thor Art w Zooplastic, Perc Endo	021348F	Bypass 4+ Cor Art from Abd Art w Zooplastic, Perc Endo
021248F	Bypass 3 Cor Art from Abd Art w Zooplastic, Perc Endo	021348W	Bypass 4+ Cor Art from Aorta w Zooplastic, Perc Endo
021248W	Bypass 3 Cor Art from Aorta w Zooplastic, Perc Endo	0213493	Bypass 4+ Cor Art from Cor Art w Autol Vn, Perc Endo
0212493	Bypass 3 Cor Art from Cor Art w Autol Vn, Perc Endo	0213498	Bypass 4+ Cor Art from R Int Mammary w Autol Vn, Perc Endo
0212498	Bypass 3 Cor Art from R Int Mammary w Autol Vn, Perc Endo	0213499	Bypass 4+ Cor Art from L Int Mammary w Autol Vn, Perc Endo
0212499	Bypass 3 Cor Art from L Int Mammary w Autol Vn, Perc Endo	021349C	Bypass 4+ Cor Art from Thor Art w Autol Vn, Perc Endo
021249C	Bypass 3 Cor Art from Thor Art w Autol Vn, Perc Endo	021349F	Bypass 4+ Cor Art from Abd Art w Autol Vn, Perc Endo
021249F	Bypass 3 Cor Art from Abd Art w Autol Vn, Perc Endo	021349W	Bypass 4+ Cor Art from Aorta w Autol Vn, Perc Endo
021249W	Bypass 3 Cor Art from Aorta w Autol Vn, Perc Endo	02134A3	Bypass 4+ Cor Art from Cor Art w Autol Art, Perc Endo
02124A3	Bypass 3 Cor Art from Cor Art w Autol Art, Perc Endo	02134A8	Bypass 4+ Cor Art from R Int Mammary w Autol Art, Perc Endo
02124A8	Bypass 3 Cor Art from R Int Mammary w Autol Art, Perc Endo	02134A9	Bypass 4+ Cor Art from L Int Mammary w Autol Art, Perc Endo
02124A9	Bypass 3 Cor Art from L Int Mammary w Autol Art, Perc Endo	02134AC	Bypass 4+ Cor Art from Thor Art w Autol Art, Perc Endo
02124AC	Bypass 3 Cor Art from Thor Art w Autol Art, Perc Endo	02134AF	Bypass 4+ Cor Art from Abd Art w Autol Art, Perc Endo
02124AF	Bypass 3 Cor Art from Abd Art w Autol Art, Perc Endo	02134AW	Bypass 4+ Cor Art from Aorta w Autol Art, Perc Endo
02124AW	Bypass 3 Cor Art from Aorta w Autol Art, Perc Endo	02134D4	Bypass 4+ Cor Art from Cor V w Intralum Dev, Perc Endo
02124D4	Bypass 3 Cor Art from Cor V w Intralum Dev, Perc Endo	02134J3	Bypass 4+ Cor Art from Cor Art w Synth Sub, Perc Endo
02124J3	Bypass 3 Cor Art from Cor Art w Synth Sub, Perc Endo	02134J8	Bypass 4+ Cor Art from R Int Mammary w Synth Sub, Perc Endo
02124J8	Bypass 3 Cor Art from R Int Mammary w Synth Sub, Perc Endo	02134J9	Bypass 4+ Cor Art from L Int Mammary w Synth Sub, Perc Endo
02124J9	Bypass 3 Cor Art from L Int Mammary w Synth Sub, Perc Endo	02134JC	Bypass 4+ Cor Art from Thor Art w Synth Sub, Perc Endo
02124JC	Bypass 3 Cor Art from Thor Art w Synth Sub, Perc Endo	02134JF	Bypass 4+ Cor Art from Abd Art w Synth Sub, Perc Endo
02124JF	Bypass 3 Cor Art from Abd Art w Synth Sub, Perc Endo	02134JW	Bypass 4+ Cor Art from Aorta w Synth Sub, Perc Endo
02124JW	Bypass 3 Cor Art from Aorta w Synth Sub, Perc Endo	02134K3	Bypass 4+ Cor Art from Cor Art w Nonaut Sub, Perc Endo
02124K3	Bypass 3 Cor Art from Cor Art w Nonaut Sub, Perc Endo	02134K8	Bypass 4+ Cor Art from R Int Mammary w Nonaut Sub, Perc Endo
02124K8	Bypass 3 Cor Art from R Int Mammary w Nonaut Sub, Perc Endo	02134K9	Bypass 4+ Cor Art from L Int Mammary w Nonaut Sub, Perc Endo
02124K9	Bypass 3 Cor Art from L Int Mammary w Nonaut Sub, Perc Endo	02134KC	Bypass 4+ Cor Art from Thor Art w Nonaut Sub, Perc Endo
02124KC	Bypass 3 Cor Art from Thor Art w Nonaut Sub, Perc Endo	02134KF	Bypass 4+ Cor Art from Abd Art w Nonaut Sub, Perc Endo
02124KF	Bypass 3 Cor Art from Abd Art w Nonaut Sub, Perc Endo	02134KW	Bypass 4+ Cor Art from Aorta w Nonaut Sub, Perc Endo
02124KW	Bypass 3 Cor Art from Aorta w Nonaut Sub, Perc Endo	02134Z3	Bypass 4+ Cor Art from Cor Art, Perc Endo Approach
02124Z3	Bypass 3 Cor Art from Cor Art, Perc Endo Approach	02134Z8	Bypass 4+ Cor Art from R Int Mammary, Perc Endo Approach
02124Z8	Bypass 3 Cor Art from R Int Mammary, Perc Endo Approach	02134Z9	Bypass 4+ Cor Art from L Int Mammary, Perc Endo Approach
02124Z9	Bypass 3 Cor Art from L Int Mammary, Perc Endo Approach	02134ZC	Bypass 4+ Cor Art from Thor Art, Perc Endo Approach
02124ZC	Bypass 3 Cor Art from Thor Art, Perc Endo Approach	02134ZF	Bypass 4+ Cor Art from Abd Art, Perc Endo Approach
02124ZF	Bypass 3 Cor Art from Abd Art, Perc Endo Approach		
0213083	Bypass 4+ Cor Art from Cor Art w Zooplastic, Open		
0213088	Bypass 4+ Cor Art from R Int Mammary w Zooplastic, Open		
0213089	Bypass 4+ Cor Art from L Int Mammary w Zooplastic, Open		
021308C	Bypass 4+ Cor Art from Thor Art w Zooplastic, Open		
021308F	Bypass 4+ Cor Art from Abd Art w Zooplastic, Open		
021308W	Bypass 4+ Cor Art from Aorta with Zooplastic, Open Approach		
0213093	Bypass 4+ Cor Art from Cor Art with Autol Vn, Open Approach		
0213098	Bypass 4+ Cor Art from R Int Mammary w Autol Vn, Open		
0213099	Bypass 4+ Cor Art from L Int Mammary w Autol Vn, Open		
021309C	Bypass 4+ Cor Art from Thor Art with Autol Vn, Open Approach		
021309F	Bypass 4+ Cor Art from Abd Art with Autol Vn, Open Approach		
021309W	Bypass 4+ Cor Art from Aorta with Autol Vn, Open Approach		
02130A3	Bypass 4+ Cor Art from Cor Art with Autol Art, Open Approach		
02130A8	Bypass 4+ Cor Art from R Int Mammary w Autol Art, Open		
02130A9	Bypass 4+ Cor Art from L Int Mammary w Autol Art, Open		

**HIP FRACTURE (HIF)**

Urgent episodes (Circ. Admission = Urgent) with main diagnosis of hip fracture that have been operated.

**Femur fracture diagnosis codes**

S72.001A	Fracture of unsp part of neck of right femur, init
S72.001B	Fx unsp part of neck of r femur, init for opn fx type 1/2
S72.001C	Fx unsp part of neck of r femur, init for opn fx type 3A/B/C
S72.002A	Fracture of unsp part of neck of left femur, init
S72.002B	Fx unsp part of neck of left femur, init for opn fx type 1/2
S72.002C	Fx unsp part of neck of l femur, init for opn fx type 3A/B/C
S72.009A	Fracture of unsp part of neck of unsp femur, init
S72.009B	Fx unsp part of neck of unsp femur, init for opn fx type 1/2

S72.009C	Fx unsp part of nk of unsp femr, init for opn fx type 3A/B/C	S72.061C	Displ artic fx head of r femur, init for opn fx type 3A/B/C
S72.011A	Unsp intracapsular fracture of right femur, init for clos fx	S72.062A	Displaced articular fracture of head of left femur, init
S72.011B	Unsp intracap fx right femur, init for opn fx type I/2	S72.062B	Displaced artic fx head of l femur, init for opn fx type I/2
S72.011C	Unsp intracap fx right femur, init for opn fx type 3A/B/C	S72.062C	Displ artic fx head of l femur, init for opn fx type 3A/B/C
S72.012A	Unsp intracapsular fracture of left femur, init for clos fx	S72.063A	Displaced articular fracture of head of unsp femur, init
S72.012B	Unsp intracap fx left femur, init for opn fx type I/2	S72.063B	Displ artic fx head of unsp femur, init for opn fx type I/2
S72.012C	Unsp intracap fx left femur, init for opn fx type 3A/B/C	S72.063C	Displ artic fx head of unsp femr, 7thC
S72.019A	Unsp intracapsular fracture of unsp femur, init for clos fx	S72.064A	Nondisplaced articular fracture of head of right femur, init
S72.019B	Unsp intracap fx unsp femur, init for opn fx type I/2	S72.064B	Nondisp artic fx head of r femur, init for opn fx type I/2
S72.019C	Unsp intracap fx unsp femur, init for opn fx type 3A/B/C	S72.064C	Nondisp artic fx head of r femr, init for opn fx type 3A/B/C
S72.021A	Disp fx of epiphysis (separation) (upper) of r femur, init	S72.065A	Nondisplaced articular fracture of head of left femur, init
S72.021B	Disp fx of epiphy (separation) (upper) of r femr, 7thB	S72.065B	Nondisp artic fx head of l femur, init for opn fx type I/2
S72.021C	Disp fx of epiphy (separation) (upper) of r femr, 7thC	S72.065C	Nondisp artic fx head of l femr, init for opn fx type 3A/B/C
S72.022A	Disp fx of epiphysis (separation) (upper) of l femur, init	S72.066A	Nondisplaced articular fracture of head of unsp femur, init
S72.022B	Disp fx of epiphy (separation) (upper) of l femr, 7thB	S72.066B	Nondisp artic fx head of unsp femr, init for opn fx type I/2
S72.022C	Disp fx of epiphy (separation) (upper) of l femr, 7thC	S72.066C	Nondisp artic fx head of unsp femr, 7thC
S72.023A	Disp fx of epiphy (separation) (upper) of unsp femur, init	S72.091A	Oth fracture of head and neck of right femur, init
S72.023B	Disp fx of epiphy (separation) (upper) of unsp femr, 7thB	S72.091B	Oth fx head/neck of right femur, init for opn fx type I/2
S72.023C	Disp fx of epiphy (separation) (upper) of unsp femr, 7thC	S72.091C	Oth fx head/neck of right femur, init for opn fx type 3A/B/C
S72.024A	Nondisp fx of epiphy (separation) (upper) of r femur, init	S72.092A	Oth fracture of head and neck of left femur, init
S72.024B	Nondisp fx of epiphy (separation) (upper) of r femr, 7thB	S72.092B	Oth fx head/neck of left femur, init for opn fx type I/2
S72.024C	Nondisp fx of epiphy (separation) (upper) of r femr, 7thC	S72.092C	Oth fx head/neck of left femur, init for opn fx type 3A/B/C
S72.025A	Nondisp fx of epiphy (separation) (upper) of l femur, init	S72.099A	Oth fracture of head and neck of unsp femur, init
S72.025B	Nondisp fx of epiphy (separation) (upper) of l femr, 7thB	S72.099B	Oth fx head/neck of unsp femur, init for opn fx type I/2
S72.025C	Nondisp fx of epiphy (separation) (upper) of l femr, 7thC	S72.099C	Oth fx head/neck of unsp femur, init for opn fx type 3A/B/C
S72.026A	Nondisp fx of epiphy (separation) (upper) of unsp femr, init	S72.101A	Unsp trochanteric fracture of right femur, init for clos fx
S72.026B	Nondisp fx of epiphy (separation) (upper) of unsp femr, 7thB	S72.101B	Unsp trochan fx right femur, init for opn fx type I/2
S72.026C	Nondisp fx of epiphy (separation) (upper) of unsp femr, 7thC	S72.101C	Unsp trochan fx right femur, init for opn fx type 3A/B/C
S72.031A	Displaced midcervical fracture of right femur, init	S72.102A	Unsp trochanteric fracture of left femur, init for clos fx
S72.031B	Displaced midcervical fx r femur, init for opn fx type I/2	S72.102B	Unsp trochan fx left femur, init for opn fx type I/2
S72.031C	Displ midcervical fx r femur, init for opn fx type 3A/B/C	S72.102C	Unsp trochan fx left femur, init for opn fx type 3A/B/C
S72.032A	Displaced midcervical fracture of left femur, init	S72.109A	Unsp trochanteric fracture of unsp femur, init for clos fx
S72.032B	Displaced midcervical fx l femur, init for opn fx type I/2	S72.109B	Unsp trochan fx unsp femur, init for opn fx type I/2
S72.032C	Displ midcervical fx l femur, init for opn fx type 3A/B/C	S72.109C	Unsp trochan fx unsp femur, init for opn fx type 3A/B/C
S72.033A	Displaced midcervical fracture of unsp femur, init	S72.111A	Disp fx of greater trochanter of right femur, init
S72.033B	Displ midcervical fx unsp femur, init for opn fx type I/2	S72.111B	Disp fx of greater trochanter of r femr, 7thB
S72.033C	Displ midcervical fx unsp femur, init for opn fx type 3A/B/C	S72.111C	Disp fx of greater trochanter of r femr, 7thC
S72.034A	Nondisplaced midcervical fracture of right femur, init	S72.112A	Disp fx of greater trochanter of left femur, init
S72.034B	Nondisp midcervical fx right femur, init for opn fx type I/2	S72.112B	Disp fx of greater trochanter of l femr, 7thB
S72.034C	Nondisp midcervical fx r femur, init for opn fx type 3A/B/C	S72.112C	Disp fx of greater trochanter of l femr, 7thC
S72.035A	Nondisplaced midcervical fracture of left femur, init	S72.113A	Disp fx of greater trochanter of unsp femur, init
S72.035B	Nondisp midcervical fx left femur, init for opn fx type I/2	S72.113B	Disp fx of greater trochanter of unsp femr, 7thB
S72.035C	Nondisp midcervical fx l femur, init for opn fx type 3A/B/C	S72.113C	Disp fx of greater trochanter of unsp femr, 7thC
S72.036A	Nondisplaced midcervical fracture of unsp femur, init	S72.114A	Nondisp fx of greater trochanter of right femur, init
S72.036B	Nondisp midcervical fx unsp femur, init for opn fx type I/2	S72.114B	Nondisp fx of greater trochanter of r femr, 7thB
S72.036C	Nondisp midcervical fx unsp femr, 7thC	S72.114C	Nondisp fx of greater trochanter of r femr, 7thC
S72.041A	Disp fx of base of neck of right femur, init for clos fx	S72.115A	Nondisp fx of greater trochanter of left femur, init
S72.041B	Disp fx of base of neck of r femur, init for opn fx type I/2	S72.115B	Nondisp fx of greater trochanter of l femr, 7thB
S72.041C	Disp fx of base of nk of r femr, init for opn fx type 3A/B/C	S72.115C	Nondisp fx of greater trochanter of l femr, 7thC
S72.042A	Disp fx of base of neck of left femur, init for clos fx	S72.116A	Nondisp fx of greater trochanter of unsp femur, init
S72.042B	Disp fx of base of neck of l femur, init for opn fx type I/2	S72.116B	Nondisp fx of greater trochanter of unsp femr, 7thB
S72.042C	Disp fx of base of nk of l femr, init for opn fx type 3A/B/C	S72.116C	Nondisp fx of greater trochanter of unsp femr, 7thC
S72.043A	Disp fx of base of neck of unsp femur, init for clos fx	S72.121A	Disp fx of lesser trochanter of right femur, init
S72.043B	Disp fx of base of nk of unsp femr, init for opn fx type I/2	S72.121B	Disp fx of less trochanter of r femr, 7thB
S72.043C	Disp fx of base of nk of unsp femr, 7thC	S72.121C	Disp fx of less trochanter of r femr, 7thC
S72.044A	Nondisp fx of base of neck of right femur, init for clos fx	S72.122A	Disp fx of lesser trochanter of left femur, init for clos fx
S72.044B	Nondisp fx of base of nk of r femr, init for opn fx type I/2	S72.122B	Disp fx of less trochanter of l femr, 7thB
S72.044C	Nondisp fx of base of nk of r femr, 7thC	S72.122C	Disp fx of less trochanter of l femr, 7thC
S72.045A	Nondisp fx of base of neck of left femur, init for clos fx	S72.123A	Disp fx of lesser trochanter of unsp femur, init for clos fx
S72.045B	Nondisp fx of base of nk of l femr, init for opn fx type I/2	S72.123B	Disp fx of less trochanter of unsp femr, 7thB
S72.045C	Nondisp fx of base of nk of l femr, 7thC	S72.123C	Disp fx of less trochanter of unsp femr, 7thC
S72.046A	Nondisp fx of base of neck of unsp femur, init for clos fx	S72.124A	Nondisp fx of lesser trochanter of right femur, init
S72.046B	Nondisp fx of base of nk of unsp femr, 7thB	S72.124B	Nondisp fx of less trochanter of r femr, 7thB
S72.046C	Nondisp fx of base of nk of unsp femr, 7thC	S72.124C	Nondisp fx of less trochanter of r femr, 7thC
S72.051A	Unsp fracture of head of right femur, init for clos fx	S72.125A	Nondisp fx of lesser trochanter of left femur, init
S72.051B	Unsp fx head of right femur, init for opn fx type I/2	S72.125B	Nondisp fx of less trochanter of l femr, 7thB
S72.051C	Unsp fx head of right femur, init for opn fx type 3A/B/C	S72.125C	Nondisp fx of less trochanter of l femr, 7thC
S72.052A	Unsp fracture of head of left femur, init for clos fx	S72.126A	Nondisp fx of lesser trochanter of unsp femur, init
S72.052B	Unsp fx head of left femur, init for opn fx type I/2	S72.126B	Nondisp fx of less trochanter of unsp femr, 7thB
S72.052C	Unsp fx head of left femur, init for opn fx type 3A/B/C	S72.126C	Nondisp fx of less trochanter of unsp femr, 7thC
S72.059A	Unsp fracture of head of unsp femur, init for clos fx	S72.131A	Displaced apophyseal fracture of right femur, init
S72.059B	Unsp fx head of unsp femur, init for opn fx type I/2	S72.131B	Displaced apophyseal fx r femur, init for opn fx type I/2
S72.059C	Unsp fx head of unsp femur, init for opn fx type 3A/B/C	S72.131C	Displaced apophyseal fx r femur, init for opn fx type 3A/B/C
S72.061A	Displaced articular fracture of head of right femur, init	S72.132A	Displaced apophyseal fracture of left femur, init
S72.061B	Displaced artic fx head of r femur, init for opn fx type I/2	S72.132B	Displaced apophyseal fx left femur, init for opn fx type I/2

S72.132C Displaced apophyseal fx l femur, init for opn fx type 3A/B/C  
 S72.133A Displaced apophyseal fracture of unsp femur, init  
 S72.133B Displaced apophyseal fx unsp femur, init for opn fx type I/2  
 S72.133C Displ apophyseal fx unsp femur, init for opn fx type 3A/B/C  
 S72.134A Nondisplaced apophyseal fracture of right femur, init  
 S72.134B Nondisp apophyseal fx right femur, init for opn fx type I/2  
 S72.134C Nondisp apophyseal fx r femur, init for opn fx type 3A/B/C  
 S72.135A Nondisplaced apophyseal fracture of left femur, init  
 S72.135B Nondisp apophyseal fx left femur, init for opn fx type I/2  
 S72.135C Nondisp apophyseal fx l femur, init for opn fx type 3A/B/C  
 S72.136A Nondisplaced apophyseal fracture of unsp femur, init  
 S72.136B Nondisp apophyseal fx unsp femur, init for opn fx type I/2  
 S72.136C Nondisp apophyseal fx unsp femr, init for opn fx type 3A/B/C  
 S72.141A Displaced intertrochanteric fracture of right femur, init  
 S72.141B Displaced intertroch fx r femur, init for opn fx type I/2  
 S72.141C Displaced intertroch fx l femur, init for opn fx type 3A/B/C  
 S72.142A Displaced intertrochanteric fracture of left femur, init  
 S72.142B Displaced intertroch fx left femur, init for opn fx type I/2  
 S72.142C Displaced intertroch fx l femur, init for opn fx type 3A/B/C  
 S72.143A Displaced intertrochanteric fracture of unsp femur, init  
 S72.143B Displaced intertroch fx unsp femur, init for opn fx type I/2  
 S72.143C Displ intertroch fx unsp femur, init for opn fx type 3A/B/C  
 S72.144A Nondisplaced intertrochanteric fracture of right femur, init  
 S72.144B Nondisp intertroch fx right femur, init for opn fx type I/2  
 S72.144C Nondisp intertroch fx r femur, init for opn fx type 3A/B/C  
 S72.145A Nondisplaced intertrochanteric fracture of left femur, init  
 S72.145B Nondisp intertroch fx left femur, init for opn fx type I/2  
 S72.145C Nondisp intertroch fx l femur, init for opn fx type 3A/B/C  
 S72.146A Nondisplaced intertrochanteric fracture of unsp femur, init  
 S72.146B Nondisp intertroch fx unsp femur, init for opn fx type I/2  
 S72.146C Nondisp intertroch fx unsp femr, init for opn fx type 3A/B/C  
 S72.21XA Displaced subtrochanteric fracture of right femur, init  
 S72.21XB Displaced subtrochnt fx r femur, init for opn fx type I/2  
 S72.21XC Displaced subtrochnt fx r femur, init for opn fx type 3A/B/C  
 S72.22XA Displaced subtrochanteric fracture of left femur, init  
 S72.22XB Displaced subtrochnt fx left femur, init for opn fx type I/2  
 S72.22XC Displaced subtrochnt fx l femur, init for opn fx type 3A/B/C  
 S72.23XA Displaced subtrochanteric fracture of unsp femur, init  
 S72.23XB Displaced subtrochnt fx unsp femur, init for opn fx type I/2  
 S72.23XC Displ subtrochnt fx unsp femur, init for opn fx type 3A/B/C  
 S72.24XA Nondisplaced subtrochanteric fracture of right femur, init  
 S72.24XB Nondisp subtrochnt fx right femur, init for opn fx type I/2  
 S72.24XC Nondisp subtrochnt fx r femur, init for opn fx type 3A/B/C  
 S72.25XA Nondisplaced subtrochanteric fracture of left femur, init  
 S72.25XB Nondisp subtrochnt fx left femur, init for opn fx type I/2  
 S72.25XC Nondisp subtrochnt fx l femur, init for opn fx type 3A/B/C  
 S72.26XA Nondisplaced subtrochanteric fracture of unsp femur, init  
 S72.26XB Nondisp subtrochnt fx unsp femur, init for opn fx type I/2  
 S72.26XC Nondisp subtrochnt fx unsp femr, init for opn fx type 3A/B/C

**GASTROINTESTINAL BLEEDING (GIB)**

Episodes with some diagnosis of gastrointestinal bleeding

**Gastrointestinal bleeding diagnostic codes**

I85.01 Esophageal varices with bleeding  
 I85.11 Secondary esophageal varices with bleeding  
 K22.11 Ulcer of esophagus with bleeding  
 K25.0 Acute gastric ulcer with hemorrhage  
 K25.2 Acute gastric ulcer with both hemorrhage and perforation  
 K25.4 Chronic or unspecified gastric ulcer with hemorrhage  
 K25.6 Chronic or unsp gastric ulcer w both hemorrhage and perf  
 K26.0 Acute duodenal ulcer with hemorrhage  
 K26.2 Acute duodenal ulcer with both hemorrhage and perforation  
 K26.4 Chronic or unspecified duodenal ulcer with hemorrhage  
 K26.6 Chronic or unsp duodenal ulcer w both hemorrhage and perf  
 K27.0 Acute peptic ulcer, site unspecified, with hemorrhage  
 K27.2 Acute peptic ulcer, site unsp, w both hemorrhage and perf  
 K27.4 Chronic or unsp peptic ulcer, site unsp, with hemorrhage  
 K27.6 Chr or unsp peptic ulcer, site unsp, w both hemor and perf  
 K28.0 Acute gastrojejunal ulcer with hemorrhage  
 K28.2 Acute gastrojejunal ulcer w both hemorrhage and perforation  
 K28.4 Chronic or unspecified gastrojejunal ulcer with hemorrhage  
 K28.6 Chronic or unsp gastrojejunal ulcer w both hemor and perf  
 K29.01 Acute gastritis with bleeding  
 K29.21 Alcoholic gastritis with bleeding  
 K29.31 Chronic superficial gastritis with bleeding  
 K29.41 Chronic atrophic gastritis with bleeding  
 K29.51 Unspecified chronic gastritis with bleeding  
 K29.61 Other gastritis with bleeding  
 K29.71 Gastritis, unspecified, with bleeding  
 K29.81 Duodenitis with bleeding  
 K29.91 Gastroduodenitis, unspecified, with bleeding  
 K92.0 Hematemesis  
 K92.1 Melena  
 K92.2 Gastrointestinal hemorrhage, unspecified

Example of the hospital scorecard - Process section MAP<sub>BM</sub>

	Pillar I. Optimise red cell mass					Pillar II. Minimize blood loss and bleeding				Pillar III. Harness and optimise physiological reserve of anaemia										
	% of patients with an Hb determination 21-90 days before surgery	% of patients with a Ferritin determination 21-90 days before surgery	% of patients treated preoperatively 7-90 days before surgery	% of patients treated with IV iron during hospital stay	% of patients with preoperative transfusion	% of patients under spinal anaesthesia	% of patients treated with antifibrinolytics perioperatively	Hb level prior to transfusion	% of patients transfused with Hb > 8 g/dl	% of single-unit transfused patients										
<b>Clinical Procedure</b>																				
	Hosp.	Norm	Hosp.	Norm	Hosp.	Norm	Hosp.	Norm	Hosp.	Norm	Hosp.	Norm	Hosp.	Norm	Hosp.	Norm	Hosp.	Norm		
Total hip replacement (N=240)	48%	51%	12%	42%	13%	16%	6%	13%	1%	1%	65%	75%	100%	52%	8,5	8,4	63%	61%	42%	33%
	▼	-6%	▼	-72%	▼	-15%	▼	-57%	►	-1%	▼	-13%	►	94%	►	2%	►	2%	►	29%
Total knee replacement (N=418)	44%	48%	21%	39%	14%	17%	4%	12%	1%	0%	37%	79%	99%	54%	8,8	8,5	76%	63%	58%	34%
	▼	-8%	▼	-47%	▼	-21%	▼	-68%	►	114%	▼	5%	►	83%	►	4%	►	21%	►	69%
Colorectal cancer resection open (N=29)	83%	61%	17%	39%	0%	23%	10%	13%	5%	4%					8,3	8,6	36%	64%	64%	50%
	►	37%	▼	-57%	▼	-100%	▼	-20%	►	7%					►	-3%	▼	-43%	►	29%
Colorectal cancer resection laparoscopic (N=78)	74%	59%	17%	46%	0%	21%	1%	12%	1%	3%					8,2	8,5	67%	67%	50%	47%
	►	25%	▼	-62%	▼	-100%	▼	-8%	►	61%					►	-4%	►	-1%	►	6%
Cardiac valve replacement (N=215)	53%	44%	20%	41%	0%	5%	11%	6%	2%	10%			85%	82%	8,7	9,2	58%	72%	67%	53%
	►	23%	▼	-52%	▼	-10%	►	79%	►	122%			►	4%	▼	-6%	▼	-19%	►	27%
Hip Fracture (N=360)							1%	25%			70%	73%	5%	12%	8,0	8,2	59%	60%	30%	43%
							▼	-92%			►	-4%	▼	-55%	►	-2%	►	-2%	▼	-32%
Gastrointestinal bleeding (N=437)							5%	32%							7,7	7,4	34%	35%	46%	40%
							▼	-86%							►	5%	►	-1%	►	16%

Example of the hospital scorecard - Outcomes section MAP<sub>BM</sub>

	Intermediate Outcomes						Hard Outcomes									
	Transfusion Rate		Transfusion Index		Total Transfusion Index (per 1.000 patients)		Length of Stay		In-Hospital Mortality		In-Hospital Complications		Re-admissions			
	Observed	Expected	Observed	Expected	Observed	Expected	Observed	Expected	Observed	Expected	Observed	Expected	Observed	Expected		
<b>Overall (all clinical procedures)</b>																
Global	38,0%	35,5%	4,38	3,52	1663,56	1247,65	14,68	9,54	7,1%	4,8%	10,5%	7,4%	4,7%	4,4%		
	Indice	►	1,07	►	1,24	►	1,33	Indice	►	1,54	►	1,48	►	1,42	►	1,06
<b>Clinical Procedure</b>																
Total hip replacement (N=240)	12,1%	15,8%	4,71	2,49	571,43	381,05	9,36	6,27	0,0%	0,1%	4,8%	2,5%	0,9%	1,7%		
	Indice	▼	0,77	►	1,89	►	1,50	Indice	►	1,49	▼	0,00	►	1,89	▼	0,54
Total knee replacement (N=418)	5,8%	9,7%	3,05	2,11	175,34	207,10	9,10	5,80	0,3%	0,0%	4,4%	2,0%	0,6%	1,2%		
	Indice	▼	0,59	►	1,45	▼	0,95	Indice	►	1,62	►	6,99	►	2,24	▼	0,50
Colorectal cancer resection open (N=29)	37,9%	20,3%	2,64	2,66	1.000,00	500,25	17,38	12,82	0,0%	2,4%	25,0%	20,2%	8,0%	8,3%		
	Indice	►	1,87	►	0,99	►	1,72	Indice	►	1,36	▼	0,00	►	1,24	►	0,96
Colorectal cancer resection laparoscopic (N=78)	9,0%	12,0%	1,71	2,5	53,8	317,51	7,62	8,81	1,3%	0,9%	12,8%	13,5%	9,7%	4,5%		
	Indice	▼	0,74	▼	0,75	▼	0,48	Indice	▼	0,86	►	1,42	▼	0,95	►	2,16
Cardiac valve replacement (N=215)	64,2%	52,9%	5,60	4,19	3595,35	2269,68	19,04	14,06	4,2%	3,6%	21,1%	17,6%	6,5%	5,0%		
	Indice	►	1,21	►	1,34	►	1,58	Indice	►	1,35	►	1,16	►	1,20	►	1,30
Hip Fracture (N=360)	56,1%	47,9%	3,04	2,54	1.705,56	1.222,07	18,23	10,98	6,9%	4,3%	8,8%	7,3%	4,6%	4,5%		
	Indice	►	1,17	►	1,19	►	1,40	Indice	►	1,66	►	1,60	►	1,21	►	1,02
Gastrointestinal bleeding (N=437)	56,1%	53,9%	5,02	4,25	2.812,36	2.303,36	17,90	10,88	19,7%	13,2%	14,0%	8,2%	9,8%	9,5%		
	Indice	►	1,04	►	1,18	►	1,22	Indice	►	1,65	►	1,50	►	1,70	►	1,03

Figure S1 - Hospital Scorecard Executive Report



Figure S1 - Hospital Scorecard Executive Report