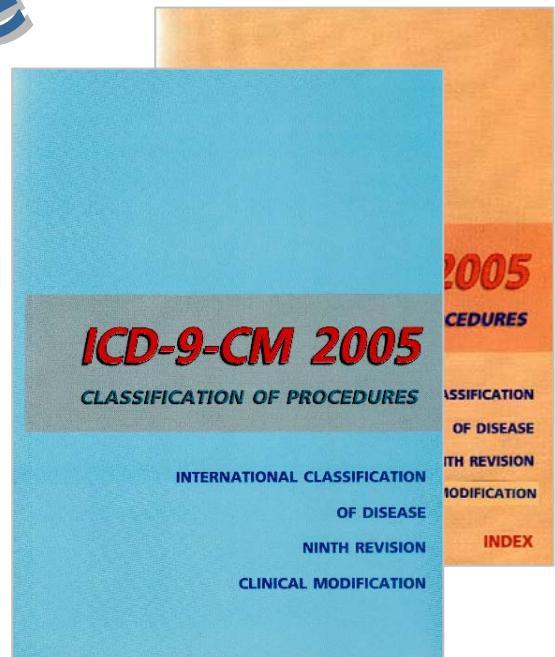


# Diagnosis & Procedure Code Update



สำนักงานกองลักษณะสุนทรีย์การสุขภาพ

- **Reclassification**

- เพิ่มกลุ่ม จากกลุ่ม Other...เดิม
- Bilateral , Multiple procedures
- Special care

- **Unbundling**

- **Coding:** ICD-10-TM (diagnosis)

ICD-9-CM 2005 with Extension  
(Procedure)

ตค.2549

**Thai  
DRGs  
ver. 4**

ตค.2548

~~Thai  
DRGs  
Ver. 3.5~~

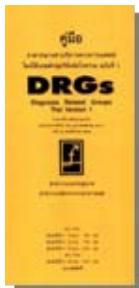
ตค.2546

เมย.2548

~~Thai  
DRGs  
Ver. 3.1~~

กพ.2544

พย.2542



- Clean up library
- Unbundling → Additional lists  
→ Recalibration  
(*Minor change*)

- Reclassification eg. LC
- Recalibration

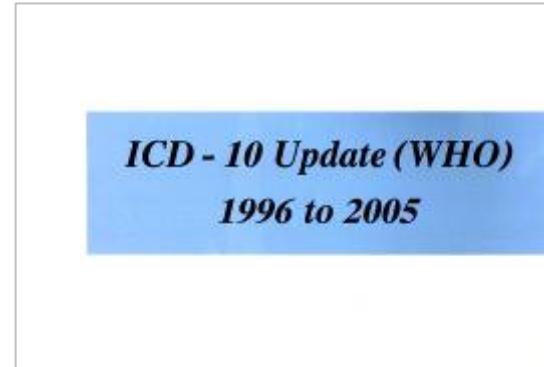
- **ICD-10 update เพิ่มเติม/ยกเลิก ตามประกาศของ WHO 2005**

เช่น M72.6 Necrotising fasciitis

- **ICD-9-CM Codes Update to version 2005**
- **Edit table**
  - Unacceptable PDx เช่น Z41.3 Ear piercing
  - Age restriction เช่น Bronchopulmonary dysplasia
- **CC List**
  - ตัด CC's บางรายการ
    - Unspecified code เช่น E118 NIDDM w unspecified complication
    - Trend to upcode เช่น R54 Senility
  - เพิ่ม CC's
  - เปลี่ยน CC exclusion list
- **Unrelated OR procedure** เช่น Excision of Pterygium
- **Reclassification** เช่น LC, Melioidosis, Dengue w or wo shock
- **Recalibration**

# Diagnosis Code

- **ICD-10 WHO update** เพิ่มเติม/ยกเลิก ตามประกาศของ WHO 2005 เช่น M72.6 Necrotising fasciitis
- เพิ่มรหัสใหม่ (20)
- ยกเลิก (9)
- แก้ไข เช่น Add dagger, Modify title, Add inclusion/exclusion term,... (???)



**Price** CHF 1150.00 / US\$ 1035.00  
Developing countries: CHF 575.00



# ICD-10 WHO Update: Add (20) codes

Code	Desc	PDC	Implementation date
B33.4 <sup>†</sup>	Hantavirus (cardio)-pulmonary syndrome [HPS] [HCPS] (J17.1*)	4C	January 2006
I27.2	Other secondary pulmonary hypertension	5R	January 2003
K31.7	Polyp of stomach and duodenum	6H	January 1999
K63.5	Polyp of colon	6J	January 1999
K75.4	Autoimmune hepatitis	7D	January 1999
M72.6[0-9]	Necrotising fasciitis	8M	January 2003
O94	Sequelae of complication of pregnancy, childbirth and the puerperium	UN <sup>1</sup>	January 2006
P91.6	Hypoxic ischaemic encephalopathy of newborn	15/MajCC <sup>2</sup>	January 2006
Q31.5	Congenital laryngomalacia	15/MajCC	January 2003
Z52.6	Liver donor	UN	January 1999
Z52.7	Heart donor	UN	January 1999



# ICD-10 WHO Update: Add (20) codes...Cont.

Code	Desc	PDC	Implementation date
U04.9	Severe acute respiratory syndrome [SARS], unspecified	4C	October 2003
U80.0	Penicillin resistant agent	UN	January 2006
U80.1	Methicillin resistant agent	UN	January 2006
U80.8	Agent resistant to other penicillin-related antibiotic	UN	January 2006
U81.0	Vancomycin resistant agent	UN	January 2006
U81.8	Agent resistant to other vancomycin-related antibiotic	UN	January 2006
U88	Agent resistant to multiple antibiotics	UN	January 2006
U89.8	Agent resistant to other single specified antibiotic	UN	January 2006
U89.9	Agent resistant to unspecified antibiotic	UN	January 2006



# ICD-10 WHO Update:

## Delete codes

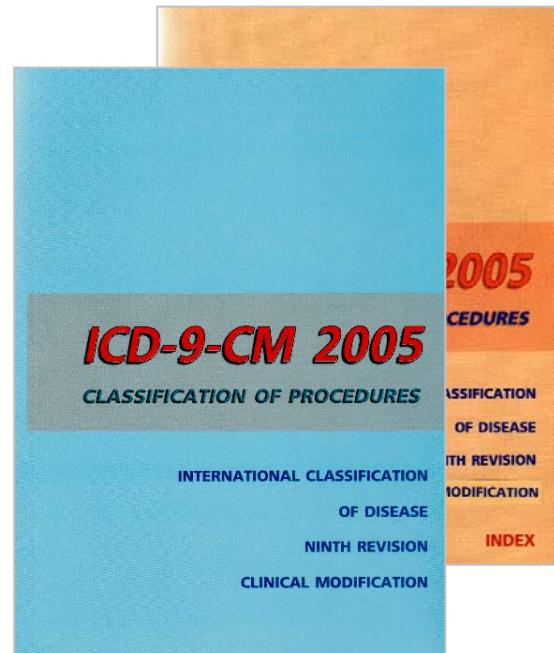
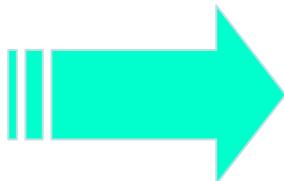
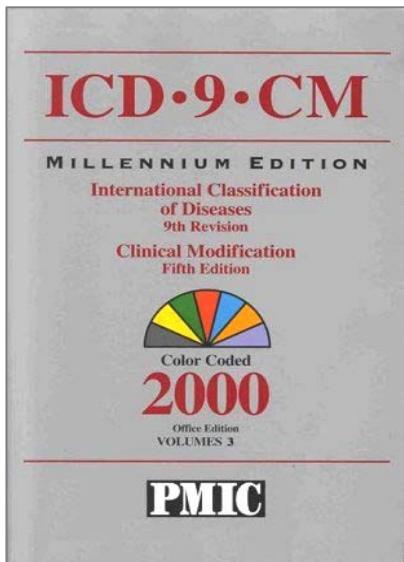
Code	Desc	Implementation date
C14.1	Laryngopharynx	January 1995
M72.3	Nodular fasciitis	January 2003
M72.5	Fasciitis, not elsewhere classified	January 2003
Q31.4	Congenital laryngeal stridor	January 2003
Q35.0	Cleft hard palate, bilateral	January 1999
Q35.2	Cleft soft palate, bilateral	January 1999
Q35.4	Cleft hard palate with cleft soft palate, bilateral	January 1999
Q35.6	Cleft palate, medial	January 1999
Q35.8	Cleft palate, unspecified, bilateral	January 1999

## Add Dagger

Code	Desc	Implementation date
M51.1 <sup>†</sup>	Lumbar and other intervertebral disc disorders with radiculopathy (G55.1*)	January 2001

# Procedure Code

- ICD-9-CM procedure codes
- Update to version 2005
- ICD-9-CM with extension code



# **International Classification of Diseases, 9th Revision, Clinical Modification (ICD-9-CM)**

- Clinical modification of ICD-9 (WHO)
- Completely comparable with the ICD-9 (WHO)
- Published by the US government
- Designed for the classification of morbidity and mortality information for statistical purposes
- Use in indexing of medical records, medical care review, ambulatory and other medical care programs
- Disease and operations
- Annual modifications through the ICD-9-CM coordination and maintenance committee (C&M): NCHS + CMS
- ICD-9-CM 2005 = sixth edition

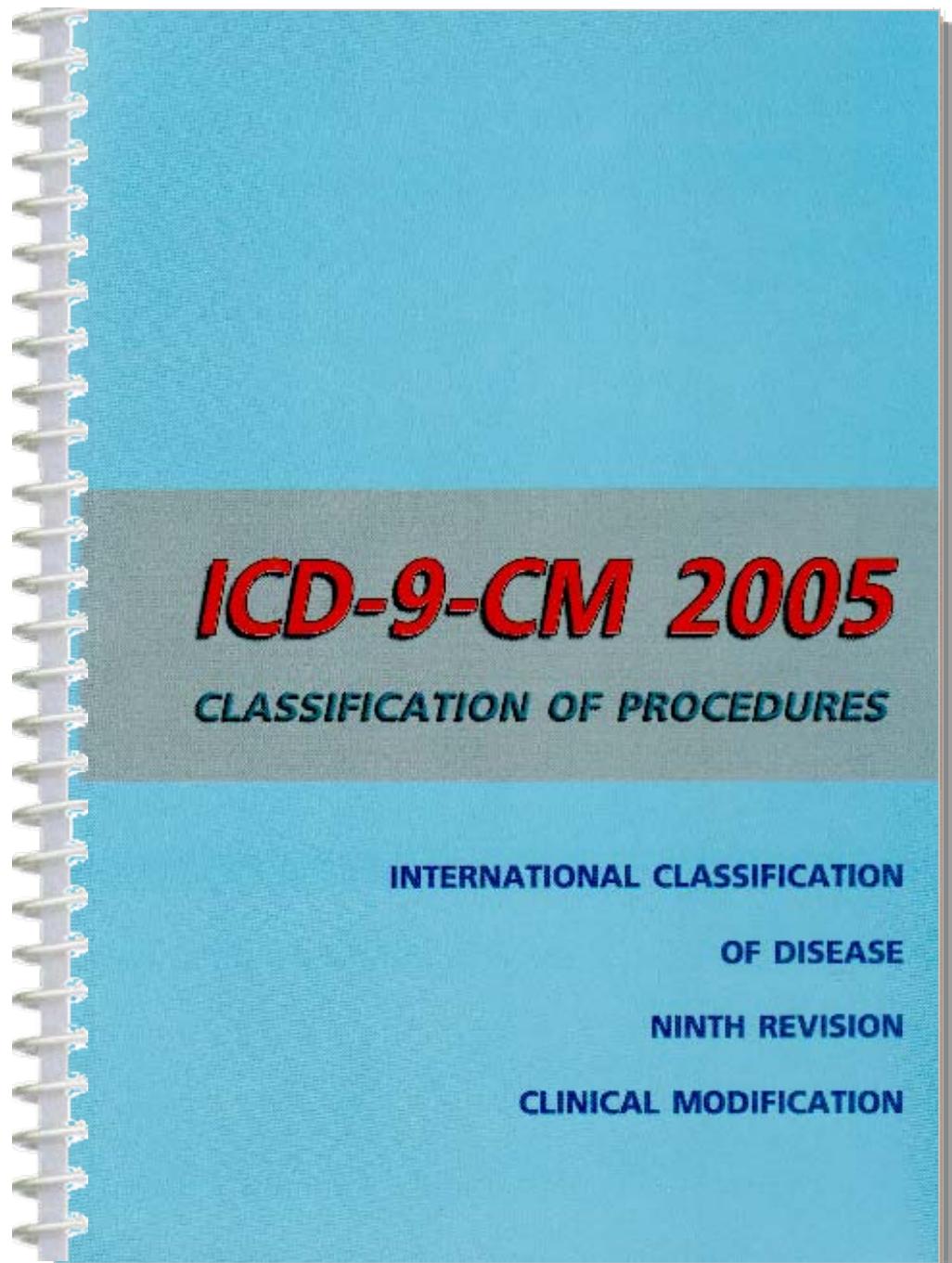
**Tabular list**

**Index**

**ICD-9-CM Changes 2001-5**

**Conversion table**

**Addenda**



<b>Chapter</b>	<b>Code</b>	
0	00	Procedures and interventions, not elsewhere classified
1	01-05	Operations on the nervous system
2	06-07	Operations on the endocrine system
3	08-16	Operations on the eye
4	18-20	Operations on the ear
5	21-29	Operations on the nose, mouth, and pharynx
6	30-34	Operations on the respiratory system
7	35-39	Operations on the cardiovascular system
8	40-41	Operations on the hemic and lymphatic system
9	42-54	Operations on the digestive system
10	55-59	Operations on the urinary system
11	60-64	Operations on the male genital organs
12	65-71	Operations on the female genital organs
13	72-75	Obstetrical procedures
14	76-84	Operations on the musculoskeletal system
15	85-86	Operations on the integumentary system
16	87-99	Miscellaneous diagnostic and therapeutic procedures

# ICD-9-CM Procedure 2000 → 2005

## New chapter (1)

### 0. PROCEDURES & INTERVENTIONS , NEC (00)

- 00.0 Therapeutic ultrasound
- 00.1 Pharmaceuticals
- 00.2 Intravascular imaging of blood vessels
- 00.3 Computer assisted surgery [CAS]
- 00.5 Other cardiovascular procedures
- 00.6 Procedures on blood vessels
- 00.9 Other procedures and intervention

## New codes (114)

## Invalid codes (4)

## Revised code titles (15)

## Revised others (???)

### 01 INCISION AND EXCISION OF SKIN, BRAIN, AND CEREBRAL MENINGES

#### 01.0 Cranial puncture

- 01.01 Cisternal puncture  
Cisternal tap

*Excludes:* pneumoventriculostomy (87.07)

Ventriculopuncture through previously implanted catheter  
Puncture of ventricles using tube

meninges  
cerebral meninges

#### 01.14 Open biopsy of brain

#### 01.15 Biopsy of skull

#### 01.18 Other diagnostic procedures on brain and cerebral meninges

*Excludes:* cerebral:

angiography (88.41)

thermography (88.81)

contrast radiogram of brain (87.01-87.02)

echoencephalogram (88.71)

electroencephalogram (89.14)

microscopic examination of specimen from nervous system  
and of spinal fluid (90.01-90.09)

neurologic examination (89.13)

phlebography of head and neck (88.61)

pneumoencephalogram (87.01)

radioisotope scan:

cerebral (92.11)

head NEC (92.12)

tomography of head:

C.A.T. scan (87.03)

other (87.04)

**ULTRASOUND**  
**New Technology**



## 00.0 Therapeutic ultrasound

*Excludes:* diagnostic ultrasound (non-invasive) ([88.71-88.79](#))  
intracardiac echocardiography [ICE] (heart chamber(s)) ([37.28](#))  
intravascular imaging (adjunctive) ([00.21-00.29](#))



### 00.01 Therapeutic ultrasound of vessels of head and neck

Anti-restenotic ultrasound  
Intravascular non-ablative ultrasound

*Excludes:* diagnostic ultrasound of:

eye ([95.13](#))  
head and neck ([88.71](#))  
that of inner ear ([20.79](#))  
ultrasonic:  
angioplasty of non-coronary vessel ([39.50](#))  
embolectomy ([38.01, 38.02](#))  
endarterectomy ([38.11, 38.12](#))  
thrombectomy ([38.01, 38.02](#))

### 00.02 Therapeutic ultrasound of heart

Anti-restenotic ultrasound  
Intravascular non-ablative ultrasound

*Excludes:* diagnostic ultrasound of heart ([88.72](#))  
ultrasonic ablation of heart lesion ([37.34](#))  
ultrasonic angioplasty of coronary vessels ([36.01, 36.02, 36.05, 36.09](#))

**00.03 Therapeutic ultrasound of peripheral vascular vessels** 

Anti-restenotic ultrasound

Intravascular non-ablative ultrasound

*Excludes:* diagnostic ultrasound of peripheral vascular system [\(88.77\)](#)  
ultrasonic angioplasty of:  
non-coronary vessel [\(39.50\)](#)

**00.09 Other therapeutic ultrasound** 

*Excludes:* ultrasonic:

fragmentation of urinary stones [\(59.95\)](#)

percutaneous nephrostomy with fragmentation [\(55.04\)](#)

physical therapy [\(93.35\)](#)

transurethral guided laser induced prostatectomy (TULIP)  
[\(60.21\)](#)

## 00.2 Intravascular imaging of blood vessels

Endovascular ultrasonography

Intravascular ultrasound (IVUS)

Code also any synchronous diagnostic or therapeutic procedures

*Excludes:* therapeutic ultrasound ([00.01-00.09](#))

### 00.21 Intravascular imaging of extracranial cerebral vessels

Common carotid vessels and branches

Intravascular ultrasound (IVUS), extracranial cerebral vessels

*Excludes:* diagnostic ultrasound (non-invasive) of head and neck  
[\(88.71\)](#)

### 00.22 Intravascular imaging of intrathoracic vessels

Aorta and aortic arch

Intravascular ultrasound (IVUS), intrathoracic vessels

Vena cava (superior) (inferior)

*Excludes:* diagnostic ultrasound (non-invasive) of other sites of thorax [\(88.73\)](#)

### 00.23 Intravascular imaging of peripheral vessels

Imaging of:

vessels of arm(s)

vessels of leg(s)

Intravascular ultrasound (IVUS), peripheral vessels

*Excludes:* diagnostic ultrasound (non-invasive) of peripheral vascular system [\(88.77\)](#)

**00.24 Intravascular imaging of coronary vessels**

Intravascular ultrasound (IVUS), coronary vessels

*Excludes:* diagnostic ultrasound (non-invasive) of heart (88.72)  
intracardiac echocardiography [ICE] (ultrasound of heart chamber(s)) (37.28)

**00.25 Intravascular imaging of renal vessels**

Intravascular ultrasound (IVUS), renal vessels

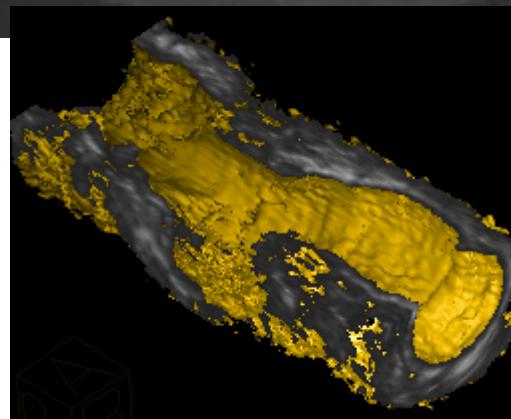
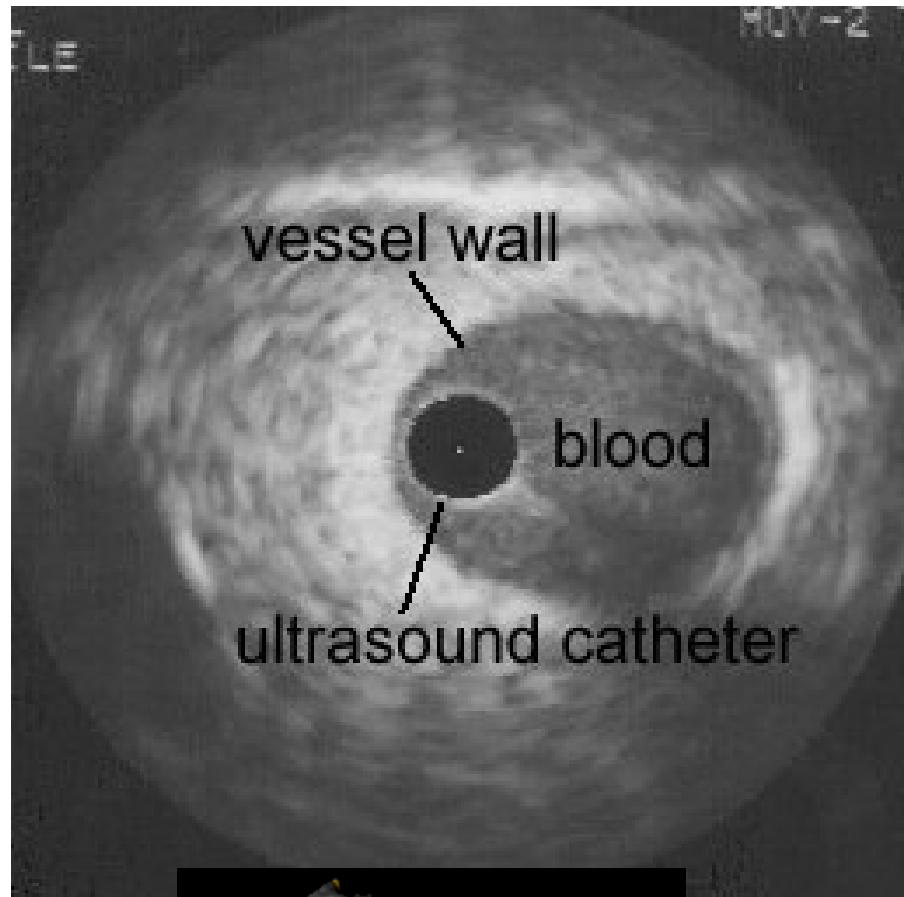
Renal artery

*Excludes:* diagnostic ultrasound (non-invasive) of urinary system (88.75)

**00.28 Intravascular imaging, other specified vessel(s)**

**00.29 Intravascular imaging, unspecified vessel(s)**

# IVUS



# **Cardiovascular interventions**

## **Cardiovascular surgery**

## 00.5 Other cardiovascular procedures

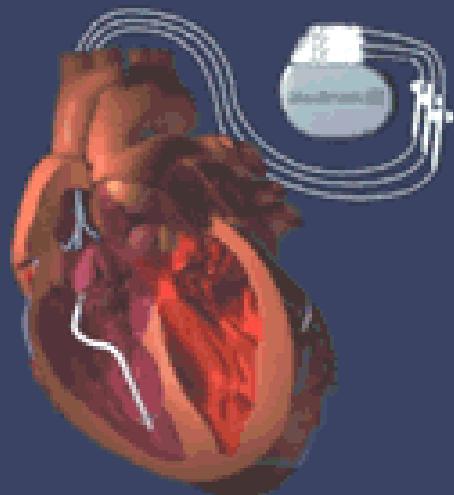
### 00.50 Implantation of cardiac resynchronization pacemaker without mention of defibrillation, total system [CRT-P]

Biventricular pacing without internal cardiac defibrillator  
Implantation of cardiac resynchronization (biventricular) pulse generator pacing device, formation of pocket, transvenous leads including placement of lead into left ventricular coronary venous system, and intraoperative procedures for evaluation of lead signals.

***Excludes:** implantation of cardiac resynchronization defibrillator, total system [CRT-D] ([00.51](#))  
insertion or replacement of any type pacemaker device ([37.80-37.87](#))*

*replacement of cardiac resynchronization defibrillator pulse generator only [CRT-D] ([00.54](#))*

*replacement of cardiac resynchronization pacemaker pulse generator only [CRT-P] ([00.53](#))*



**00.51 Implantation of cardiac resynchronization defibrillator, total system [CRT-D]**

Biventricular pacing with internal cardiac defibrillator

Implantation of a cardiac resynchronization (biventricular) pulse generator with defibrillator [AICD], formation of pocket, transvenous leads, including placement of lead into left ventricular coronary venous system, intraoperative procedures for evaluation of lead signals, and obtaining defibrillator threshold measurements.

***Excludes:** implantation of cardiac resynchronization pacemaker, total system [CRT-P] (00.50)*

*implantation or replacement of automatic cardioverter/defibrillator, total system [AICD] (37.94)*  
*replacement of cardiac resynchronization defibrillator pulse generator, only [CRT-D] (00.54)*



**00.52 Implantation or replacement of transvenous lead [electrode] into left ventricular coronary venous system**

*Excludes:* implantation of cardiac resynchronization defibrillator, total system [CRT-D] ([00.51](#))  
implantation of cardiac resynchronization pacemaker, total system [CRT-P] ([00.50](#))  
initial insertion of transvenous lead [electrode] ([37.70-37.72](#))  
replacement of transvenous atrial and/or ventricular lead(s) [electrodes] ([37.76](#))

**00.53 Implantation or replacement of cardiac resynchronization pacemaker pulse generator only [CRT-P]**

Implantation of CRT-P device with removal of any existing CRT-P or other pacemaker device

*Excludes:* implantation of cardiac resynchronization pacemaker, total system [CRT-P] ([00.50](#))  
implantation or replacement of cardiac resynchronization defibrillator pulse generator only [CRT-D] ([00.54](#))  
insertion or replacement of any type pacemaker device ([37.80-37.87](#))

**00.54 Implantation or replacement of cardiac resynchronization  
defibrillator pulse generator device only [CRT-D]**

Implantation of CRT-D device with removal of any existing CRT-D, CRT-P, pacemaker, or defibrillator device

*Excludes:* implantation of automatic cardioverter/defibrillator pulse generator only [\(37.96\)](#)

implantation of cardiac resynchronization defibrillator,  
total system [CRT-D] [\(00.51\)](#)

implantation or replacement of cardiac resynchronization  
pacemaker pulse generator only [CRT-P] [\(00.53\)](#)

37.5 Heart transplantation

2000

*Excludes:* combined heart-lung transplantation (33.6)



37.5 Heart replacement procedures

2005

37.51 Heart transplantation

*Excludes:* combined heart-lung transplantation (33.6)

37.52 Implantation of total replacement heart system

Artificial heart

Implantation of fully implantable total replacement heart system,  
including ventriculectomy

*Excludes:* implantation of heart assist system [VAD]  
[\(37.62, 37.65, 37.66\)](#)

37.53 Replacement or repair of thoracic unit of total replacement   
heart system

*Excludes:* replacement and repair of heart assist system [VAD] [\(37.63\)](#)

37.54 Replacement or repair of other implantable component of   
total replacement heart system

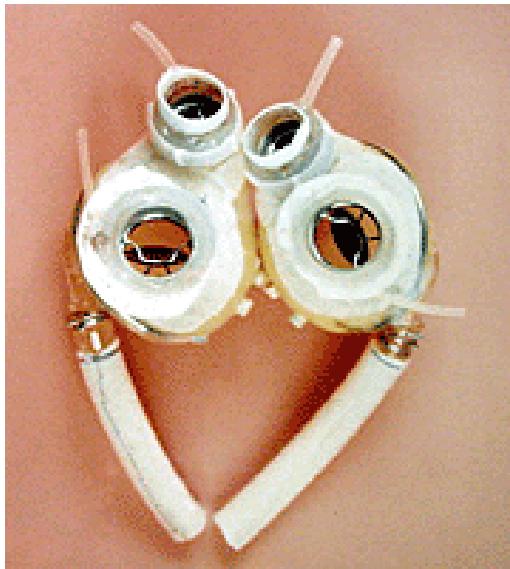
Implantable battery

Implantable controller

Transcutaneous energy transfer [TET] device

*Excludes:* replacement and repair of heart assist system [VAD] [\(37.63\)](#)  
replacement or repair of thoracic unit of total replacement  
heart system [\(37.53\)](#)

# Total replacement heart system



Akutsu III Total  
Artificial Heart



Jarvik-7 Total  
Artificial Heart



AbioCor Implantable  
Replacement Heart

## 37.6 Implantation of heart and circulatory assist system

### 37.61 Implant of pulsation balloon

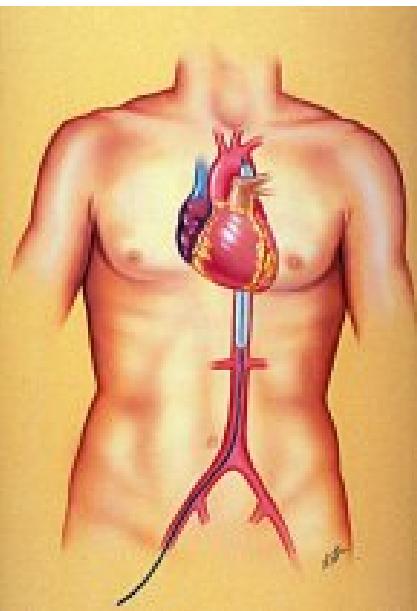
### 37.62 Insertion of non-implantable heart assist system <sup>®</sup>

Insertion of heart assist system, NOS

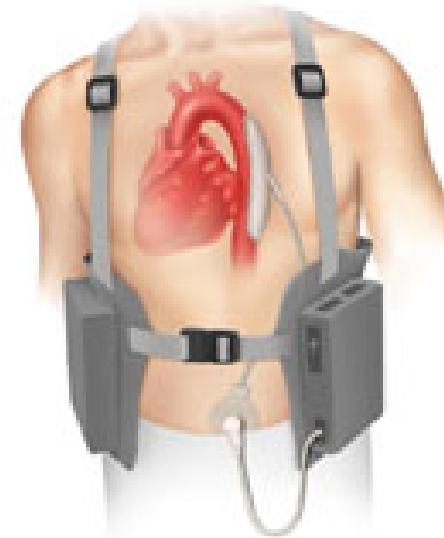
Insertion of heart pump

*Excludes:* implantation of total replacement heart system (37.52)  
insertion of percutaneous external heart assist device  
[\(37.68\)](#)

---



Intra-aortic Balloon Pump  
(IABP)



Kantrowitz CardioVad™  
heart-assist device

**37.65 Implant of external heart assist system ®**

Note: Device (outside the body but connected to heart) with external circulation and pump.

Includes open chest (sternotomy) procedure for cannulae attachments

***Excludes:** implant of pulsation balloon [\(37.61\)](#)*

*implantation of total replacement heart system [\(37.52\)](#)*

*insertion of percutaneous external heart assist device [\(37.68\)](#)*



Medtronic Bio-Pump

**37.66 Insertion of implantable heart assist system ®**

Axial flow heart assist system

Diagonal pump heart assist system

Left ventricular assist device (LVAD)

Pulsatile heart assist system

Right ventricular assist device (RVAD)

Rotary pump heart assist system

Ventricular assist device (VAD) not otherwise specified

Note: Device directly connected to the heart and implanted in the upper left quadrant of peritoneal cavity.

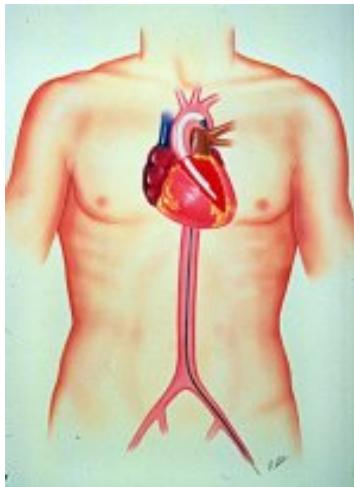
Transportable, implantable heart assist system.

***Excludes:** implant of pulsation balloon (37.61)*

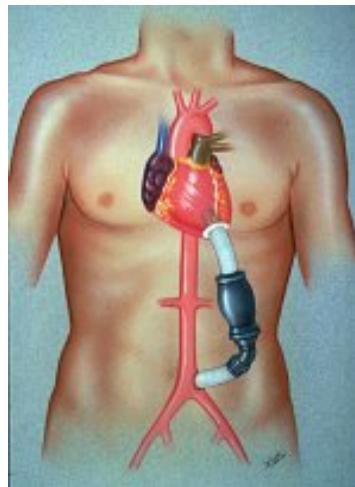
*implantation of total replacement heart system [artificial heart] (37.52)*

*insertion of percutaneous external heart assist device (37.68)*

# implantable heart assist system



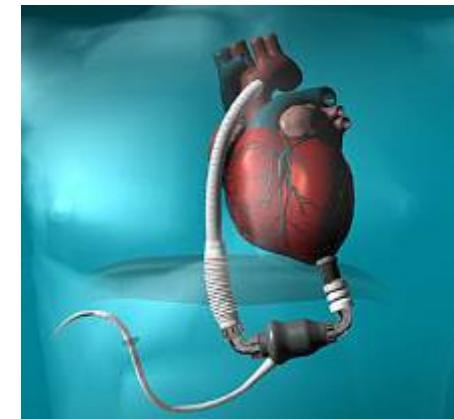
Hemopump



Model-7 ALVAD  
abdominal left ventricular  
assist device



Thoratec HeartMate®  
IP LVAS



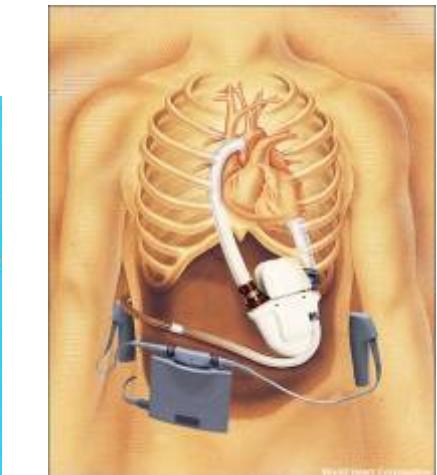
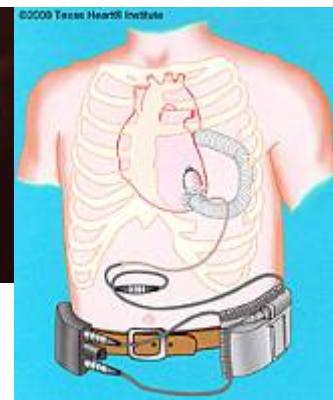
Thoratec HeartMate®  
II LVAS



Thoratec Ventricular  
Assist Device (VAD)



Jarvik 2000  
FlowMaker



Novacor ®  
Left Ventricular Assist  
System (LVAS)

## 37.68 Insertion of percutaneous external heart assist device

Includes percutaneous [femoral] insertion of cannulae attachments

Circulatory assist device

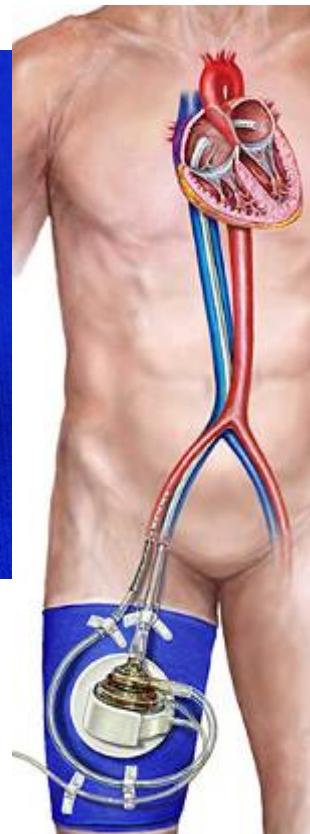
Extrinsic heart assist device

pVAD

Percutaneous heart assist device



TandemHeart  
Percutaneous Ventricular Assist Device  
(pVAD)



## 00.6 Procedures on blood vessels

*Excludes:* angioplasty or atherectomy of other non-coronary vessel(s) ([39.50](#))  
insertion of coronary artery stent(s) ([36.06- 36.07](#))  
insertion of drug-eluting peripheral vessel stent(s) ([00.55](#))  
insertion of non-drug-eluting peripheral vessel stent(s) ([39.90](#))

### 00.61 Percutaneous angioplasty or atherectomy of precerebral (extracranial) vessel(s)

Basilar

Carotid

Vertebral

Code also any:

injection or infusion of thrombolytic agent ([99.10](#))

percutaneous insertion of carotid artery stent(s) ([00.63](#))

percutaneous insertion of other precerebral artery stent(s)  
([00.64](#))

*Excludes:* angioplasty or atherectomy of other non-coronary vessel(s) ([39.50](#))

removal of cerebrovascular obstruction of vessel(s) by open approach ([38.01-38.02](#), [38.11-38.12](#), [38.31-38.32](#),  
[38.41-38.42](#))

**00.62 Percutaneous angioplasty or atherectomy of intracranial vessel(s)**

Code also any:

injection or infusion of thrombolytic agent ([99.10](#))

percutaneous insertion of intracranial stent(s) ([00.65](#))

***Excludes:** angioplasty or atherectomy of other non-coronary vessel(s) ([39.50](#))*

*removal of cerebrovascular obstruction of vessel(s) by open approach ([38.01-38.02](#), [38.11-38.12](#), [38.31-38.32](#), [38.41-38.42](#))*

**00.63 Percutaneous insertion of carotid artery stent(s) **

Includes the use of any embolic protection device, distal protection device, filter device, or stent delivery system

Non-drug-eluting stent

Code also percutaneous angioplasty or atherectomy of precerebral vessel(s) [\(00.61\)](#)

**00.64 Percutaneous insertion of other precerebral (extracranial) artery stent(s) **

Includes the use of any embolic protection device, distal protection device, filter device, or stent delivery system

Basilar stent

Vertebral stent

Code also percutaneous angioplasty or atherectomy of precerebral vessel(s) [\(00.61\)](#)

**00.65 Percutaneous insertion of intracranial vascular stent(s) **

Includes the use of any embolic protection device, distal protection device, filter device, or stent delivery system

Code also percutaneous angioplasty or atherectomy of intracranial vessel(s) [\(00.62\)](#)

**00.55 Insertion of drug-eluting peripheral vessel stent(s) **

Endograft(s)  
Endovascular graft(s)  
Stent grafts

Code also any angioplasty or atherectomy of other non-coronary vessel(s) [\(39.50\)](#)

**Excludes:** drug-coated peripheral stents, e.g., heparin coated [\(39.90\)](#)  
*insertion of cerebrovascular stent(s) [\(00.63-00.65\)](#)*  
*insertion of drug-eluting coronary artery stent [\(36.07\)](#)*  
*insertion of non-drug-eluting stent(s):*  
*coronary artery [\(36.06\)](#)*  
*peripheral vessel [\(39.90\)](#)*  
*that for aneurysm repair [\(39.71 - 39.79\)](#)*

**36.07 Insertion of drug-eluting coronary artery stent(s) **

Endograft(s)  
Endovascular graft(s)  
Stent graft(s)

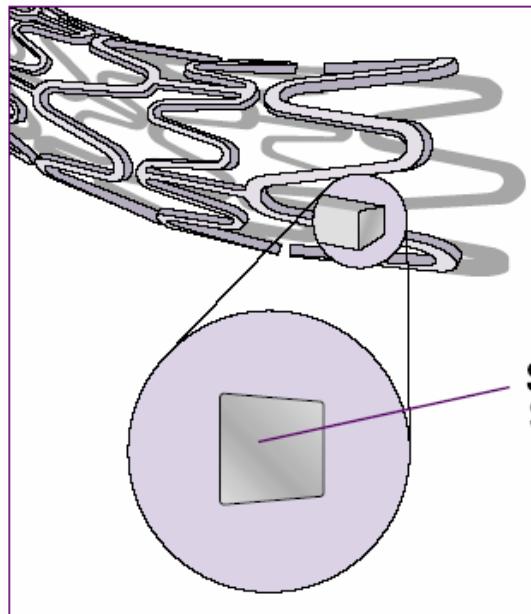
Code also any:

open chest coronary artery angioplasty [\(36.03\)](#)  
percutaneous transluminal coronary angioplasty [PTCA] or  
coronary atherectomy [\(36.01, 36.02, 36.05\)](#)

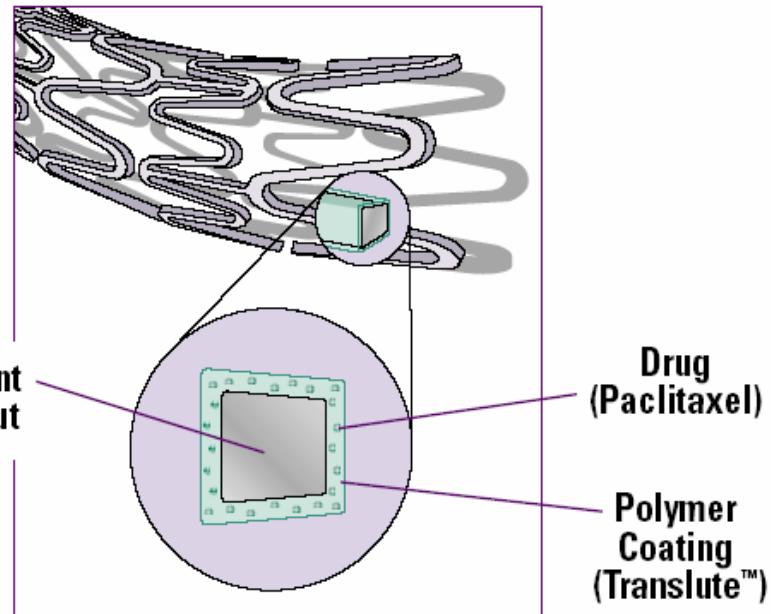
**Excludes:** drug-coated stents, e.g., heparin coated [\(36.06\)](#)  
*insertion of non-drug-eluting coronary artery stent(s) [\(36.06\)](#)*

# Drug-eluting stent

- Paclitaxel
- Sirolimus



Schematic of  
Express® Stent



Schematic of  
TAXUS Stent\*

## 39.72 Endovascular repair or occlusion of head and neck vessels

Coil embolization or occlusion

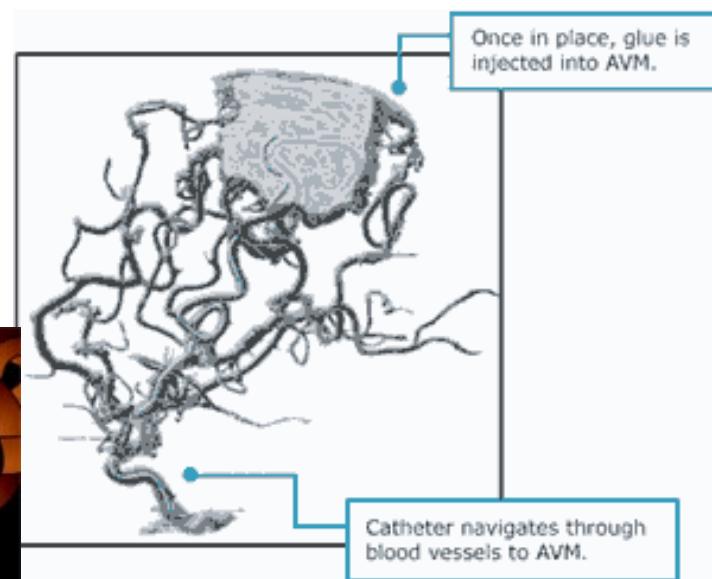
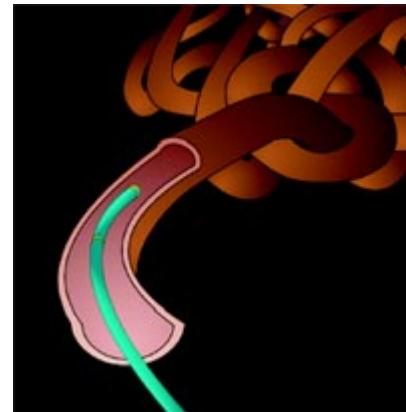
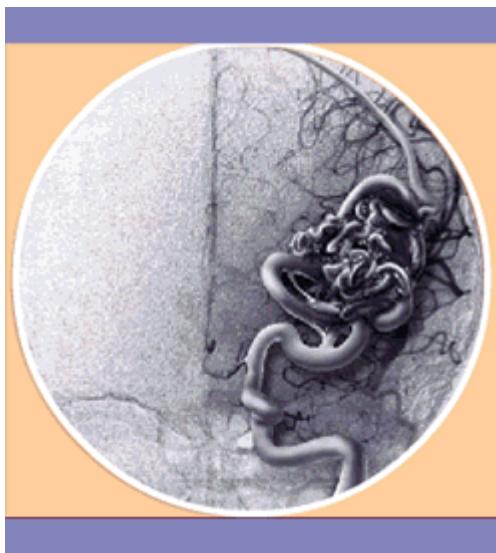
Endograft(s)

Endovascular graft(s)

Liquid tissue adhesive (glue) embolization or occlusion

Other implant or substance for repair, embolization or occlusion

That for repair of aneurysm, arteriovenous malformation[AVM] or fistula



# **Orthopedics surgery**

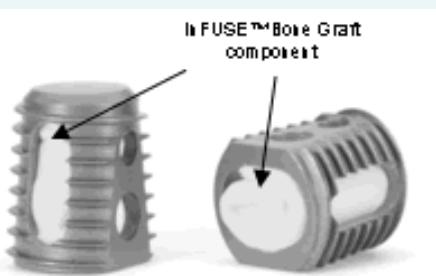
## 84.51 Insertion of interbody spinal fusion device

Insertion of:  
cages (carbon, ceramic, metal, plastic or titanium)  
interbody fusion cage

synthetic cages or spacers  
threaded bone dowels

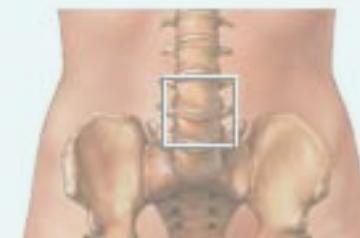
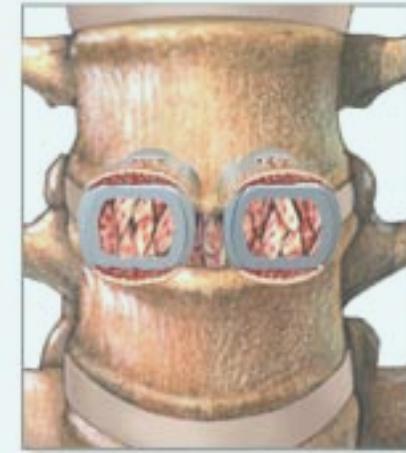
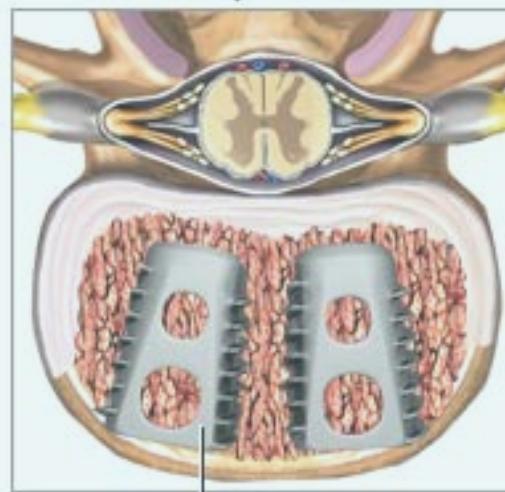
Code also refusion of spine [\(81.30 - 81.39\)](#)

Code also spinal fusion [\(81.00 - 81.08\)](#)



Interbody cage fusion uses a hollow threaded cylinder filled with bone graft to fuse two vertebrae

Top view



## 84.52 Insertion of recombinant bone morphogenetic protein rhBMP

That via collagen sponge, coral, ceramic and other carriers

Code also primary procedure performed:

fracture repair [\(79.00-79.99\)](#)

spinal fusion [\(81.00 - 81.08\)](#)

spinal refusion [\(81.30 - 81.39\)](#)



genetically engineered protein using recombinant technology to recruit bone forming cells & stimulate bone growth.

## **81.3 Refusion of spine**

Includes: arthrodesis of spine with:

bone graft

internal fixation

correction of pseudarthrosis of spine

Code also any 360 degree spinal refusion by a single incision [\(81.61\)](#)

Code also any insertion of interbody spinal fusion device [\(84.51\)](#)

Code also any insertion of recombinant bone morphogenetic protein [\(84.52\)](#)

Code also the total number of vertebrae fused [\(81.62-81.64\)](#)

**81.30 Refusion of spine, not otherwise specified**

**81.31 Refusion of atlas-axis spine**

Craniocervical fusion by anterior, transoral, or posterior technique

C1-C2 fusion by anterior, transoral, or posterior technique

Occiput C2 fusion by anterior, transoral, or posterior technique

:  
:

**81.39 Refusion of spine, not elsewhere classified**

81.62 Fusion or refusion of 2-3 vertebrae 

81.63 Fusion or refusion of 4- 8 vertebrae 

81.64 Fusion or refusion of 9 or more vertebrae 

**81.65 Vertebroplasty** 

Injection of bone void filler (cement) (polymethylmethacrylate) (PMMA) into the diseased or fractured vertebral body

*Excludes:* kyphoplasty [\(81.66\)](#)

**81.66 Kyphoplasty** 

Insertion of inflatable balloon, bone tamp, or other device to create a cavity for partial restoration of height of diseased or fractured vertebral body prior to injection of bone void filler (cement)(polymethylmethacrylate) (PMMA)

*Excludes:* vertebroplasty [\(81.65\)](#)

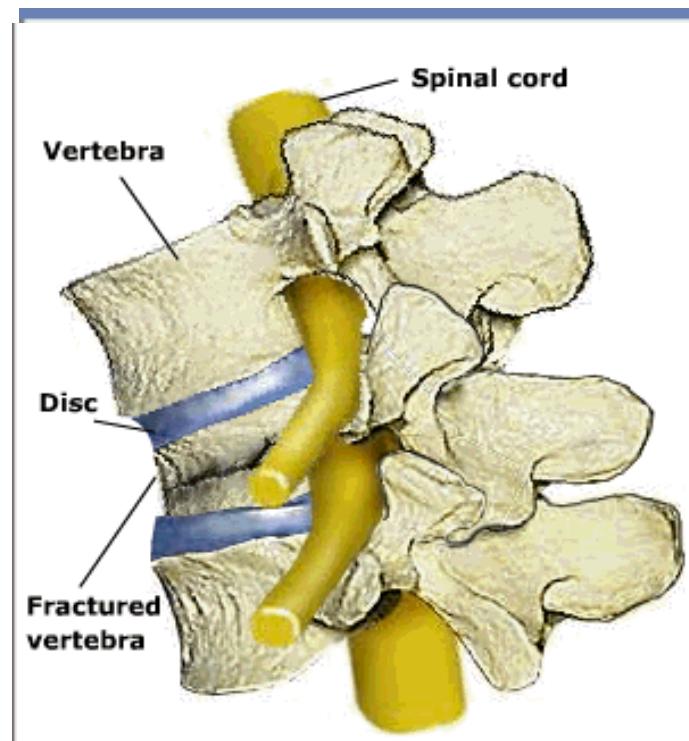
# Vertebroplasty

- originally introduced in France in 1984
- injecting an acrylic bone cement, PMMA percutaneously into a fractured vertebral body to stabilise it.



# Kyphoplasty

- developed by Dr Mark Reiley (Kyphon Inc, Sunnyvale, USA) in 1997
- modification to vertebroplasty
- additional preliminary step of inserting and inflating an bone tamp (a small balloon-like device) inside the vertebra to create a cavity which can then be filled with PMMA.



## **84.6 Replacement of spinal disc**

Includes: non-fusion arthroplasty of the spine with insertion of artificial disc prosthesis

### **84.60 Insertion of spinal disc prosthesis, not otherwise specified**

Replacement of spinal disc, NOS

Includes: diskectomy (discectomy)

### **84.61 Insertion of partial spinal disc prosthesis, cervical**

Nuclear replacement device, cervical

Partial artificial disc prosthesis (flexible), cervical

Replacement of nuclear disc (nucleus pulposus), cervical

Includes: diskectomy (discectomy)

⋮  
⋮  
⋮

### **84.69 Revision or replacement of artificial spinal disc prosthesis, not otherwise specified**

Removal of (partial) (total) spinal disc prosthesis with synchronous insertion of new (partial)(total) spinal disc prosthesis

Repair of previously inserted spinal disc prosthesis

# Artificial disc prosthesis



SB Charite III disc prosthesis



Bryan disc



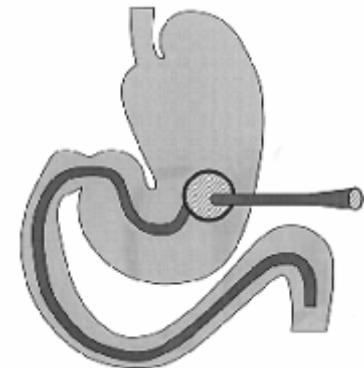
Prestige artificial disc

**Laparoscopic surgery  
Weight loss surgery**

## 44.3 Gastroenterostomy without gastrectomy

### 44.32 Percutaneous [endoscopic] gastrojejunostomy ✎

Endoscopic conversion of gastrostomy to jejunostomy  
PEG



### 44.38 Laparoscopic gastroenterostomy ✎

Bypass:

- gastroduodenostomy
- gastroenterostomy
- gastrogastrostomy

Laparoscopic gastrojejunostomy without gastrectomy NEC

*Excludes:* gastroenterostomy, open approach (44.39)



## 44.6 Other repair of stomach

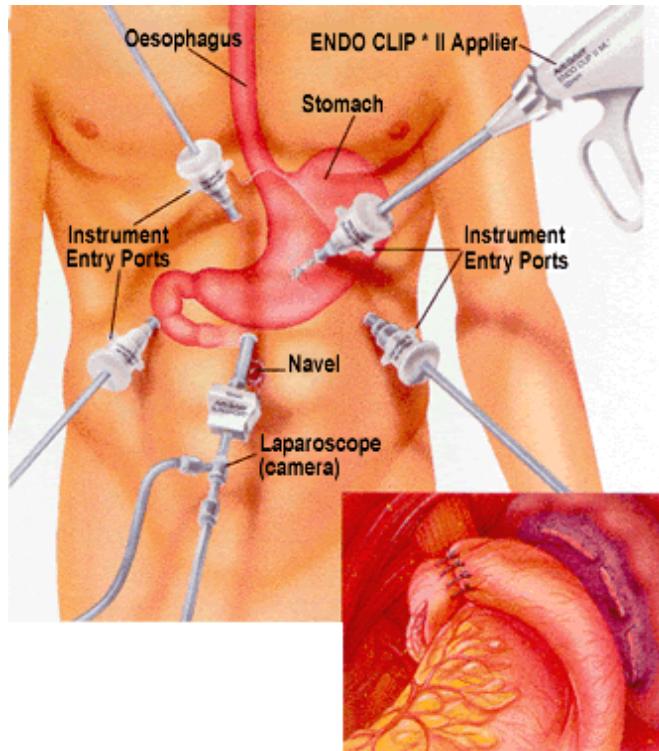
### 44.67 Laparoscopic procedures for creation of esophagogastric sphincteric competence

Fundoplication

Gastric cardioplasty

Nissen's fundoplication

Restoration of cardio-esophageal angle



*Severe, chronic heartburn can now be surgically corrected via a minimally invasive procedure that secures the top of the stomach around the bottom of the esophagus (inset) to prevent the reflux of stomach acids.*

**44.68 Laparoscopic gastroplasty**

Banding

Silastic vertical banding

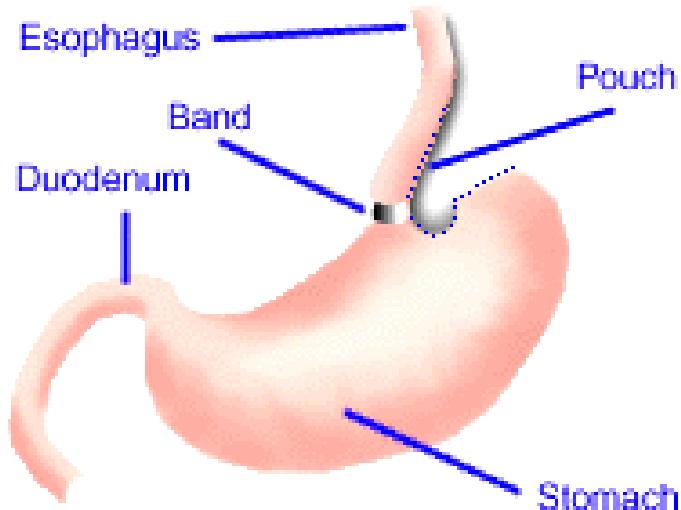
Vertical banded gastroplasty (VBG)

Code also any synchronous laparoscopic gastroenterostomy [\(44.38\)](#)

*Excludes:* insertion, laparoscopic adjustable gastric band

(restrictive procedure) [\(44.95\)](#)

other repair of stomach, open approach [\(44.61-44.65, 44.69\)](#)



Blue dots indicate surgical micro staples

## 44.9 Other operations on stomach

### 44.95 Laparoscopic gastric restrictive procedure

Adjustable gastric band and port insertion

*Excludes:* laparoscopic gastroplasty (44.68)  
other repair of stomach (44.69)

### 44.96 Laparoscopic revision of gastric restrictive procedure

Revision or replacement of:

adjustable gastric band  
subcutaneous gastric port device

### 44.97 Laparoscopic removal of gastric restrictive device(s)

Removal of either or both:

adjustable gastric band  
subcutaneous port device

*Excludes:* nonoperative removal of gastric restrictive device(s) (97.86)  
open removal of gastric restrictive device(s) (44.99)

### 44.98 (Laparoscopic) adjustment of size of adjustable gastric restrictive device

Infusion of saline for device tightening

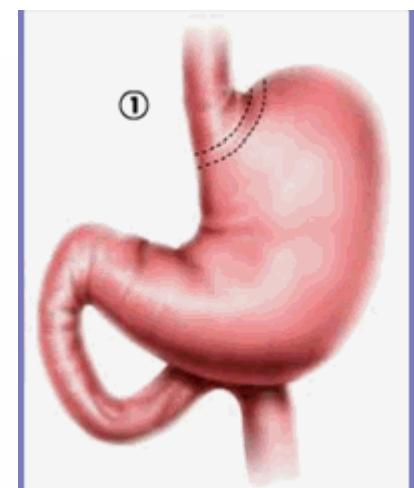
Withdrawal of saline for device loosening

Code also any:

abdominal ultrasound (88.76)

abdominal wall fluoroscopy (88.09)

barium swallow (87.61)



# **Stem cell transplant**

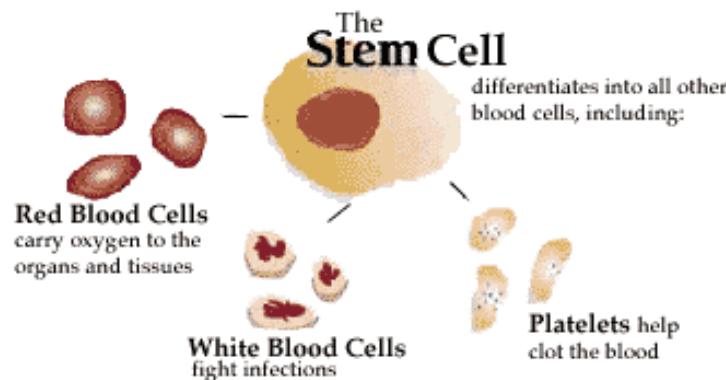
## 41.0 Bone marrow or hematopoietic stem cell transplant ®

Note: To report donor source - see codes [00.91-00.93](#)

**41.07 Autologous hematopoietic stem cell transplant with purging**   
Cell depletion

**41.08 Allogeneic hematopoietic stem cell transplant with purging**   
Cell depletion

**41.09 Autologous bone marrow transplant with purging**   
With extracorporeal purging of malignant cells from marrow  
Cell depletion



**TUMT & TUNA**

## 60.9 Other operations on prostate

### 60.96 Transurethral destruction of prostate tissue by microwave thermotherapy

Transurethral microwave thermotherapy (TUMT) of prostate

*Excludes:* Prostatectomy:

other [\(60.61 - 60.69\)](#)

radical [\(60.5\)](#)

retropubic [\(60.4\)](#)

suprapubic [\(60.3\)](#)

transurethral [\(60.21 - 60.29\)](#)

### 60.97 Other transurethral destruction of prostate tissue by other thermotherapy

Radiofrequency thermotherapy

Transurethral needle ablation (TUNA) of prostate

*Excludes:* Prostatectomy:

other [\(60.61 - 60.69\)](#)

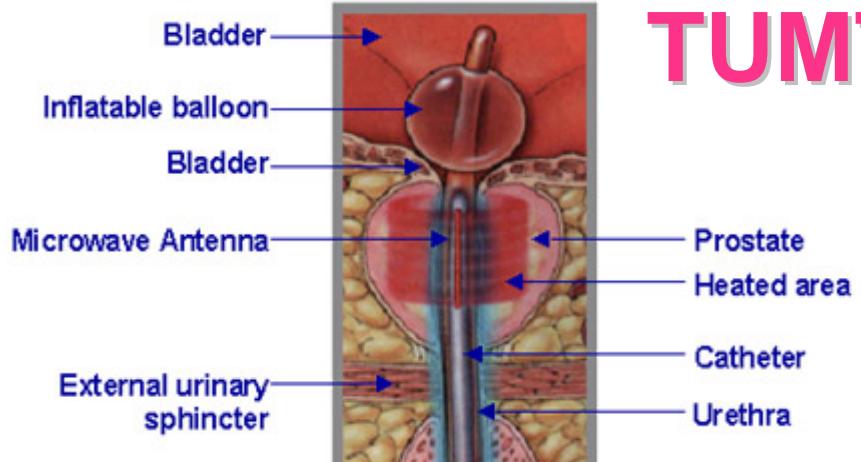
radical [\(60.5\)](#)

retropubic [\(60.4\)](#)

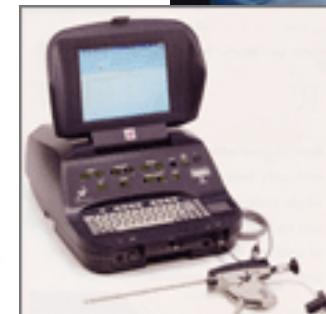
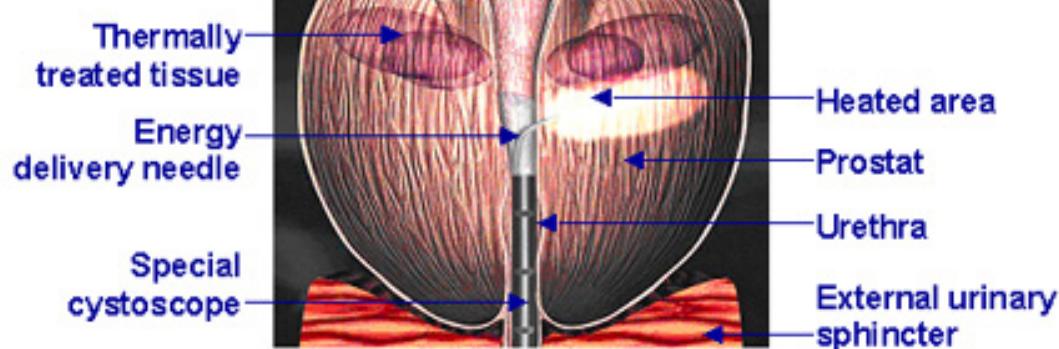
suprapubic [\(60.3\)](#)

transurethral [\(60.21 - 60.29\)](#)

**TUMT**



**TUNA**



**OBGYN**

## 67.5 Repair of internal cervical os

67.51 Transabdominal cerclage of cervix

67.59 Other repair of internal cervical os

Cerclage of isthmus uteri

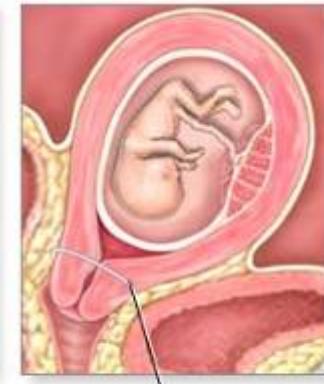
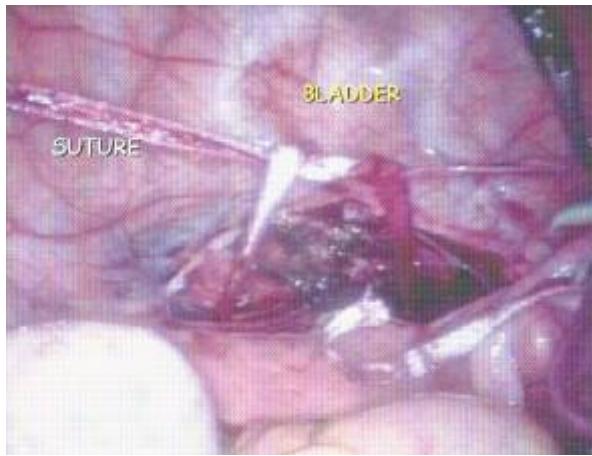
McDonald operation

Shirodkar operation

Transvaginal cerclage

*Excludes:* laparoscopically assisted supracervical hysterectomy  
[LASH] [\(68.31\)](#)

transabdominal cerclage of cervix [\(67.51\)](#)



**cerclage** = encircling of a part with a ring or loop

•ADAM.

## 68.3 Subtotal abdominal hysterectomy

### 68.31 Laparoscopic supracervical hysterectomy [LSH] ✎

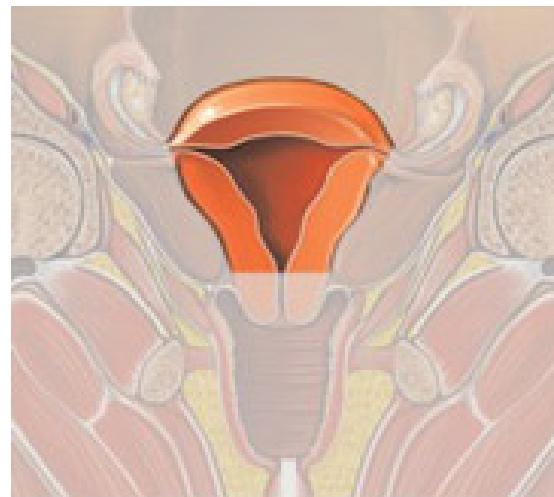
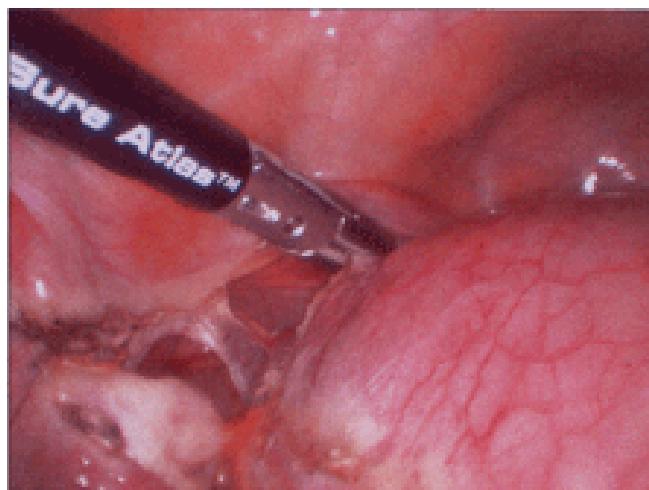
Classic infrafascial SEMM hysterectomy [CISH]

Laparoscopically assisted supracervical hysterectomy [LASH]

### 68.39 Other subtotal abdominal hysterectomy, NOS ✎

Supracervical hysterectomy

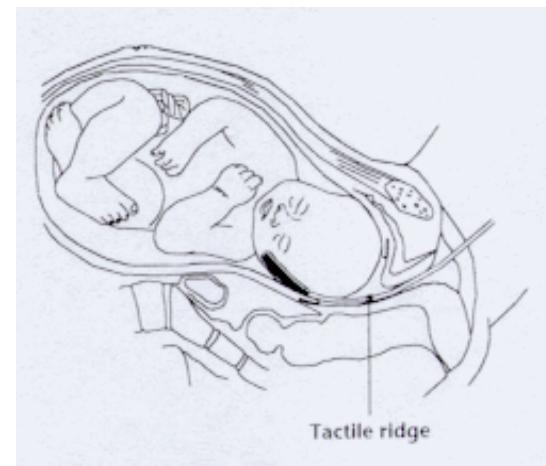
*Excludes:* classic infrafascial SEMM hysterectomy [CISH] [\(68.31\)](#)  
laparoscopic supracervical hysterectomy [LSH] [\(68.31\)](#)



## 75.3 Other intrauterine operations on fetus and amnion

### 75.38 Fetal pulse oximetry

Transcervical fetal oxygen saturation monitoring  
Transcervical fetal SpO<sub>2</sub> monitoring



# Miscellaneous

## 00.9 Other procedures and interventions

### 00.91 Transplant from live related donor

Code also organ transplant procedure

### 00.92 Transplant from live non-related donor

Code also organ transplant procedure

### 00.93 Transplant from cadaver

Code also organ transplant procedure



"OK, the old one's in my right hand,  
the donor's in my left. Right?"

# **Invalid procedure code**

67.5	Repair of internal cervical os
81.09	Refusion of spine, any level or technique
37.5	Heart transplantation
68.3	Subtotal abdominal hysterectomy

## ICD-9-CM Extension Codes

- ThaiDRG version 3 ไม่สามารถแยกแยะ Multiple หรือ Bilateral procedure ได้
- รหัสหัวตตการปัจจุบัน(ส่วนใหญ่)ไม่ได้แสดงถึงจำนวนแห่ง/ข้าง
- การใส่รหัสซ้ำกันเพื่อแสดงการทำลายครั้งมีปัญหาในด้านการจัดการข้อมูล

# ICD-9-CM Extension Codes

9 9 9 9 + 9 9

ICD-9-CM Code

Multiplicity

Settings

**ตัวอย่างที่ 1** ผ่าตัดต้อกระจกด้วยเครื่องสลายต้อ 2 ข้าง  
พร้อมกัน ในการผ่าตัดครั้งเดียว

1 3 4 1 + 2 1

Phacoemulsification and aspiration of cataract

2 ตา

ในการผ่าตัดครั้งที่ 1

## ตัวอย่างที่ 2 ผ่าตัดสมองหล่ายครั้ง/หล่ายต่อเนื่อง

Summary	ICD-9-CM Code	ICD-9-CM ext Code
<p><b>Operation setting 1:</b></p> <p>(1) Craniotomy with removal of Extradural hematoma, Right temporal area            (2) Craniotomy with removal of Extradural hematoma, left occipital area            (3) Debridement of opened skull fracture, Right frontal area</p>	0124 0124 0202	0124+21 0202+11
<p><b>Operation setting 2:</b></p> <p>(1) Craniotomy with removal of Extradural hematoma, Left temporal area            (2) Reopened Craniotomy with removal of Subdural hematoma, left occipital area</p>	0124 0131	0124+12 0131+11
<p><b>Operation setting 3:</b></p> <p>(1) Tracheostomy</p>	311	311+11

# ตัวอย่างที่ 3 ตัดเนื้อตายและ ปลูกถ่ายผิวหนัง

<b>Summary</b>	<b>ICD-9-CM Code</b>	<b>ICD-9-CM ext Code</b>
<b>Operation setting 1:</b> (1) Excisional Debridement, both hand & abdomen	8622	8622+31
<b>Operation setting 2:</b> (1) Excisional Debridement, right hand	8622	8622+12
<b>Operation setting 3:</b> (1) Excisional Debridement, abdomen	8622	8622+13
<b>Operation setting 4:</b> (1)Skin graft (full thickness), both hand (2)Skin graft (full thickness), abdomen	8661 8664	8661+21 8664+11
<b>Operation setting 5:</b> (1) Skin graft (full thickness), Right hand (2) Excisional debridement, buttock	8661 8622	8661+12 8622+14

# ข้อกำหนดอื่นๆ

1. **ข้อมูลที่ไม่มีรหัสต่อห้าย หมายถึง การทำหัตถการครั้งเดียว และเป็นการทำหัตถการครั้งที่ 1 การใส่รหัสซ้ำกันในข้อมูลชุดเดียวกัน จะถูกนับเพียงครั้งเดียว เช่น 8622 หมายถึง 8622+11  
8622,8622 หมายถึง 8622+11  
8622+2 หมายถึง 8622+21**
2. ในกรณีที่ทำหัตถการตั้งแต่ **9 ตำแหน่งขึ้นไป** ใน 1 setting ให้ใช้ รหัสเป็น “9”
3. รหัสของหัตถการบางชนิดที่แสดงถึงการทำหัตถการ 2 ข้าง หรือหลายตำแหน่งในการหัตถการครั้งเดียวกันนั้นอยู่แล้ว ให้ใช้รหัสดังกล่าวเพื่อรับการทำหัตถการ 2 ข้างได้เลย

# Bilateral codes

<b>Thyroid and parathyroid procedure</b>	
06.4	Complete thyroidectomy
06.52	Complete substernal thyroidectomy
06.81	Complete parathyroidectomy
<b>Adrenal procedure</b>	
07.02	Bilateral exploration of adrenal field
07.3	Bilateral adrenalectomy

<b>Lung transplantation</b>	
33.52	Bilateral lung transplantation

## **Spinal fusion**

**81.61** 360 degree spinal fusion, single incision approach 

**81.62** Fusion or refusion of 2-3 vertebrae 

**81.63** Fusion or refusion of 4- 8 vertebrae 

**81.64** Fusion or refusion of 9 or more vertebrae 

# สรุป

ICD-9-CM	Ver 2005	Extension code
เริ่มใช้เมื่อไร?	มค.2549	มค.2549
มีผลเมื่อไร?	ThaiDRG V4	ThaiDRG V4
Invalid code เริ่มเมื่อไร	เมื่อมีประกาศ	-