

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Intravascular imaging of blood vessels	1
Soft tissue x-ray of face, head, and neck	2
X-ray of spine	1
Biliary tract x-ray	2
Other x-ray of digestive system	1
X-ray of urinary system	6
Other x-ray	2
Arteriography using contrast material	2
Anatomic and physiologic measurements and manual examinations -- genitourinary system	1
Other anatomic and physiologic measurements and manual examinations	1
Circulatory monitoring	2
Autopsy	1
specimen from ear, nose, throat, and larynx	1
specimen from female genital tract	1
Stereotactic radiosurgery	1
Other immobilization, pressure, and attention twound	5
General and subjective eye examination	3
Nonoperative procedures related to hearing	3
Nonoperative intubation of gastrointestinal and respiratory tracts	5
Nonoperative alimentary tract irrigation, cleaning, and local instillation	1
Nonoperative irrigation, cleaning, and local instillation of other digestive and genitourinary organs	2
Other nonoperative irrigation and cleaning	7
Other continuous invasive mechanical ventilation	1
Nonoperative replacement of musculoskeletal and integumentary system appliance	1
Nonoperative removal of therapeutic device from head and neck	2
Nonoperative removal of therapeutic device from thorax	1
Nonoperative removal of therapeutic device from digestive system	1
Other nonoperative removal of therapeutic device	1
Removal of intraluminal foreign body from digestive system without incision	1
Removal of intraluminal foreign body from other sites without incision	1
Removal of other foreign body without incision	1
Extracorporeal shockwave lithotripsy (ESWL)	2
Injection or infusion of other therapeutic or prophylactic substance	3
Other miscellaneous procedures	4

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Cranial puncture	1
Diagnostic procedures on skull, brain, and cerebral meninges	21
Craniotomy and craniectomy	19
Incision of brain and cerebral meninges	4
Other excision or destruction of brain and meninges	13
Excision of lesion of skull	3
Cranioplasty	3
Repair of cerebral meninges	2
Ventriculostomy	43
Extracranial ventricular shunt	18
Revision, removal, and irrigation of ventricular shunt	13
2.8	2
Other operations on skull, brain, and cerebral meninges	1
Exploration and decompression of spinal canal structures	5
Diagnostic procedures on spinal cord and spinal canal structures	25
Excision or destruction of lesion of spinal cord or spinal meninges	4
Other operations on spinal cord and spinal canal structures	2
Incision, division, and excision of cranial and peripheral nerves	2
Diagnostic procedures on peripheral nervous system	2
Other cranial or peripheral neuroplasty	1
Injection into peripheral nerve	1
Diagnostic procedures on sympathetic nerves or ganglia	1
Sympathectomy	1

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Incision of thyroid field	1
Unilateral thyroid lobectomy	4
Other partial thyroidectomy	4
Complete thyroidectomy	3
Diagnostic procedures on adrenal glands, pituitary gland, pineal gland, and thymus	1
Partial adrenalectomy	1
Thymectomy	2

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Incision of eyelid	1
Diagnostic procedures on eyelid	2
Excision or destruction of lesion or tissue of eyelid	4
Repair of entropion or ectropion	1
Other reconstruction of eyelid	1
Other repair of eyelid	1
Diagnostic procedures on lacrimal system	1
Other operations on lacrimal gland	1
Manipulation of lacrimal passage	5
Other operations on lacrimal system	1
Diagnostic procedures on conjunctiva	1
Other operations on iris, ciliary body, and anterior chamber	1
Intracapsular extraction of lens	8
Extracapsular extraction of lens by linear extraction technique	1
Extracapsular extraction of lens by fragmentation and aspiration technique	3
Other extracapsular extraction of lens	1
Other cataract extraction	3
Insertion of prosthetic lens [pseudophakos]	5
Repair of retinal tear	1
Other repair of retinal detachment	2
Operations on vitreous	4
Operations on one extraocular muscle involving temporary detachment from globe	6
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	4
Other operations on two or more extraocular muscles, one or both eyes	1
Diagnostic procedures on external ear	1
Excision or destruction of lesion of external ear	5
Reconstruction of external auditory canal	2
Other plastic repair of external ear	2
Stapedectomy	1
Other operations on ossicular chain	2
Myringoplasty	15
Other tympanoplasty	7
Revision of tympanoplasty	1
Myringotomy	87
Removal of tympanostomy tube	10
Incision of mastoid and middle ear	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Diagnostic procedures on middle and inner ear	2
Mastoidectomy	10
Other excision of middle ear	3
Incision, excision, and destruction of inner ear	1
Diagnostic procedures on nose	3
Submucous resection of nasal septum	2
Turbinectomy	3
Repair and plastic operations on the nose	6
Aspiration and lavage of nasal sinus	15
Diagnostic procedures on nasal sinus	8
Intranasal antrotomy	17
External maxillary antrotomy	12
Frontal sinusotomy and sinusectomy	2
Other nasal sinusotomy	5
Other nasal sinusectomy	13
Forceps extraction of tooth	9
Surgical removal of tooth	15
Restoration of tooth by filling	8
Other dental restoration	12
Apicoectomy and root canal therapy	1
Diagnostic procedures on teeth, gums, and alveoli	1
Other operations on gum	1
Excision of dental lesion of jaw	1
Diagnostic procedures on tongue	3
Excision or destruction of lesion or tissue of tongue	1
Partial glossectomy	1
Excision of lesion of salivary gland	2
Sialoadenectomy	2
Diagnostic procedures on oral cavity	4
Excision of other parts of mouth	3
Plastic repair of mouth	1
Palatoplasty	1
Operations on uvula	1
Incision and drainage of tonsil and peritonsillar structures	1
Diagnostic procedures on tonsils and adenoids	2
Tonsillectomy without adenoidectomy	24

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

*Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)*

Procedure/ICD code	# survivors
Tonsillectomy with adenoidectomy	25
Adenoidectomy without tonsillectomy	7
Diagnostic procedures on pharynx	5
Excision of branchial cleft cyst or vestige	2
Excision or destruction of lesion or tissue of pharynx	1

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Temporary tracheostomy	5
Permanent tracheostomy	3
Diagnostic procedures on larynx and trachea	8
Repair and plastic operations on trachea	2
Local excision or destruction of lesion or tissue of bronchus	2
Local excision or destruction of lesion or tissue of lung	4
Segmental resection of lung	3
Lobectomy of lung	3
Incision of lung	2
Diagnostic procedures on lung and bronchus	133
Surgical collapse of lung	1
Lung transplant	1
Other operations on lung and bronchus	4
Incision of chest wall and pleura	39
Incision of mediastinum	1
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	5
Excision or destruction of lesion of chest wall	2
Pleurectomy	1
Other operations on thorax	3

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)***

Procedure/ICD code	# survivors
Open heart valvuloplasty without replacement	1
Other and unspecified repair of atrial and ventricular septa	2
Total repair of certain congenital cardiac anomalies	1
Pericardiocentesis	2
Cardiotomy and pericardiotomy	1
Diagnostic procedures on heart and pericardium	10
Pericardiectomy and excision of lesion of heart	1
Heart replacement procedures	1
Incision of vessel	3
Other excision of vessel	1
Other surgical occlusion of vessels	3
Other shunt or vascular bypass	5
Revision of vascular procedure	1
Other repair of vessels	2
Other operations on vessels	2
Incision of lymphatic structures	1
Diagnostic procedures on lymphatic structures	70
Simple excision of lymphatic structure	23
Regional lymph node excision	1
Radical excision of cervical lymph nodes	2
Bone marrow or hematopoietic stem cell transplant	84
Diagnostic procedures on bone marrow and spleen	149
Total splenectomy	12
Other operations on spleen and bone marrow	27

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	12
Local excision or destruction of lesion or tissue of esophagus	1
Other repair of esophagus	2
Other operations on esophagus	4
Gastrostomy	4
Diagnostic procedures on stomach	5
Control of hemorrhage and suture of ulcer of stomach or duodenum	3
Other repair of stomach	1
Other operations on stomach	1
Enterotomy	1
Diagnostic procedures on small intestine	18
Diagnostic procedures on large intestine	16
Local excision or destruction of lesion or tissue of small intestine	4
Isolation of intestinal segment	1
Other excision of small intestine	3
Partial excision of large intestine	8
Intestinal anastomosis	1
Exteriorization of intestine	2
Colostomy	5
Ileostomy	4
Other enterostomy	2
Revision of intestinal stoma	4
Closure of intestinal stoma	7
Other repair of intestine	2
Appendectomy	31
Incidental appendectomy	30
Drainage of appendiceal abscess	1
Other operations on appendix	2
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	8
Local excision or destruction of lesion or tissue of rectum	1
Pull-through resection of rectum	1
Repair of rectum	1
Incision or excision of perirectal tissue or lesion	1
Other operations on rectum and perirectal tissue	1
Local excision or destruction of other lesion or tissue of anus	1
Division of anal sphincter	1

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Other operations on anus	1
Diagnostic procedures on liver	108
Diagnostic procedures on biliary tract	1
Cholecystectomy	20
Repair of bile ducts	1
Other operations on biliary tract	1
Marsupialization of pancreatic cyst	1
Other unilateral repair of inguinal hernia	21
Other bilateral repair of inguinal hernia	10
Repair of other hernia of anterior abdominal wall (without graft or prosthesis)	3
Other hernia repair	9
Incision of abdominal wall	9
Laparotomy	63
Diagnostic procedures of abdominal region	14
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	1
Excision or destruction of peritoneal tissue	2
Lysis of peritoneal adhesions	4
Suture of abdominal wall and peritoneum	3

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Nephrotomy and nephrostomy	2
Diagnostic procedures on kidney	17
Complete nephrectomy	2
Transplant of kidney	1
Transurethral removal of obstruction from ureter and renal pelvis	2
Ureterotomy	1
Diagnostic procedures on ureter	1
Other anastomosis or bypass of ureter	2
Repair of ureter	1
Transurethral clearance of bladder	1
Cystotomy and cystostomy	3
Diagnostic procedures on bladder	19
Transurethral excision or destruction of bladder tissue	1
Other operations on bladder	6
Urethral meatotomy	4
Excision or destruction of lesion or tissue of urethra	1
Repair of urethra	3
Release of urethral stricture	1
Dilation of urethra	1
Other repair of urinary stress incontinence	1
Ureteral catheterization	2

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Diagnostic procedures on prostate and seminal vesicles	1
Incision and drainage of scrotum and tunica vaginalis	1
Diagnostic procedures on scrotum and tunica vaginalis	2
Excision of hydrocele (of tunica vaginalis)	2
Excision or destruction of lesion or tissue of scrotum	1
Incision of testis	1
Diagnostic procedures on testes	980
Excision or destruction of testicular lesion	3
Unilateral orchiectomy	17
Bilateral orchiectomy	11
Orchiopexy	14
Insertion of testicular prosthesis	14
Other operations on testes	2
Diagnostic procedures on spermatic cord, epididymis, and vas deferens	1
Excision of varicocele and hydrocele of spermatic cord	8
Excision of other lesion or tissue of spermatic cord and epididymis	1
Circumcision	3
Repair and plastic operation on penis	1
Other operations on male genital organs	1
Diagnostic procedures on ovaries	2
Local excision or destruction of ovarian lesion or tissue	8
Unilateral oophorectomy	3
Unilateral salpingo-oophorectomy	2
Bilateral oophorectomy	1
Bilateral salpingo-oophorectomy	2
Repair of ovary	2
Other operations on ovary	1
Other bilateral destruction or occlusion of fallopian tubes	1
Total unilateral salpingectomy	1
Dilation of cervical canal	1
Conization of cervix	1
Other excision or destruction of lesion or tissue of cervix	5
Diagnostic procedures on uterus and supporting structures	1
Total abdominal hysterectomy	4
Incision of vagina and rectouterine pouch	1
Diagnostic procedures on vagina and rectouterine pouch	1

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Local excision or destruction of vagina and rectouterine pouch	1
Incision of vulva and perineum	1
Other local excision or destruction of vulva and perineum	2
Classical cesarean section	1
Cesarean section of unspecified type	1
Repair of current obstetric laceration of uterus	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Diagnostic procedures on facial bones and joints	2
Other facial bone repair and orthognathic surgery	1
Reduction of facial fracture	2
Other operations on facial bones and joints	1
Sequestrectomy	2
Other incision of bone without division	3
Other division of bone	7
Biopsy of bone	31
Excision and repair of bunion and other toe deformities	1
Local excision of lesion or tissue of bone	7
Other partial ostectomy	1
Total ostectomy	1
Application of external fixator device	1
Limb shortening procedures	1
Internal fixation of bone without fracture reduction	1
Removal of implanted devices from bone	3
Closed reduction of fracture without internal fixation	5
Closed reduction of fracture with internal fixation	1
Open reduction of fracture with internal fixation	5
Debridement of open fracture site	1
Closed reduction of dislocation	1
Other arthrotomy	1
Arthroscopy	5
Biopsy of joint structure	3
Division of joint capsule, ligament, or cartilage	1
Excision or destruction of intervertebral disc	1
Synovectomy	1
Other local excision or destruction of lesion of joint	2
Other excision of joint	1
Arthrodesis and arthroereisis of foot and ankle	2
Other repair of joint of lower extremity	1
Joint replacement of lower extremity	8
Other procedures on spine	1
Other operations on joint structures	4
Division of muscle, tendon, and fascia of hand	1
Excision of lesion of muscle, tendon, and fascia of hand	2

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Acute lymphoblastic leukemia
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Suture of muscle, tendon, and fascia of hand	1
Transplantation of muscle and tendon of hand	1
Plastic operation on hand with graft or implant	1
Other plastic operations on hand	1
Other operations on muscle, tendon, and fascia of hand	1
Incision of muscle, tendon, fascia, and bursa	6
Division of muscle, tendon, and fascia	2
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	9
Excision of lesion of muscle, tendon, fascia, and bursa	10
Other excision of muscle, tendon, and fascia	1
Bursectomy	1
Reconstruction of muscle and tendon	3
Other plastic operations on muscle, tendon, and fascia	9
Amputation of upper limb	1
Amputation of lower limb	1
Implantation or fitting of prosthetic limb device	1
Diagnostic procedures on breast	4
Excision or destruction of breast tissue	4
Reduction mammoplasty and subcutaneous mastectomy	4
Mastectomy	1
Incision of skin and subcutaneous tissue	18
Diagnostic procedures on skin and subcutaneous tissue	33
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	30
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	23
Radical excision of skin lesion	3
Free skin graft	11
Pedicle grafts or flaps	3
Other repair and reconstruction of skin and subcutaneous tissue	4
Other operations on skin and subcutaneous tissue	1

***Surgery-Detailed report: Acute myeloid leukemia
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Other cardiovascular procedures	1
Other x-ray of abdomen	1
Skeletal x-ray of extremities and pelvis	1
Arteriography using contrast material	2
Angiocardiography using contrast material	1
Anatomic and physiologic measurements and manual examinations -- genitourinary system	1
Other immobilization, pressure, and attention twound	2
Nonoperative intubation of gastrointestinal and respiratory tracts	2
Nonoperative irrigation, cleaning, and local instillation of other digestive and genitourinary organs	1
Other nonoperative irrigation and cleaning	4
Enteral infusion of concentrated nutritional substances	1
Nonoperative replacement of gastrointestinal appliance	1
Nonoperative replacement of musculoskeletal and integumentary system appliance	1
Nonoperative removal of therapeutic device from head and neck	1
Nonoperative removal of therapeutic device from digestive system	3
Other nonoperative removal of therapeutic device	1
Removal of other foreign body without incision	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Acute myeloid leukemia
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Diagnostic procedures on skull, brain, and cerebral meninges	1
Craniotomy and craniectomy	2
Incision of brain and cerebral meninges	1
Ventriculostomy	2
Extracranial ventricular shunt	1
Revision, removal, and irrigation of ventricular shunt	2
Exploration and decompression of spinal canal structures	2
Diagnostic procedures on spinal cord and spinal canal structures	3
Plastic operations on spinal cord structures	1
Other operations on spinal cord and spinal canal structures	1
Incision, division, and excision of cranial and peripheral nerves	2
Diagnostic procedures on peripheral nervous system	1
Lysis of adhesions and decompression of cranial and peripheral nerves	1
Other cranial or peripheral neuroplasty	1
Sympathectomy	1

***Surgery-Detailed report: Acute myeloid leukemia
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Incision of thyroid field	1
Other partial thyroidectomy	2
Hypophysectomy	1

***Surgery-Detailed report: Acute myeloid leukemia
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Manipulation of lacrimal passage	2
Corneal transplant	1
Iridotomy and simple iridectomy	1
Intracapsular extraction of lens	2
Extracapsular extraction of lens by simple aspiration (and irrigation) technique	2
Extracapsular extraction of lens by fragmentation and aspiration technique	1
Other cataract extraction	1
Insertion of prosthetic lens [pseudophakos]	2
Operations on vitreous	2
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	2
Diagnostic procedures on orbit and eyeball	1
Diagnostic procedures on external ear	1
Other plastic repair of external ear	1
Myringoplasty	3
Other tympanoplasty	2
Myringotomy	17
Removal of tympanostomy tube	2
Incision of mastoid and middle ear	1
Mastoidectomy	2
Control of epistaxis	1
Incision of nose	1
Diagnostic procedures on nose	1
Repair and plastic operations on the nose	1
Aspiration and lavage of nasal sinus	5
Diagnostic procedures on nasal sinus	2
Intranasal antrotomy	6
External maxillary antrotomy	2
Forceps extraction of tooth	3
Surgical removal of tooth	4
Restoration of tooth by filling	1
Other dental restoration	2
Diagnostic procedures on teeth, gums, and alveoli	2
Diagnostic procedures on salivary glands and ducts	1
Sialoadenectomy	3
Diagnostic procedures on oral cavity	3
Excision of other parts of mouth	1

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

*Surgery-Detailed report: Acute myeloid leukemia
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)*

Procedure/ICD code	# survivors
Tonsillectomy without adenoidectomy	4
Tonsillectomy with adenoidectomy	4

***Surgery-Detailed report: Acute myeloid leukemia
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Diagnostic procedures on larynx and trachea	2
Local excision or destruction of lesion or tissue of bronchus	1
Local excision or destruction of lesion or tissue of lung	4
Segmental resection of lung	1
Lobectomy of lung	1
Diagnostic procedures on lung and bronchus	26
Surgical collapse of lung	2
Incision of chest wall and pleura	19
Excision or destruction of lesion of chest wall	1
Pleurectomy	3
Other operations on thorax	1

***Surgery-Detailed report: Acute myeloid leukemia
 Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)***

Procedure/ICD code	# survivors
Open heart valvuloplasty without replacement	1
Operations on structures adjacent theart valves	1
Repair of atrial and ventricular septa with prosthesis	2
Repair of atrial and ventricular septa with tissue graft	2
Other and unspecified repair of atrial and ventricular septa	4
Cardiotomy and pericardiotomy	1
Diagnostic procedures on heart and pericardium	5
Heart replacement procedures	1
Insertion, revision, replacement, and removal of pacemaker leads; insertion of temporary pacemaker system; or revision of cardiac device pocket	1
Incision of vessel	2
Other excision of vessel	1
Other surgical occlusion of vessels	1
Puncture of vessel	6
Other shunt or vascular bypass	2
Revision of vascular procedure	1
Other repair of vessels	1
Extracorporeal circulation and procedures auxiliary to heart surgery	2
Other operations on vessels	1
Diagnostic procedures on lymphatic structures	9
Simple excision of lymphatic structure	3
Regional lymph node excision	1
Radical excision of cervical lymph nodes	1
Bone marrow or hematopoietic stem cell transplant	35
Diagnostic procedures on bone marrow and spleen	15
Total splenectomy	11
Other operations on spleen and bone marrow	16

***Surgery-Detailed report: Acute myeloid leukemia
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	7
Intrathoracic anastomosis of esophagus	2
Other repair of esophagus	1
Other operations on esophagus	1
Gastrostomy	1
Diagnostic procedures on stomach	1
Pyloroplasty	1
Diagnostic procedures on small intestine	5
Diagnostic procedures on large intestine	5
Other excision of small intestine	2
Partial excision of large intestine	2
Colostomy	3
Other enterostomy	1
Closure of intestinal stoma	2
Appendectomy	4
Incidental appendectomy	3
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	7
Incision or excision of perirectal tissue or lesion	1
Diagnostic procedures on anus and perianal tissue	1
Local excision or destruction of other lesion or tissue of anus	1
Hepatotomy	1
Diagnostic procedures on liver	28
Local excision or destruction of liver tissue or lesion	2
Cholecystotomy and cholecystostomy	1
Diagnostic procedures on biliary tract	1
Cholecystectomy	3
Diagnostic procedures on pancreas	1
Other unilateral repair of inguinal hernia	1
Other bilateral repair of inguinal hernia	1
Laparotomy	21
Diagnostic procedures of abdominal region	3
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	1
Excision or destruction of peritoneal tissue	1
Other operations of abdominal region	2

***Surgery-Detailed report: Acute myeloid leukemia
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Diagnostic procedures on kidney	2
Complete nephrectomy	2
Other anastomosis or bypass of ureter	1
Diagnostic procedures on bladder	1
Other operations on bladder	1

***Surgery-Detailed report: Acute myeloid leukemia
 Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Excision or destruction of lesion or tissue of scrotum	2
Repair of scrotum and tunica vaginalis	1
Incision of testis	1
Diagnostic procedures on testes	14
Excision or destruction of testicular lesion	1
Unilateral orchiectomy	1
Orchiopexy	1
Circumcision	1
Diagnostic procedures on ovaries	1
Bilateral endoscopic destruction or occlusion of fallopian tubes	1
Other salpingectomy	1
Dilation and curettage of uterus	1
Diagnostic procedures on vagina and rectouterine pouch	1
Other repair of vagina	1

***Surgery-Detailed report: Acute myeloid leukemia
 Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Other incision of bone without division	1
Wedge osteotomy	1
Biopsy of bone	4
Local excision of lesion or tissue of bone	3
Other partial ostectomy	1
Internal fixation of bone without fracture reduction	1
Closed reduction of fracture without internal fixation	1
Unspecified operation on bone injury	1
Other arthrotomy	3
Arthroscopy	1
Biopsy of joint structure	1
Excision of semilunar cartilage of knee	1
Other local excision or destruction of lesion of joint	1
Other repair of joint of lower extremity	1
Joint replacement of lower extremity	1
Arthroplasty and repair of shoulder and elbow	1
Excision of lesion of muscle, tendon, and fascia of hand	1
Incision of muscle, tendon, fascia, and bursa	2
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	2
Excision of lesion of muscle, tendon, fascia, and bursa	4
Other excision of muscle, tendon, and fascia	1
Diagnostic procedures on breast	3
Excision or destruction of breast tissue	3
Reduction mammoplasty and subcutaneous mastectomy	1
Incision of skin and subcutaneous tissue	5
Diagnostic procedures on skin and subcutaneous tissue	10
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	2
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	4
Free skin graft	4
Pedicle grafts or flaps	1
Other repair and reconstruction of skin and subcutaneous tissue	1

***Surgery-Detailed report: Other leukemia
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Other x-ray of digestive system	1
X-ray of urinary system	1
specimen from nervous system and of spinal fluid	1
specimen from ear, nose, throat, and larynx	1
Nonoperative intubation of gastrointestinal and respiratory tracts	1
Nonoperative irrigation, cleaning, and local instillation of other digestive and genitourinary organs	1
Other nonoperative irrigation and cleaning	1
Nonoperative removal of therapeutic device from head and neck	1
Other nonoperative removal of therapeutic device	1
Therapeutic apheresis or other injection, administration, or infusion of other therapeutic or prophylactic substance	2
Other miscellaneous procedures	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Other leukemia
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Diagnostic procedures on skull, brain, and cerebral meninges	2
Craniotomy and craniectomy	4
Cranioplasty	2
Ventriculostomy	1
Extracranial ventricular shunt	1
Exploration and decompression of spinal canal structures	1
Diagnostic procedures on spinal cord and spinal canal structures	2
Excision or destruction of lesion of spinal cord or spinal meninges	1

***Surgery-Detailed report: Other leukemia
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Unilateral thyroid lobectomy	1
Other partial thyroidectomy	3
Complete thyroidectomy	1

***Surgery-Detailed report: Other leukemia
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Excision or destruction of lesion or tissue of eyelid	1
Intracapsular extraction of lens	2
Other cataract extraction	2
Operations on vitreous	1
Operations on one extraocular muscle involving temporary detachment from globe	2
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	1
Diagnostic procedures on orbit and eyeball	1
Reconstruction of external auditory canal	1
Myringotomy	10
Removal of tympanostomy tube	1
Incision of nose	1
Local excision or destruction of lesion of nose	2
Repair and plastic operations on the nose	1
Aspiration and lavage of nasal sinus	1
Diagnostic procedures on nasal sinus	2
Intranasal antrotomy	4
External maxillary antrotomy	1
Frontal sinusotomy and sinusectomy	1
Other nasal sinusotomy	1
Other nasal sinusectomy	4
Forceps extraction of tooth	1
Surgical removal of tooth	3
Other dental restoration	2
Drainage of face and floor of mouth	1
Diagnostic procedures on oral cavity	1
Tonsillectomy with adenoidectomy	4
Diagnostic procedures on pharynx	1

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Other leukemia
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Temporary tracheostomy	2
Other incision of larynx or trachea	1
Diagnostic procedures on larynx and trachea	1
Local excision or destruction of lesion or tissue of lung	1
Segmental resection of lung	1
Diagnostic procedures on lung and bronchus	16
Incision of chest wall and pleura	3
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	1
Other operations on thorax	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Other leukemia
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)***

Procedure/ICD code	# survivors
Pericardiocentesis	1
Intra-abdominal venous shunt	1
Other shunt or vascular bypass	1
Other repair of vessels	2
Diagnostic procedures on lymphatic structures	9
Simple excision of lymphatic structure	1
Radical excision of cervical lymph nodes	1
Bone marrow or hematopoietic stem cell transplant	23
Diagnostic procedures on bone marrow and spleen	11
Total splenectomy	13
Other operations on spleen and bone marrow	8

***Surgery-Detailed report: Other leukemia
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	1
Gastrostomy	2
Diagnostic procedures on stomach	1
Other repair of stomach	1
Diagnostic procedures on small intestine	4
Diagnostic procedures on large intestine	5
Local excision or destruction of lesion or tissue of large intestine	1
Partial excision of large intestine	2
Exteriorization of intestine	1
Closure of intestinal stoma	1
Appendectomy	4
Incidental appendectomy	3
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	1
Other resection of rectum	1
Diagnostic procedures on liver	12
Other unilateral repair of inguinal hernia	2
Other bilateral repair of inguinal hernia	1
Bilateral repair of femoral hernia	1
Laparotomy	8
Diagnostic procedures of abdominal region	1
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	1
Excision or destruction of peritoneal tissue	1
Lysis of peritoneal adhesions	3

***Surgery-Detailed report: Other leukemia
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Diagnostic procedures on kidney	2
Transurethral removal of obstruction from ureter and renal pelvis	1
Other anastomosis or bypass of ureter	1
Diagnostic procedures on bladder	3
Other repair of urinary bladder	1
Other operations on bladder	1

***Surgery-Detailed report: Other leukemia
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Diagnostic procedures on testes	60
Excision or destruction of testicular lesion	1
Unilateral orchiectomy	1
Bilateral orchiectomy	2
Repair of testes	1
Insertion of testicular prosthesis	1
Excision of varicocele and hydrocele of spermatic cord	1
Diagnostic procedures on the penis	1
Other operations on male genital organs	1
Bilateral endoscopic destruction or occlusion of fallopian tubes	1
Other excision or destruction of lesion or tissue of cervix	1
Diagnostic procedures on vagina and rectouterine pouch	1

***Surgery-Detailed report: Other leukemia
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Temporomandibular arthroplasty	1
Other facial bone repair and orthognathic surgery	2
Biopsy of bone	1
Excision and repair of bunion and other toe deformities	1
Local excision of lesion or tissue of bone	1
Other partial ostectomy	1
Bone graft	1
Internal fixation of bone without fracture reduction	1
Removal of implanted devices from bone	1
Closed reduction of fracture with internal fixation	1
Open reduction of fracture with internal fixation	1
Other arthrotomy	1
Biopsy of joint structure	1
Division of muscle, tendon, and fascia	1
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	2
Excision of lesion of muscle, tendon, fascia, and bursa	1
Reconstruction of muscle and tendon	2
Other plastic operations on muscle, tendon, and fascia	1
Excision or destruction of breast tissue	1
Reduction mammoplasty and subcutaneous mamnectomy	2
Augmentation mammoplasty	1
Incision of skin and subcutaneous tissue	1
Diagnostic procedures on skin and subcutaneous tissue	6
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	5
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	4
Free skin graft	3
Pedicle grafts or flaps	1
Other repair and reconstruction of skin and subcutaneous tissue	1

***Surgery-Detailed report: Astrocytomas
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Therapeutic ultrasound	1
Intravascular imaging of blood vessels	1
Soft tissue x-ray of face, head, and neck	75
Other x-ray of face, head, and neck	2
X-ray of spine	18
X-ray of urinary system	2
Other x-ray	4
Arteriography using contrast material	109
Diagnostic ultrasound=	1
Other diagnostic imaging	4
Anatomic and physiologic measurements and manual examinations -- nervous system and sense organs	6
Autopsy	1
Therapeutic radiology and nuclear medicine	8
Skeletal traction and other traction	1
Other immobilization, pressure, and attention tbound	8
Examinations of form and structure of eye	1
Nonoperative intubation of gastrointestinal and respiratory tracts	2
Other nonoperative irrigation and cleaning	3
Nonoperative replacement of gastrointestinal appliance	1
Nonoperative replacement of musculoskeletal and integumentary system appliance	1
Nonoperative removal of therapeutic device from head and neck	6
Other nonoperative removal of therapeutic device	3
Removal of other foreign body without incision	1
Other miscellaneous procedures	5

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Astrocytomas
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Cranial puncture	18
Diagnostic procedures on skull, brain, and cerebral meninges	222
Craniotomy and craniectomy	404
Incision of brain and cerebral meninges	68
Operations on thalamus and globus pallidus	1
Other excision or destruction of brain and meninges	684
Excision of lesion of skull	5
Cranioplasty	13
Repair of cerebral meninges	9
Ventriculostomy	85
Extracranial ventricular shunt	329
Revision, removal, and irrigation of ventricular shunt	177
Other operations on skull, brain, and cerebral meninges	15
Exploration and decompression of spinal canal structures	48
Chordotomy	8
Diagnostic procedures on spinal cord and spinal canal structures	27
Excision or destruction of lesion of spinal cord or spinal meninges	38
Plastic operations on spinal cord structures	2
Shunt of spinal theca	10
Other operations on spinal cord and spinal canal structures	6
Incision, division, and excision of cranial and peripheral nerves	10
Diagnostic procedures on peripheral nervous system	12
Lysis of adhesions and decompression of cranial and peripheral nerves	1
Cranial or peripheral nerve graft	3
Transposition of cranial and peripheral nerves	1
Other cranial or peripheral neuroplasty	2
Injection into sympathetic nerve or ganglion	1
Other operations on nervous system	1

***Surgery-Detailed report: Astrocytomas
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Diagnostic procedures on adrenal glands, pituitary gland, pineal gland, and thymus	6
Operations on pineal gland	1

***Surgery-Detailed report: Astrocytomas
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Incision of eyelid	1
Diagnostic procedures on eyelid	1
Excision or destruction of lesion or tissue of eyelid	1
Repair of blepharoptosis and lid retraction	2
Other adjustment of lid position	4
Reconstruction of eyelid with flaps or grafts	1
Other reconstruction of eyelid	1
Excision of lesion or tissue of lacrimal gland	1
Other operations on conjunctiva	1
Intracapsular extraction of lens	1
Extracapsular extraction of lens by linear extraction technique	1
Operations on one extraocular muscle involving temporary detachment from globe	26
Other operations on one extraocular muscle	3
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	20
Other operations on two or more extraocular muscles, one or both eyes	6
Other operations on extraocular muscles and tendons	2
Orbitotomy	12
Removal of penetrating foreign body from eye, not otherwise specified	1
Diagnostic procedures on orbit and eyeball	3
Enucleation of eyeball	1
Secondary procedures after removal of eyeball	2
Repair of injury of eyeball and orbit	1
Other operations on orbit and eyeball	10
Diagnostic procedures on external ear	1
Excision or destruction of lesion of external ear	2
Myringoplasty	1
Myringotomy	18
Removal of tympanostomy tube	3
Mastoidectomy	1
Incision, excision, and destruction of inner ear	1
Local excision or destruction of lesion of nose	2
Reduction of nasal fracture	2
Repair and plastic operations on the nose	1
Intranasal antrotomy	1
Forceps extraction of tooth	6
Surgical removal of tooth	7

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Astrocytomas
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Restoration of tooth by filling	6
Other dental restoration	8
Excision or destruction of lesion or tissue of tongue	1
Partial glossectomy	1
Sialoadenectomy	1
Repair of salivary gland or duct	1
Excision of other parts of mouth	1
Plastic repair of mouth	1
Palatoplasty	2
Tonsillectomy without adenoidectomy	1
Tonsillectomy with adenoidectomy	8
Adenoidectomy without tonsillectomy	2
Diagnostic procedures on pharynx	1
Plastic operation on pharynx	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Astrocytomas
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Temporary tracheostomy	5
Permanent tracheostomy	5
Diagnostic procedures on larynx and trachea	5
Repair and plastic operations on trachea	2
Incision of lung	1
Diagnostic procedures on lung and bronchus	7
Incision of chest wall and pleura	4
Excision or destruction of lesion or tissue of mediastinum	1
Other operations on thorax	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

Surgery-Detailed report: Astrocytomas
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)

Procedure/ICD code	# survivors
Production of septal defect in heart	1
Repair of atrial and ventricular septa with prosthesis	1
Other and unspecified repair of atrial and ventricular septa	1
Incision of vessel	1
Diagnostic procedures on blood vessels	1
Other excision of vessel	2
Puncture of vessel	3
Intra-abdominal venous shunt	1
Other shunt or vascular bypass	3
Revision of vascular procedure	3
Extracorporeal circulation and procedures auxiliary to heart surgery	1
Simple excision of lymphatic structure	1
Regional lymph node excision	1
Radical excision of cervical lymph nodes	1

***Surgery-Detailed report: Astrocytomas
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	5
Gastrostomy	13
Other partial gastrectomy	1
Vagotomy	2
Diagnostic procedures on stomach	2
Pyloroplasty	1
Control of hemorrhage and suture of ulcer of stomach or duodenum	1
Other repair of stomach	4
Diagnostic procedures on small intestine	5
Diagnostic procedures on large intestine	1
Other excision of small intestine	1
Total intra-abdominal colectomy	1
Intestinal anastomosis	1
Ileostomy	1
Other enterostomy	1
Closure of intestinal stoma	1
Appendectomy	5
Incidental appendectomy	3
Diagnostic procedures on liver	1
Other unilateral repair of inguinal hernia	5
Other bilateral repair of inguinal hernia	8
Incision of abdominal wall	3
Laparotomy	6
Diagnostic procedures of abdominal region	2
Excision or destruction of peritoneal tissue	1
Other operations of abdominal region	8

***Surgery-Detailed report: Astrocytomas
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Nephrotomy and nephrostomy	1
Diagnostic procedures on kidney	2
Complete nephrectomy	2
Transplant of kidney	1
Ureterotomy	1
Diagnostic procedures on ureter	1
Other anastomosis or bypass of ureter	1
Cystotomy and cystostomy	1
Vesicostomy	2
Diagnostic procedures on bladder	6
Other operations on bladder	2
Release of urethral stricture	1
Ureteral catheterization	1

Surgery-Detailed report: Astrocytomas
Procedure Group: Genital organs and obstetrical procedures (60-75)

Procedure/ICD code	# survivors
Excision of varicocele and hydrocele of spermatic cord	7
Excision of other lesion or tissue of spermatic cord and epididymis	1
Circumcision	1
Other operations on male genital organs	1
Unilateral salpingo-oophorectomy	1
Diagnostic procedures on uterus and supporting structures	1
Excision or destruction of lesion or tissue of uterus	1
Dilation and curettage of uterus	3
Aspiration curettage of uterus	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

Surgery-Detailed report: Astrocytomas
Procedure Group: Musculoskeletal or integumentary system (76-86)

Procedure/ICD code	# survivors
Excision and reconstruction of facial bones	1
Other incision of bone without division	1
Other division of bone	13
Biopsy of bone	2
Excision and repair of bunion and other toe deformities	1
Excision of bone for graft	4
Bone graft	3
Application of external fixator device	1
Limb shortening procedures	1
Limb lengthening procedures	2
Internal fixation of bone without fracture reduction	4
Removal of implanted devices from bone	5
Closed reduction of fracture without internal fixation	1
Open reduction of fracture with internal fixation	1
Closed reduction of separated epiphysis	1
Open reduction of dislocation	2
Other arthrotomy	1
Arthroscopy	1
Division of joint capsule, ligament, or cartilage	5
Excision or destruction of intervertebral disc	5
Spinal fusion	26
Arthrodesis and arthroereisis of foot and ankle	2
Other repair of joint of lower extremity	3
Joint replacement of lower extremity	1
Other operations on joint structures	1
Other plastic operations on hand	1
Division of muscle, tendon, and fascia	13
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	4
Excision of lesion of muscle, tendon, fascia, and bursa	4
Other excision of muscle, tendon, and fascia	2
Reconstruction of muscle and tendon	8
Other plastic operations on muscle, tendon, and fascia	15
Amputation of lower limb	1
Revision of amputation stump	1
Other operations on musculoskeletal system	1
Incision of skin and subcutaneous tissue	11

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes

Surgery-Detailed report: Astrocytomas
Procedure Group: Musculoskeletal or integumentary system (76-86)

Procedure/ICD code	# survivors
Diagnostic procedures on skin and subcutaneous tissue	5
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	16
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	10
Radical excision of skin lesion	2
Suture or other closure of skin and subcutaneous tissue	6
Free skin graft	5
Pedicle grafts or flaps	4
Other repair and reconstruction of skin and subcutaneous tissue	4

***Surgery-Detailed report: Medulloblastoma, PNET
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Soft tissue x-ray of face, head, and neck	27
X-ray of spine	23
Other x-ray of thorax	1
Other x-ray	1
Arteriography using contrast material	24
Stereotactic radiosurgery	1
Other immobilization, pressure, and attention twound	2
Nonoperative procedures related to hearing	1
Nonoperative intubation of gastrointestinal and respiratory tracts	2
Enteral infusion of concentrated nutritional substances	1
Injection or infusion of other therapeutic or prophylactic substance	1
Other miscellaneous procedures	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Medulloblastoma, PNET
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Cranial puncture	5
Diagnostic procedures on skull, brain, and cerebral meninges	36
Craniotomy and craniectomy	143
Incision of brain and cerebral meninges	18
Operations on thalamus and globus pallidus	1
Other excision or destruction of brain and meninges	283
Excision of lesion of skull	4
Cranioplasty	7
Repair of cerebral meninges	2
Ventriculostomy	45
Extracranial ventricular shunt	153
Revision, removal, and irrigation of ventricular shunt	78
Other operations on skull, brain, and cerebral meninges	1
Exploration and decompression of spinal canal structures	20
Diagnostic procedures on spinal cord and spinal canal structures	4
Excision or destruction of lesion of spinal cord or spinal meninges	8
Other operations on spinal cord and spinal canal structures	2
Incision, division, and excision of cranial and peripheral nerves	2

***Surgery-Detailed report: Medulloblastoma, PNET
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Diagnostic procedures on thyroid and parathyroid glands	1
Other partial thyroidectomy	2
Complete thyroidectomy	2
Other operations on thyroid (region) and parathyroid	1

***Surgery-Detailed report: Medulloblastoma, PNET
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Repair of blepharoptosis and lid retraction	1
Repair of entropion or ectropion	1
Other adjustment of lid position	3
Intracapsular extraction of lens	1
Insertion of prosthetic lens [pseudophakos]	1
Operations on one extraocular muscle involving temporary detachment from globe	6
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	5
Other operations on two or more extraocular muscles, one or both eyes	1
Transposition of extraocular muscles	1
Other operations on extraocular muscles and tendons	2
Other operations on orbit and eyeball	2
Myringoplasty	1
Myringotomy	11
Mastoidectomy	1
Other operations on inner and middle ear	1
Repair and plastic operations on the nose	1
Other operations on nose	1
External maxillary antrotomy	1
Surgical removal of tooth	2
Restoration of tooth by filling	1
Other dental restoration	3
Excision of other parts of mouth	1
Palatoplasty	1
Diagnostic procedures on tonsils and adenoids	1
Tonsillectomy without adenoidectomy	1
Other operations on tonsils and adenoids	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Medulloblastoma, PNET
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Excision or destruction of lesion or tissue of larynx	1
Temporary tracheostomy	3
Diagnostic procedures on larynx and trachea	3
Local excision or destruction of lesion or tissue of trachea	1
Diagnostic procedures on lung and bronchus	8
Repair of chest wall	1

Surgery-Detailed report: Medulloblastoma, PNET
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)

Procedure/ICD code	# survivors
Other excision of vessel	1
Puncture of vessel	2
Diagnostic procedures on lymphatic structures	1
Diagnostic procedures on bone marrow and spleen	1
Other operations on spleen and bone marrow	1

***Surgery-Detailed report: Medulloblastoma, PNET
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	4
Intrathoracic anastomosis of esophagus	1
Other operations on esophagus	1
Gastrostomy	5
Vagotomy	1
Pyloroplasty	1
Other repair of stomach	2
Diagnostic procedures on small intestine	2
Colostomy	1
Appendectomy	2
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	2
Repair of rectum	1
Cholecystectomy	1
Other unilateral repair of inguinal hernia	4
Other bilateral repair of inguinal hernia	1
Repair of other hernia of anterior abdominal wall (without graft or prosthesis)	1
Incision of abdominal wall	1
Laparotomy	2
Diagnostic procedures of abdominal region	3
Other operations of abdominal region	2

***Surgery-Detailed report: Medulloblastoma, PNET
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Diagnostic procedures on bladder	1
Repair of urethra	1

Surgery-Detailed report: Medulloblastoma, PNET
Procedure Group: Genital organs and obstetrical procedures (60-75)

Procedure/ICD code	# survivors
Excision of hydrocele (of tunica vaginalis)	1
Diagnostic procedures on testes	1
Unilateral orchiectomy	1
Orchiopexy	1
Excision of varicocele and hydrocele of spermatic cord	2

***Surgery-Detailed report: Medulloblastoma, PNET
 Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Other facial bone repair and orthognathic surgery	2
Local excision of lesion or tissue of bone	1
Removal of implanted devices from bone	1
Open reduction of fracture with internal fixation	1
Open reduction of separated epiphysis	1
Spinal fusion	2
Incision of muscle, tendon, fascia, and bursa	1
Division of muscle, tendon, and fascia	1
Reconstruction of muscle and tendon	2
Other plastic operations on muscle, tendon, and fascia	1
Excision or destruction of breast tissue	1
Reduction mammoplasty and subcutaneous mastectomy	1
Incision of skin and subcutaneous tissue	3
Diagnostic procedures on skin and subcutaneous tissue	2
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	3
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	7
Suture or other closure of skin and subcutaneous tissue	2
Pedicle grafts or flaps	1
Other repair and reconstruction of skin and subcutaneous tissue	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Other CNS tumors
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Soft tissue x-ray of face, head, and neck	3
X-ray of spine	9
Other x-ray of digestive system	1
X-ray of urinary system	1
Other x-ray of abdomen	1
Arteriography using contrast material	23
Angiocardiology using contrast material	1
Therapeutic radiology and nuclear medicine	4
Stereotactic radiosurgery	1
General and subjective eye examination	1
Other nonoperative irrigation and cleaning	1
Nonoperative replacement of gastrointestinal appliance	1
Nonoperative removal of therapeutic device from head and neck	1
Other nonoperative removal of therapeutic device	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Other CNS tumors
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Cranial puncture	6
Diagnostic procedures on skull, brain, and cerebral meninges	43
Craniotomy and craniectomy	93
Incision of brain and cerebral meninges	7
Operations on thalamus and globus pallidus	1
Other excision or destruction of brain and meninges	161
Cranioplasty	13
Repair of cerebral meninges	7
Ventriculostomy	28
Extracranial ventricular shunt	76
Revision, removal, and irrigation of ventricular shunt	52
Other operations on skull, brain, and cerebral meninges	3
Exploration and decompression of spinal canal structures	21
Chordotomy	3
Diagnostic procedures on spinal cord and spinal canal structures	4
Excision or destruction of lesion of spinal cord or spinal meninges	22
Plastic operations on spinal cord structures	1
Other operations on spinal cord and spinal canal structures	1
Incision, division, and excision of cranial and peripheral nerves	2
Diagnostic procedures on peripheral nervous system	2
Cranial or peripheral nerve graft	1

***Surgery-Detailed report: Other CNS tumors
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Diagnostic procedures on adrenal glands, pituitary gland, pineal gland, and thymus	3
Partial adrenalectomy	1
Operations on pineal gland	6

***Surgery-Detailed report: Other CNS tumors
 Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Excision or destruction of lesion or tissue of eyelid	2
Other adjustment of lid position	2
Operations on one extraocular muscle involving temporary detachment from globe	2
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	4
Other operations on orbit and eyeball	1
Myringotomy	3
Diagnostic procedures on nasal sinus	1
Other nasal sinusectomy	1
Forceps extraction of tooth	1
Surgical removal of tooth	1
Restoration of tooth by filling	1
Other dental restoration	3
Tonsillectomy without adenoidectomy	1
Tonsillectomy with adenoidectomy	3

***Surgery-Detailed report: Other CNS tumors
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Temporary tracheostomy	1
Permanent tracheostomy	3
Diagnostic procedures on larynx and trachea	3
Local excision or destruction of lesion or tissue of lung	1
Diagnostic procedures on lung and bronchus	3
Incision of chest wall and pleura	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Other CNS tumors
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)***

Procedure/ICD code	# survivors
Cardiotomy and pericardiotomy	1
Insertion, revision, replacement, and removal of pacemaker leads; insertion of temporary pacemaker system; or revision of cardiac device pocket	1
Other surgical occlusion of vessels	1
Simple excision of lymphatic structure	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Other CNS tumors
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	1
Other operations on esophagus	1
Gastrostomy	6
Vagotomy	2
Pyloroplasty	3
Control of hemorrhage and suture of ulcer of stomach or duodenum	3
Other repair of stomach	1
Diagnostic procedures on small intestine	2
Diagnostic procedures on large intestine	1
Incidental appendectomy	1
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	1
Incision or excision of anal fistula	1
Other unilateral repair of inguinal hernia	2
Laparotomy	5
Lysis of peritoneal adhesions	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Other CNS tumors
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Partial nephrectomy	1
Diagnostic procedures on bladder	1
Excision or destruction of lesion or tissue of urethra	1
Dissection of retroperitoneal tissue	2

***Surgery-Detailed report: Other CNS tumors
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Unilateral orchiectomy	4
Excision of varicocele and hydrocele of spermatic cord	1
Circumcision	1
Unilateral salpingo-oophorectomy	1
Repair of ovary	1
Local excision or destruction of vagina and rectouterine pouch	1
Other repair of vagina	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Other CNS tumors
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Local excision or destruction of lesion of facial bone	1
Wedge osteotomy	1
Other division of bone	1
Biopsy of bone	3
Local excision of lesion or tissue of bone	2
Excision of bone for graft	2
Other partial ostectomy	1
Application of external fixator device	1
Internal fixation of bone without fracture reduction	1
Removal of implanted devices from bone	1
Other arthrotomy	1
Excision or destruction of intervertebral disc	3
Spinal fusion	6
Arthrodesis and arthroereisis of foot and ankle	1
Other repair of joint of lower extremity	1
Joint replacement of lower extremity	1
Division of muscle, tendon, and fascia	1
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	1
Reconstruction of muscle and tendon	1
Reduction mammoplasty and subcutaneous mammectomy	1
Incision of skin and subcutaneous tissue	3
Diagnostic procedures on skin and subcutaneous tissue	2
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	4
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	2
Free skin graft	1
Pedicle grafts or flaps	2
Other repair and reconstruction of skin and subcutaneous tissue	3
Other operations on skin and subcutaneous tissue	2

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Soft tissue x-ray of face, head, and neck	130
X-ray of spine	1
Biliary tract x-ray	2
X-ray of urinary system	6
Soft tissue x-ray of abdomen	12
Other x-ray	27
Arteriography using contrast material	5
Angiocardiography using contrast material	6
Phlebography	2
Anatomic and physiologic measurements and manual examinations -- genitourinary system	1
specimen from spleen and of bone marrow	1
specimen from female genital tract	1
Other immobilization, pressure, and attention twound	2
Nonoperative intubation of gastrointestinal and respiratory tracts	1
Other nonoperative irrigation and cleaning	1
Other nonoperative removal of therapeutic device	1
Removal of intraluminal foreign body from digestive system without incision	1
Other miscellaneous procedures	3

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Cranial puncture	1
Diagnostic procedures on skull, brain, and cerebral meninges	3
Craniotomy and craniectomy	4
Other excision or destruction of brain and meninges	3
Cranioplasty	2
Repair of cerebral meninges	1
Revision, removal, and irrigation of ventricular shunt	1
Other operations on skull, brain, and cerebral meninges	1
Exploration and decompression of spinal canal structures	4
Diagnostic procedures on spinal cord and spinal canal structures	8
Excision or destruction of lesion of spinal cord or spinal meninges	6
Plastic operations on spinal cord structures	1
Diagnostic procedures on peripheral nervous system	1
Injection into peripheral nerve	1
Diagnostic procedures on sympathetic nerves or ganglia	1

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Incision of thyroid field	8
Diagnostic procedures on thyroid and parathyroid glands	6
Unilateral thyroid lobectomy	3
Other partial thyroidectomy	31
Complete thyroidectomy	20
Parathyroidectomy	1
Other operations on thyroid (region) and parathyroid	2
Diagnostic procedures on adrenal glands, pituitary gland, pineal gland, and thymus	5
Thymectomy	3

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Other repair of retinal detachment	2
Other operations on orbit and eyeball	1
Excision or destruction of lesion of external ear	2
Other operations on ossicular chain	1
Myringoplasty	2
Other tympanoplasty	2
Myringotomy	12
Mastoidectomy	2
Turbineectomy	1
Repair and plastic operations on the nose	4
Other operations on nose	1
External maxillary antrotomy	1
Frontal sinusotomy and sinusectomy	1
Other nasal sinusectomy	1
Forceps extraction of tooth	2
Surgical removal of tooth	10
Other dental restoration	2
Diagnostic procedures on teeth, gums, and alveoli	1
Excision of dental lesion of jaw	1
Diagnostic procedures on tongue	1
Diagnostic procedures on salivary glands and ducts	2
Excision of lesion of salivary gland	3
Sialoadenectomy	5
Operations on uvula	1
Diagnostic procedures on tonsils and adenoids	9
Tonsillectomy without adenoidectomy	20
Tonsillectomy with adenoidectomy	9
Adenoidectomy without tonsillectomy	4
Other operations on tonsils and adenoids	1
Diagnostic procedures on pharynx	13
Excision or destruction of lesion or tissue of pharynx	1
Plastic operation on pharynx	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Temporary tracheostomy	1
Permanent tracheostomy	1
Other incision of larynx or trachea	1
Diagnostic procedures on larynx and trachea	8
Repair of larynx	1
Local excision or destruction of lesion or tissue of lung	27
Segmental resection of lung	4
Lobectomy of lung	3
Incision of bronchus	1
Diagnostic procedures on lung and bronchus	93
Repair and plastic operation on lung and bronchus	1
Incision of chest wall and pleura	116
Incision of mediastinum	17
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	106
Excision or destruction of lesion or tissue of mediastinum	23
Excision or destruction of lesion of chest wall	1
Pleurectomy	1
Scarification of pleura	4
Repair of chest wall	2
Operations on diaphragm	2
Other operations on thorax	12

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)***

Procedure/ICD code	# survivors
Closed heart valvotomy	1
Open heart valvuloplasty without replacement	1
Replacement of heart valve	2
Other and unspecified repair of atrial and ventricular septa	1
Bypass anastomosis for heart revascularization	4
Heart revascularization by arterial implant	1
Pericardiocentesis	5
Cardiotomy and pericardiotomy	7
Diagnostic procedures on heart and pericardium	13
Pericardiectomy and excision of lesion of heart	7
Heart replacement procedures	1
Implantation of heart and circulatory assist system	1
Insertion, revision, replacement, and removal of pacemaker leads; insertion of temporary pacemaker system; or revision of cardiac device pocket	2
Insertion, replacement, removal, and revision of pacemaker device	5
Incision of vessel	2
Interruption of the vena cava	1
Other surgical occlusion of vessels	3
Puncture of vessel	4
Extracorporeal circulation and procedures auxiliary to heart surgery	4
Operations on carotid body and other vascular bodies	1
Incision of lymphatic structures	2
Diagnostic procedures on lymphatic structures	1299
Simple excision of lymphatic structure	398
Regional lymph node excision	76
Radical excision of cervical lymph nodes	15
Radical excision of other lymph nodes	15
Bone marrow or hematopoietic stem cell transplant	17
Puncture of spleen	2
Splenotomy	3
Diagnostic procedures on bone marrow and spleen	601
Excision or destruction of lesion or tissue of spleen	33
Total splenectomy	1151
Other operations on spleen and bone marrow	37

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	11
Local excision or destruction of lesion or tissue of esophagus	1
Other repair of esophagus	3
Other operations on esophagus	4
Gastrotomy	1
Gastrostomy	4
Local excision or destruction of lesion or tissue of stomach	2
Partial gastrectomy with anastomosis to jejunum	1
Other partial gastrectomy	2
Vagotomy	1
Diagnostic procedures on stomach	7
Gastroenterostomy without gastrectomy	1
Other repair of stomach	2
Other operations on stomach	1
Enterotomy	2
Diagnostic procedures on small intestine	9
Diagnostic procedures on large intestine	5
Local excision or destruction of lesion or tissue of small intestine	5
Local excision or destruction of lesion or tissue of large intestine	3
Other excision of small intestine	3
Partial excision of large intestine	3
Total intra-abdominal colectomy	2
Intestinal anastomosis	3
Colostomy	3
Closure of intestinal stoma	1
Fixation of intestine	1
Other repair of intestine	2
Dilation and manipulation of intestine	1
Other operations on intestines	1
Appendectomy	58
Incidental appendectomy	428
Other operations on appendix	6
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	3
Incision or excision of anal fistula	1
Local excision or destruction of other lesion or tissue of anus	1
Division of anal sphincter	2

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on liver	1300
Local excision or destruction of liver tissue or lesion	9
Repair of liver	1
Diagnostic procedures on biliary tract	1
Cholecystectomy	8
Anastomosis of gallbladder or bile duct	1
Incision of bile duct for relief of obstruction	2
Partial pancreatectomy	1
Other unilateral repair of inguinal hernia	9
Other bilateral repair of inguinal hernia	1
Repair of umbilical hernia	1
Repair of other hernia of anterior abdominal wall (without graft or prosthesis)	4
Repair of diaphragmatic hernia, thoracic approach	1
Other hernia repair	6
Incision of abdominal wall	8
Laparotomy	1150
Diagnostic procedures of abdominal region	35
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	7
Excision or destruction of peritoneal tissue	3
Lysis of peritoneal adhesions	34
Other repair of abdominal wall and peritoneum	1
Other operations of abdominal region	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Nephrotomy and nephrostomy	1
Pyelotomy and pyelostomy	2
Diagnostic procedures on kidney	9
Local excision or destruction of lesion or tissue of kidney	1
Complete nephrectomy	1
Nephropexy	1
Other repair of kidney	1
Other operations on kidney	1
Transurethral removal of obstruction from ureter and renal pelvis	3
Ureterotomy	1
Diagnostic procedures on ureter	1
Ureterectomy	1
Other anastomosis or bypass of ureter	3
Other operations on ureter	1
Diagnostic procedures on bladder	12
Other operations on bladder	2
Urethrotomy	2
Urethral meatotomy	1
Diagnostic procedures on urethra	1
Dilation of urethra	1
Other operations on urethra and periurethral tissue	1
Dissection of retroperitoneal tissue	3
Ureteral catheterization	1

***Surgery-Detailed report: Hodgkins disease
 Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Diagnostic procedures on prostate and seminal vesicles	2
Incision and drainage of scrotum and tunica vaginalis	2
Excision of hydrocele (of tunica vaginalis)	2
Incision of testis	1
Diagnostic procedures on testes	17
Excision or destruction of testicular lesion	1
Unilateral orchiectomy	4
Bilateral orchiectomy	2
Orchiopexy	4
Insertion of testicular prosthesis	2
Diagnostic procedures on spermatic cord, epididymis, and vas deferens	1
Excision of varicocele and hydrocele of spermatic cord	12
Excision of cyst of epididymis	1
Excision of other lesion or tissue of spermatic cord and epididymis	1
Vasectomy and ligation of vas deferens	1
Circumcision	1
Oophorotomy	3
Diagnostic procedures on ovaries	2
Local excision or destruction of ovarian lesion or tissue	14
Unilateral oophorectomy	5
Unilateral salpingo-oophorectomy	2
Bilateral oophorectomy	3
Bilateral salpingo-oophorectomy	2
Repair of ovary	212
Lysis of adhesions of ovary and fallopian tube	1
Other operations on ovary	9
Other bilateral destruction or occlusion of fallopian tubes	2
Other salpingectomy	1
Dilation of cervical canal	1
Diagnostic procedures on cervix	5
Conization of cervix	3
Other excision or destruction of lesion or tissue of cervix	4
Other repair of cervix	1
Diagnostic procedures on uterus and supporting structures	3
Excision or destruction of lesion or tissue of uterus	4
Total abdominal hysterectomy	1

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
 Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Vaginal hysterectomy	1
Other and unspecified hysterectomy	4
Dilation and curettage of uterus	7
Excision or destruction of lesion or tissue of uterus and supporting structures	2
Repair of uterine supporting structures	1
Uterine repair	1
Aspiration curettage of uterus	3
Diagnostic procedures on vagina and rectouterine pouch	4
Local excision or destruction of vagina and rectouterine pouch	5
Other operations on vagina and rectouterine pouch	1
Diagnostic procedures on vulva	1
Other local excision or destruction of vulva and perineum	4
Cesarean section of unspecified type	6

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Hodgkins disease
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Other facial bone repair and orthognathic surgery	1
Other operations on facial bones and joints	3
Sequestrectomy	1
Other incision of bone without division	1
Other division of bone	6
Biopsy of bone	137
Local excision of lesion or tissue of bone	7
Excision of bone for graft	2
Other partial ostectomy	2
Total ostectomy	2
Bone graft	2
Limb shortening procedures	1
Internal fixation of bone without fracture reduction	3
Removal of implanted devices from bone	2
Osteoclasia	1
Insertion of bone growth stimulator	1
Closed reduction of fracture without internal fixation	2
Open reduction of fracture with internal fixation	1
Debridement of open fracture site	1
Open reduction of dislocation	2
Other arthrotomy	3
Arthroscopy	5
Biopsy of joint structure	1
Excision of semilunar cartilage of knee	1
Synovectomy	1
Other excision of joint	2
Spinal fusion	1
Other repair of joint of lower extremity	3
Joint replacement of lower extremity	3
Other procedures on spine	2
Incision of muscle, tendon, fascia, and bursa	1
Division of muscle, tendon, and fascia	1
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	38
Excision of lesion of muscle, tendon, fascia, and bursa	11
Other excision of muscle, tendon, and fascia	2
Other plastic operations on muscle, tendon, and fascia	2

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

Surgery-Detailed report: Hodgkins disease
Procedure Group: Musculoskeletal or integumentary system (76-86)

Procedure/ICD code	# survivors
Other operations on muscle, tendon, fascia, and bursa	1
Amputation of lower limb	1
Diagnostic procedures on breast	17
Excision or destruction of breast tissue	9
Reduction mammoplasty and subcutaneous mastectomy	4
Mastectomy	8
Augmentation mammoplasty	6
Mastopexy	1
Other repair and plastic operations on breast	2
Other operations on the breast	2
Incision of skin and subcutaneous tissue	42
Diagnostic procedures on skin and subcutaneous tissue	15
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	6
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	31
Radical excision of skin lesion	4
Suture or other closure of skin and subcutaneous tissue	1
Free skin graft	1
Other repair and reconstruction of skin and subcutaneous tissue	3

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Soft tissue x-ray of face, head, and neck	6
X-ray of spine	2
X-ray of urinary system	9
Soft tissue x-ray of abdomen	2
Other x-ray	7
Arteriography using contrast material	2
Angiocardiography using contrast material	3
Anatomic and physiologic measurements and manual examinations -- genitourinary system	1
Other anatomic and physiologic measurements and manual examinations	2
specimen from upper gastrointestinal tract and of vomitus	1
Other immobilization, pressure, and attention twound	2
General and subjective eye examination	1
Nonoperative intubation of gastrointestinal and respiratory tracts	4
Nonoperative irrigation, cleaning, and local instillation of other digestive and genitourinary organs	2
Other nonoperative irrigation and cleaning	4
Other nonoperative replacement	1
Nonoperative removal of therapeutic device from head and neck	2
Nonoperative removal of therapeutic device from thorax	1
Nonoperative removal of therapeutic device from urinary system	4
Injection or infusion of other therapeutic or prophylactic substance	2
Other miscellaneous procedures	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Diagnostic procedures on skull, brain, and cerebral meninges	6
Craniotomy and craniectomy	6
Incision of brain and cerebral meninges	1
Other excision or destruction of brain and meninges	5
Excision of lesion of skull	3
Cranioplasty	2
Ventriculostomy	7
Extracranial ventricular shunt	7
Revision, removal, and irrigation of ventricular shunt	2
2.8	1
Other operations on skull, brain, and cerebral meninges	3
Exploration and decompression of spinal canal structures	4
Diagnostic procedures on spinal cord and spinal canal structures	7
Excision or destruction of lesion of spinal cord or spinal meninges	10
Other operations on nervous system	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Incision of thyroid field	4
Unilateral thyroid lobectomy	4
Other partial thyroidectomy	6
Complete thyroidectomy	2
Diagnostic procedures on adrenal glands, pituitary gland, pineal gland, and thymus	5
Partial adrenalectomy	1
Thymectomy	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Repair of blepharoptosis and lid retraction	1
Other adjustment of lid position	1
Incision of lacrimal sac and passages	1
Fistulization of lacrimal tract to nasal cavity	2
Other operations on lacrimal system	1
Removal of intraocular foreign body from anterior segment of eye	1
Excision or destruction of lesion of iris and ciliary body	1
Intracapsular extraction of lens	4
Extracapsular extraction of lens by simple aspiration (and irrigation) technique	1
Insertion of prosthetic lens [pseudophakos]	2
Operations on one extraocular muscle involving temporary detachment from globe	5
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	1
Orbitotomy	3
Diagnostic procedures on orbit and eyeball	5
Enucleation of eyeball	3
Exenteration of orbital contents	1
Excision or destruction of lesion of external ear	2
Reconstruction of external auditory canal	1
Myringotomy	18
Mastoidectomy	5
Incision of nose	2
Diagnostic procedures on nose	4
Repair and plastic operations on the nose	1
Aspiration and lavage of nasal sinus	4
Diagnostic procedures on nasal sinus	3
Intranasal antrotomy	3
External maxillary antrotomy	8
Other nasal sinusotomy	1
Other nasal sinusectomy	9
Repair of nasal sinus	1
Forceps extraction of tooth	5
Surgical removal of tooth	7
Restoration of tooth by filling	3
Restoration of tooth by inlay	1
Other dental restoration	2
Incision of gum or alveolar bone	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Diagnostic procedures on teeth, gums, and alveoli	3
Alveoloplasty	1
Diagnostic procedures on tongue	3
Excision or destruction of lesion or tissue of tongue	1
Diagnostic procedures on salivary glands and ducts	2
Excision of lesion of salivary gland	1
Sialoadenectomy	2
Other operations on salivary gland or duct	1
Drainage of face and floor of mouth	1
Diagnostic procedures on oral cavity	5
Excision of other parts of mouth	2
Plastic repair of mouth	1
Other operations on mouth and face	1
Diagnostic procedures on tonsils and adenoids	10
Tonsillectomy without adenoidectomy	18
Tonsillectomy with adenoidectomy	28
Adenoidectomy without tonsillectomy	14
Other operations on tonsils and adenoids	1
Diagnostic procedures on pharynx	31
Excision of branchial cleft cyst or vestige	1
Excision or destruction of lesion or tissue of pharynx	6

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Excision or destruction of lesion or tissue of larynx	1
Temporary tracheostomy	4
Permanent tracheostomy	4
Diagnostic procedures on larynx and trachea	10
Local excision or destruction of lesion or tissue of bronchus	1
Local excision or destruction of lesion or tissue of lung	7
Lobectomy of lung	2
Diagnostic procedures on lung and bronchus	41
Surgical collapse of lung	1
Other operations on lung and bronchus	1
Incision of chest wall and pleura	67
Incision of mediastinum	7
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	71
Excision or destruction of lesion or tissue of mediastinum	12
Excision or destruction of lesion of chest wall	4
Pleurectomy	1
Operations on diaphragm	1
Other operations on thorax	17

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)***

Procedure/ICD code	# survivors
Pericardiocentesis	1
Cardiotomy and pericardiotomy	3
Diagnostic procedures on heart and pericardium	8
Pericardiectomy and excision of lesion of heart	5
Heart replacement procedures	2
Implantation of heart and circulatory assist system	1
Insertion, revision, replacement, and removal of pacemaker leads; insertion of temporary pacemaker system; or revision of cardiac device pocket	1
Incision of vessel	3
Other excision of vessel	1
Puncture of vessel	3
Other shunt or vascular bypass	1
Revision of vascular procedure	1
Other repair of vessels	1
Extracorporeal circulation and procedures auxiliary to heart surgery	1
Other operations on vessels	1
Incision of lymphatic structures	2
Diagnostic procedures on lymphatic structures	363
Simple excision of lymphatic structure	128
Regional lymph node excision	14
Radical excision of cervical lymph nodes	7
Radical excision of other lymph nodes	4
Bone marrow or hematopoietic stem cell transplant	14
Diagnostic procedures on bone marrow and spleen	83
Excision or destruction of lesion or tissue of spleen	1
Total splenectomy	44
Other operations on spleen and bone marrow	14

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	8
Antesternal anastomosis of esophagus	1
Other operations on esophagus	1
Gastrostomy	6
Partial gastrectomy with anastomosis to esophagus	1
Other partial gastrectomy	2
Diagnostic procedures on stomach	3
Pyloroplasty	1
Gastroenterostomy without gastrectomy	1
Control of hemorrhage and suture of ulcer of stomach or duodenum	1
Revision of gastric anastomosis	1
Other repair of stomach	2
Enterotomy	5
Diagnostic procedures on small intestine	22
Diagnostic procedures on large intestine	18
Local excision or destruction of lesion or tissue of small intestine	19
Local excision or destruction of lesion or tissue of large intestine	5
Isolation of intestinal segment	1
Other excision of small intestine	59
Partial excision of large intestine	92
Intestinal anastomosis	32
Exteriorization of intestine	3
Colostomy	14
Ileostomy	7
Other enterostomy	1
Closure of intestinal stoma	5
Other repair of intestine	4
Dilation and manipulation of intestine	14
Other operations on intestines	2
Appendectomy	22
Incidental appendectomy	68
Other operations on appendix	1
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	6
Abdominoperineal resection of rectum	1
Other resection of rectum	1

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Repair of rectum	2
Incision or excision of perianal tissue	1
Diagnostic procedures on liver	98
Local excision or destruction of liver tissue or lesion	2
Lobectomy of liver	2
Repair of liver	1
Cholecystectomy	4
Incision of bile duct for relief of obstruction	1
Diagnostic procedures on pancreas	1
Other unilateral repair of inguinal hernia	7
Other bilateral repair of inguinal hernia	2
Repair of other hernia of anterior abdominal wall (without graft or prosthesis)	3
Other hernia repair	2
Incision of abdominal wall	7
Laparotomy	205
Diagnostic procedures of abdominal region	51
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	8
Excision or destruction of peritoneal tissue	20
Lysis of peritoneal adhesions	24
Suture of abdominal wall and peritoneum	3
Other operations of abdominal region	10

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Nephrotomy and nephrostomy	3
Pyelotomy and pyelostomy	4
Diagnostic procedures on kidney	9
Local excision or destruction of lesion or tissue of kidney	1
Partial nephrectomy	1
Complete nephrectomy	4
Transplant of kidney	2
Other repair of kidney	2
Other operations on kidney	1
Transurethral removal of obstruction from ureter and renal pelvis	1
Ureterotomy	1
Diagnostic procedures on ureter	1
Other anastomosis or bypass of ureter	1
Repair of ureter	3
Transurethral clearance of bladder	1
Cystotomy and cystostomy	1
Diagnostic procedures on bladder	21
Transurethral excision or destruction of bladder tissue	1
Other excision or destruction of bladder tissue	3
Partial cystectomy	1
Other repair of urinary bladder	1
Urethral meatotomy	1
Excision or destruction of lesion or tissue of urethra	1
Release of urethral stricture	1
Dilation of urethra	1
Dissection of retroperitoneal tissue	1
Ureteral catheterization	6

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Diagnostic procedures on prostate and seminal vesicles	2
Incision and drainage of scrotum and tunica vaginalis	1
Excision or destruction of lesion or tissue of scrotum	1
Diagnostic procedures on testes	43
Unilateral orchiectomy	4
Bilateral orchiectomy	1
Orchiopexy	3
Excision of varicocele and hydrocele of spermatic cord	9
Excision of cyst of epididymis	2
Excision of other lesion or tissue of spermatic cord and epididymis	1
Epididymectomy	1
Circumcision	1
Diagnostic procedures on ovaries	6
Local excision or destruction of ovarian lesion or tissue	4
Unilateral oophorectomy	5
Unilateral salpingo-oophorectomy	8
Bilateral oophorectomy	1
Repair of ovary	5
Lysis of adhesions of ovary and fallopian tube	1
Total unilateral salpingectomy	1
Conization of cervix	1
Other excision or destruction of lesion or tissue of cervix	1
Other and unspecified hysterectomy	1
Dilation and curettage of uterus	2
Repair of uterine supporting structures	1
Aspiration curettage of uterus	2
Diagnostic procedures on vagina and rectouterine pouch	1

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Diagnostic procedures on facial bones and joints	5
Local excision or destruction of lesion of facial bone	1
Temporomandibular arthroplasty	1
Other facial bone repair and orthognathic surgery	6
Other operations on facial bones and joints	2
Other incision of bone without division	1
Other division of bone	5
Biopsy of bone	56
Local excision of lesion or tissue of bone	6
Excision of bone for graft	4
Other partial ostectomy	1
Total ostectomy	2
Bone graft	4
Application of external fixator device	2
Limb shortening procedures	2
Limb lengthening procedures	1
Internal fixation of bone without fracture reduction	2
Removal of implanted devices from bone	2
Closed reduction of fracture without internal fixation	1
Closed reduction of fracture with internal fixation	2
Open reduction of fracture with internal fixation	6
Open reduction of dislocation	1
Arthroscopy	4
Biopsy of joint structure	3
Excision or destruction of intervertebral disc	1
Excision of semilunar cartilage of knee	1
Synovectomy	2
Other local excision or destruction of lesion of joint	1
Spinal fusion	10
Joint replacement of lower extremity	2
Other operations on joint structures	1
Excision of lesion of muscle, tendon, and fascia of hand	3
Incision of muscle, tendon, fascia, and bursa	2
Division of muscle, tendon, and fascia	2
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	32

***Surgery-Detailed report: Non-Hodgkins lymphoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Excision of lesion of muscle, tendon, fascia, and bursa	11
Other excision of muscle, tendon, and fascia	4
Other plastic operations on muscle, tendon, and fascia	2
Amputation of upper limb	1
Implantation or fitting of prosthetic limb device	1
Diagnostic procedures on breast	3
Augmentation mammoplasty	1
Incision of skin and subcutaneous tissue	18
Diagnostic procedures on skin and subcutaneous tissue	31
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	7
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	29
Radical excision of skin lesion	2
Suture or other closure of skin and subcutaneous tissue	1
Free skin graft	2
Pedicle grafts or flaps	1
Other repair and reconstruction of skin and subcutaneous tissue	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Kidney tumors
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Other x-ray of thorax	1
Biliary tract x-ray	3
Other x-ray of digestive system	1
X-ray of urinary system	18
Soft tissue x-ray of abdomen	1
Arteriography using contrast material	23
Angiocardiology using contrast material	7
Phlebography	1
Anatomic and physiologic measurements and manual examinations -- genitourinary system	1
Circulatory monitoring	2
specimen from kidney, ureter, perirenal and periureteral tissue	1
Skeletal traction and other traction	1
General and subjective eye examination	3
Nonoperative intubation of gastrointestinal and respiratory tracts	1
Nonoperative irrigation, cleaning, and local instillation of other digestive and genitourinary organs	1
Nonoperative removal of therapeutic device from thorax	1
Nonoperative removal of therapeutic device from urinary system	1
Other nonoperative removal of therapeutic device	7
Removal of intraluminal foreign body from digestive system without incision	1
Other miscellaneous procedures	4

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Kidney tumors
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Craniotomy and craniectomy	2
Other excision or destruction of brain and meninges	3
Cranioplasty	4
Repair of cerebral meninges	2
Extracranial ventricular shunt	2
Exploration and decompression of spinal canal structures	3
Diagnostic procedures on spinal cord and spinal canal structures	1
Excision or destruction of lesion of spinal cord or spinal meninges	3
Plastic operations on spinal cord structures	1
Incision, division, and excision of cranial and peripheral nerves	2
Diagnostic procedures on peripheral nervous system	1
Sympathectomy	1

***Surgery-Detailed report: Kidney tumors
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Diagnostic procedures on thyroid and parathyroid glands	1
Unilateral thyroid lobectomy	1
Other partial thyroidectomy	1
Diagnostic procedures on adrenal glands, pituitary gland, pineal gland, and thymus	1
Partial adrenalectomy	172
Bilateral adrenalectomy	6
Other operations on adrenal glands, nerves, and vessels	17
Other operations on hypophysis	1
Thymectomy	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Kidney tumors
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Incision of eyelid	1
Other reconstructive and refractive surgery on cornea	2
Intracapsular extraction of lens	3
Other cataract extraction	1
Operations on vitreous	1
Operations on one extraocular muscle involving temporary detachment from globe	2
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	2
Enucleation of eyeball	1
Other operations on orbit and eyeball	1
Excision or destruction of lesion of external ear	1
Myringoplasty	1
Myringotomy	23
Operations on Eustachian tube	1
Repair and plastic operations on the nose	1
Intranasal antrotomy	1
Forceps extraction of tooth	3
Surgical removal of tooth	3
Restoration of tooth by filling	2
Other dental restoration	4
Apicoectomy and root canal therapy	1
Excision of dental lesion of jaw	1
Partial glossectomy	1
Repair of tongue and glossoplasty	1
Sialoadenectomy	1
Operations on uvula	1
Other operations on mouth and face	1
Tonsillectomy without adenoidectomy	10
Tonsillectomy with adenoidectomy	20
Adenoidectomy without tonsillectomy	3

***Surgery-Detailed report: Kidney tumors
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Temporary tracheostomy	1
Permanent tracheostomy	1
Diagnostic procedures on larynx and trachea	2
Local excision or destruction of lesion or tissue of lung	44
Segmental resection of lung	6
Lobectomy of lung	6
Complete pneumonectomy	1
Diagnostic procedures on lung and bronchus	24
Incision of chest wall and pleura	59
Incision of mediastinum	1
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	6
Excision or destruction of lesion or tissue of mediastinum	1
Excision or destruction of lesion of chest wall	2
Pleurectomy	3
Repair of chest wall	1
Operations on diaphragm	33
Other operations on thorax	8

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

Surgery-Detailed report: Kidney tumors
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)

Procedure/ICD code	# survivors
Replacement of heart valve	1
Repair of atrial and ventricular septa with prosthesis	1
Other operations on valves and septa of heart	1
Cardiotomy and pericardiotomy	5
Diagnostic procedures on heart and pericardium	3
Pericardiectomy and excision of lesion of heart	3
Heart replacement procedures	2
Implantation of heart and circulatory assist system	1
Incision of vessel	12
Diagnostic procedures on blood vessels	3
Resection of vessel with anastomosis	3
Resection of vessel with replacement	1
Other excision of vessel	24
Interruption of the vena cava	2
Other surgical occlusion of vessels	3
Puncture of vessel	8
Systemic to pulmonary artery shunt	2
Intra-abdominal venous shunt	3
Other shunt or vascular bypass	2
Suture of vessel	3
Revision of vascular procedure	1
Other repair of vessels	4
Extracorporeal circulation and procedures auxiliary to heart surgery	5
Other operations on vessels	4
Incision of lymphatic structures	2
Diagnostic procedures on lymphatic structures	259
Simple excision of lymphatic structure	196
Regional lymph node excision	53
Radical excision of cervical lymph nodes	1
Radical excision of other lymph nodes	60
Diagnostic procedures on bone marrow and spleen	20
Excision or destruction of lesion or tissue of spleen	2
Total splenectomy	20
Other operations on spleen and bone marrow	4

***Surgery-Detailed report: Kidney tumors
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	4
Local excision or destruction of lesion or tissue of esophagus	1
Excision of esophagus	1
Intrathoracic anastomosis of esophagus	1
Other operations on esophagus	1
Gastrostomy	6
Vagotomy	1
Diagnostic procedures on stomach	2
Pyloroplasty	2
Control of hemorrhage and suture of ulcer of stomach or duodenum	2
Other repair of stomach	1
Enterotomy	3
Diagnostic procedures on small intestine	10
Diagnostic procedures on large intestine	5
Local excision or destruction of lesion or tissue of small intestine	6
Local excision or destruction of lesion or tissue of large intestine	3
Other excision of small intestine	9
Partial excision of large intestine	10
Intestinal anastomosis	7
Colostomy	1
Other repair of intestine	3
Dilation and manipulation of intestine	10
Appendectomy	34
Incidental appendectomy	173
Drainage of appendiceal abscess	2
Other operations on appendix	12
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	2
Incision or excision of perirectal tissue or lesion	1
Diagnostic procedures on anus and perianal tissue	3
Repair of anus	1
Diagnostic procedures on liver	72
Local excision or destruction of liver tissue or lesion	21
Lobectomy of liver	7
Total hepatectomy	1
Diagnostic procedures on biliary tract	1
Cholecystectomy	8

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Kidney tumors
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Other incision of bile duct	1
Local excision or destruction of pancreas and pancreatic duct	1
Partial pancreatectomy	8
Other unilateral repair of inguinal hernia	20
Other bilateral repair of inguinal hernia	5
Repair of umbilical hernia	2
Repair of other hernia of anterior abdominal wall (without graft or prosthesis)	4
Repair of diaphragmatic hernia, abdominal approach	1
Other hernia repair	5
Incision of abdominal wall	18
Laparotomy	336
Diagnostic procedures of abdominal region	21
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	10
Excision or destruction of peritoneal tissue	19
Lysis of peritoneal adhesions	48
Suture of abdominal wall and peritoneum	3
Other repair of abdominal wall and peritoneum	2
Other operations of abdominal region	5

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Kidney tumors
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Nephrotomy and nephrostomy	46
Pyelotomy and pyelostomy	3
Diagnostic procedures on kidney	118
Local excision or destruction of lesion or tissue of kidney	65
Partial nephrectomy	66
Complete nephrectomy	1018
Transplant of kidney	6
Other repair of kidney	5
Other operations on kidney	1
Ureterotomy	1
Diagnostic procedures on ureter	3
Ureterectomy	14
Other external urinary diversion	1
Other anastomosis or bypass of ureter	3
Repair of ureter	1
Transurethral clearance of bladder	1
Cystotomy and cystostomy	2
Vesicostomy	2
Diagnostic procedures on bladder	32
Other repair of urinary bladder	1
Other operations on bladder	1
Diagnostic procedures on urethra	1
Excision or destruction of lesion or tissue of urethra	1
Repair of urethra	11
Release of urethral stricture	4
Dilation of urethra	2
Dissection of retroperitoneal tissue	6
Diagnostic procedures on perirenal and perivesical tissue	2
Ureteral catheterization	2
Other operations on urinary system	1

Surgery-Detailed report: Kidney tumors
Procedure Group: Genital organs and obstetrical procedures (60-75)

Procedure/ICD code	# survivors
Incision and drainage of scrotum and tunica vaginalis	1
Diagnostic procedures on scrotum and tunica vaginalis	1
Excision of hydrocele (of tunica vaginalis)	3
Excision or destruction of lesion or tissue of scrotum	1
Incision of testis	1
Diagnostic procedures on testes	4
Excision or destruction of testicular lesion	1
Unilateral orchiectomy	7
Orchiopexy	17
Excision of varicocele and hydrocele of spermatic cord	13
Repair of vas deferens and epididymis	1
Circumcision	4
Repair and plastic operation on penis	3
Local excision or destruction of ovarian lesion or tissue	3
Unilateral oophorectomy	4
Unilateral salpingo-oophorectomy	3
Bilateral salpingo-oophorectomy	2
Repair of ovary	2
Salpingotomy and salpingostomy	1
Other salpingectomy	1
Dilation of cervical canal	1
Diagnostic procedures on cervix	1
Other excision or destruction of lesion or tissue of cervix	1
Total abdominal hysterectomy	1
Vaginal hysterectomy	1
Dilation and curettage of uterus	1
Diagnostic procedures on vagina and rectouterine pouch	2
Operations on clitoris	1
Cesarean section of unspecified type	1
Intra-amniotic injection for abortion	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

Surgery-Detailed report: Kidney tumors
Procedure Group: Musculoskeletal or integumentary system (76-86)

Procedure/ICD code	# survivors
Other division of bone	3
Biopsy of bone	4
Excision and repair of bunion and other toe deformities	1
Local excision of lesion or tissue of bone	8
Other partial ostectomy	1
Total ostectomy	2
Bone graft	2
Application of external fixator device	2
Limb shortening procedures	5
Limb lengthening procedures	1
Internal fixation of bone without fracture reduction	2
Removal of implanted devices from bone	4
Open reduction of fracture with internal fixation	1
Closed reduction of separated epiphysis	1
Open reduction of separated epiphysis	1
Other arthrotomy	1
Arthroscopy	2
Excision or destruction of intervertebral disc	1
Spinal fusion	5
Other repair of joint of lower extremity	1
Joint replacement of lower extremity	1
[[Incision of muscle, tendon, fascia, and bursa of hand	1
Other excision of soft tissue of hand	1
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	3
Excision of lesion of muscle, tendon, fascia, and bursa	6
Other excision of muscle, tendon, and fascia	3
Other plastic operations on muscle, tendon, and fascia	1
Amputation of lower limb	1
Diagnostic procedures on breast	2
Excision or destruction of breast tissue	3
Reduction mammoplasty and subcutaneous mastectomy	2
Mastectomy	1
Augmentation mammoplasty	5
Mastopexy	1
Total reconstruction of breast	2
Other repair and plastic operations on breast	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes

Surgery-Detailed report: Kidney tumors
Procedure Group: Musculoskeletal or integumentary system (76-86)

Procedure/ICD code	# survivors
Other operations on the breast	1
Incision of skin and subcutaneous tissue	5
Diagnostic procedures on skin and subcutaneous tissue	6
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	11
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	10
Suture or other closure of skin and subcutaneous tissue	1
Free skin graft	5
Pedicle grafts or flaps	1
Other repair and reconstruction of skin and subcutaneous tissue	4
Other operations on skin and subcutaneous tissue	1

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Soft tissue x-ray of face, head, and neck	3
Other x-ray of face, head, and neck	2
X-ray of spine	36
Soft tissue x-ray of thorax	1
Other x-ray of thorax	14
X-ray of urinary system	5
Soft tissue x-ray of abdomen	10
Other x-ray	2
Arteriography using contrast material	7
Anatomic and physiologic measurements and manual examinations -- genitourinary system	5
Other anatomic and physiologic measurements and manual examinations	2
Circulatory monitoring	1
specimen from ear, nose, throat, and larynx	2
Therapeutic radiology and nuclear medicine	3
Skeletal traction and other traction	2
Other immobilization, pressure, and attention twound	5
General and subjective eye examination	1
Nonoperative procedures related to hearing	1
Nonoperative intubation of gastrointestinal and respiratory tracts	2
Nonoperative dilation and manipulation	3
Nonoperative alimentary tract irrigation, cleaning, and local instillation	1
Other nonoperative irrigation and cleaning	2
Nonoperative removal of therapeutic device from head and neck	2
Nonoperative removal of therapeutic device from thorax	1
Other nonoperative removal of therapeutic device	2
Removal of intraluminal foreign body from digestive system without incision	1
98.6	1
Other miscellaneous procedures	5

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Diagnostic procedures on skull, brain, and cerebral meninges	8
Craniotomy and craniectomy	11
Other excision or destruction of brain and meninges	17
Cranioplasty	2
Repair of cerebral meninges	2
Ventriculostomy	4
Extracranial ventricular shunt	4
Revision, removal, and irrigation of ventricular shunt	4
Other operations on skull, brain, and cerebral meninges	4
Exploration and decompression of spinal canal structures	55
Division of intraspinal nerve root	1
Diagnostic procedures on spinal cord and spinal canal structures	10
Excision or destruction of lesion of spinal cord or spinal meninges	56
Plastic operations on spinal cord structures	1
Other operations on spinal cord and spinal canal structures	1
Incision, division, and excision of cranial and peripheral nerves	6
Diagnostic procedures on peripheral nervous system	1
Suture of cranial and peripheral nerves	1
Transposition of cranial and peripheral nerves	1
Diagnostic procedures on sympathetic nerves or ganglia	1
Sympathectomy	5
5.4	1
Other operations on sympathetic nerves or ganglia	1
Other operations on nervous system	1

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Incision of thyroid field	8
Unilateral thyroid lobectomy	3
Other partial thyroidectomy	6
Complete thyroidectomy	3
Substernal thyroidectomy	1
Parathyroidectomy	1
Diagnostic procedures on adrenal glands, pituitary gland, pineal gland, and thymus	10
Partial adrenalectomy	186
Bilateral adrenalectomy	5
Other operations on adrenal glands, nerves, and vessels	1
Thymectomy	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Excision or destruction of lesion or tissue of eyelid	1
Repair of blepharoptosis and lid retraction	3
Repair of entropion or ectropion	1
Other adjustment of lid position	1
Other reconstruction of eyelid	1
Manipulation of lacrimal passage	1
Excision or destruction of lesion or tissue of conjunctiva	1
Diagnostic procedures on cornea	1
Excision or destruction of lesion of iris and ciliary body	1
Intracapsular extraction of lens	2
Other extracapsular extraction of lens	1
Other cataract extraction	2
Operations on vitreous	1
Operations on one extraocular muscle involving temporary detachment from globe	2
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	4
Other operations on two or more extraocular muscles, one or both eyes	4
Orbitotomy	4
Diagnostic procedures on orbit and eyeball	4
Enucleation of eyeball	3
Removal of ocular or orbital implant	1
Other operations on orbit and eyeball	1
Excision or destruction of lesion of external ear	1
Other excision of external ear	1
Myringoplasty	5
Other tympanoplasty	3
Revision of tympanoplasty	1
Myringotomy	31
Removal of tympanostomy tube	3
Mastoidectomy	1
Operations on Eustachian tube	1
Other operations on inner and middle ear	1
Control of epistaxis	2
Incision of nose	2
Turbinectomy	2
Repair and plastic operations on the nose	4
Other operations on nose	1

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Diagnostic procedures on nasal sinus	2
External maxillary antrotomy	3
Other nasal sinusotomy	2
Other nasal sinusectomy	3
Repair of nasal sinus	1
Forceps extraction of tooth	1
Surgical removal of tooth	9
Restoration of tooth by filling	2
Other dental restoration	5
Apicoectomy and root canal therapy	1
Excision or destruction of lesion or tissue of tongue	1
Drainage of face and floor of mouth	1
Diagnostic procedures on oral cavity	1
Excision of lesion or tissue of bony palate	1
Plastic repair of mouth	1
Palatoplasty	5
Diagnostic procedures on tonsils and adenoids	1
Tonsillectomy without adenoidectomy	9
Tonsillectomy with adenoidectomy	16
Adenoidectomy without tonsillectomy	5
Diagnostic procedures on pharynx	5
Excision or destruction of lesion or tissue of pharynx	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Excision or destruction of lesion or tissue of larynx	2
Injection of larynx	2
Temporary tracheostomy	3
Diagnostic procedures on larynx and trachea	10
Repair of larynx	1
Repair and plastic operations on trachea	1
Local excision or destruction of lesion or tissue of bronchus	1
Local excision or destruction of lesion or tissue of lung	10
Segmental resection of lung	2
Lobectomy of lung	1
Radical dissection of thoracic structures	1
Diagnostic procedures on lung and bronchus	20
Incision of chest wall and pleura	146
Incision of mediastinum	21
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	24
Excision or destruction of lesion or tissue of mediastinum	161
Excision or destruction of lesion of chest wall	42
Pleurectomy	2
Repair of chest wall	2
Operations on diaphragm	6
Other operations on thorax	3

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)***

Procedure/ICD code	# survivors
Closed heart valvotomy	1
Open heart valvuloplasty without replacement	1
Replacement of heart valve	1
Production of septal defect in heart	1
Other and unspecified repair of atrial and ventricular septa	4
Diagnostic procedures on heart and pericardium	3
Repair of heart and pericardium	1
Incision of vessel	2
Diagnostic procedures on blood vessels	2
Resection of vessel with anastomosis	1
Resection of vessel with replacement	1
Other excision of vessel	7
Other surgical occlusion of vessels	1
Puncture of vessel	4
Other shunt or vascular bypass	3
Suture of vessel	3
Revision of vascular procedure	2
Other repair of vessels	5
Extracorporeal circulation and procedures auxiliary to heart surgery	1
Other operations on vessels	1
Diagnostic procedures on lymphatic structures	173
Simple excision of lymphatic structure	75
Regional lymph node excision	24
Radical excision of cervical lymph nodes	9
Radical excision of other lymph nodes	13
Operations on thoracic duct	2
Bone marrow or hematopoietic stem cell transplant	14
Puncture of spleen	1
Diagnostic procedures on bone marrow and spleen	50
Total splenectomy	4
Other operations on spleen and bone marrow	23

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	6
Other repair of esophagus	1
Gastrostomy	7
43.2	1
Pyloromyotomy	2
Vagotomy	1
Diagnostic procedures on stomach	1
Other repair of stomach	4
Enterotomy	2
Diagnostic procedures on small intestine	4
Diagnostic procedures on large intestine	6
Local excision or destruction of lesion or tissue of small intestine	6
Local excision or destruction of lesion or tissue of large intestine	1
Other excision of small intestine	1
Partial excision of large intestine	3
Intestinal anastomosis	3
Other enterostomy	1
Revision of intestinal stoma	1
Closure of intestinal stoma	1
Fixation of intestine	1
Other repair of intestine	3
Dilation and manipulation of intestine	8
Other operations on intestines	1
Appendectomy	17
Incidental appendectomy	76
Drainage of appendiceal abscess	2
Other operations on appendix	7
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	7
Abdominoperineal resection of rectum	1
Repair of rectum	1
Other operations on rectum and perirectal tissue	1
Incision or excision of perianal tissue	1
Diagnostic procedures on anus and perianal tissue	1
Local excision or destruction of other lesion or tissue of anus	1
Other operations on anus	1
Diagnostic procedures on liver	184

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Local excision or destruction of liver tissue or lesion	4
Repair of liver	1
Cholecystotomy and cholecystostomy	1
Cholecystectomy	4
Local excision or destruction of pancreas and pancreatic duct	2
Partial pancreatectomy	2
Other unilateral repair of inguinal hernia	14
Other bilateral repair of inguinal hernia	9
Repair of other hernia of anterior abdominal wall (without graft or prosthesis)	2
Repair of diaphragmatic hernia, thoracic approach	4
Other hernia repair	2
Incision of abdominal wall	7
Laparotomy	287
Diagnostic procedures of abdominal region	54
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	67
Excision or destruction of peritoneal tissue	126
Lysis of peritoneal adhesions	23
Suture of abdominal wall and peritoneum	3
Other repair of abdominal wall and peritoneum	1
Other operations of abdominal region	6

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Nephrotomy and nephrostomy	2
Diagnostic procedures on kidney	17
Local excision or destruction of lesion or tissue of kidney	14
Partial nephrectomy	4
Complete nephrectomy	56
Other repair of kidney	3
Other operations on kidney	1
Transurethral removal of obstruction from ureter and renal pelvis	1
Diagnostic procedures on ureter	1
Ureterectomy	1
Other anastomosis or bypass of ureter	4
Repair of ureter	1
Other operations on ureter	1
Cystotomy and cystostomy	2
Diagnostic procedures on bladder	17
Other excision or destruction of bladder tissue	2
Total cystectomy	1
Other repair of urinary bladder	1
Urethral meatotomy	1
Diagnostic procedures on urethra	2
Dilation of urethra	4
Other operations on urethra and periurethral tissue	1
Dissection of retroperitoneal tissue	8
Diagnostic procedures on perirenal and perivesical tissue	1
Ureteral catheterization	1
Other operations on urinary system	3

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Diagnostic procedures on testes	2
Excision or destruction of testicular lesion	1
Unilateral orchiectomy	2
Orchiopexy	4
Excision of varicocele and hydrocele of spermatic cord	2
Circumcision	1
Local excision or destruction of lesion of penis	1
Local excision or destruction of ovarian lesion or tissue	1
Unilateral oophorectomy	3
Unilateral salpingo-oophorectomy	2
Bilateral salpingo-oophorectomy	1
Repair of ovary	2
Conization of cervix	1
Other and unspecified hysterectomy	1
Excision or destruction of lesion or tissue of uterus and supporting structures	1
Aspiration curettage of uterus	1
Diagnostic procedures on vagina and rectouterine pouch	2
Local excision or destruction of vagina and rectouterine pouch	1
Diagnostic procedures on vulva	2
Other local excision or destruction of vulva and perineum	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Neuroblastoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Diagnostic procedures on facial bones and joints	1
Partial ostectomy of facial bone	1
Other facial bone repair and orthognathic surgery	2
Other operations on facial bones and joints	1
Sequestrectomy	2
Wedge osteotomy	1
Other division of bone	7
Biopsy of bone	33
Local excision of lesion or tissue of bone	19
Excision of bone for graft	3
Other partial ostectomy	8
Total ostectomy	2
Bone graft	3
Application of external fixator device	2
Limb lengthening procedures	2
Other repair or plastic operations on bone	2
Internal fixation of bone without fracture reduction	4
Removal of implanted devices from bone	8
Closed reduction of fracture without internal fixation	3
Other arthrotomy	1
Arthroscopy	1
Division of joint capsule, ligament, or cartilage	2
Excision or destruction of intervertebral disc	2
Other local excision or destruction of lesion of joint	1
Other excision of joint	2
Spinal fusion	32
Arthrodesis and arthroereisis of foot and ankle	2
Other repair of joint of lower extremity	1
Excision of lesion of muscle, tendon, and fascia of hand	2
Transplantation of muscle and tendon of hand	1
Other operations on muscle, tendon, and fascia of hand	1
Incision of muscle, tendon, fascia, and bursa	6
Division of muscle, tendon, and fascia	5
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	25
Excision of lesion of muscle, tendon, fascia, and bursa	25
Other excision of muscle, tendon, and fascia	14

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Neuroblastoma
 Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Suture of muscle, tendon, and fascia	1
Reconstruction of muscle and tendon	10
Other plastic operations on muscle, tendon, and fascia	12
Amputation of lower limb	1
Diagnostic procedures on breast	2
Excision or destruction of breast tissue	1
Reduction mammoplasty and subcutaneous mastectomy	3
Augmentation mammoplasty	4
Other repair and plastic operations on breast	1
Other operations on the breast	2
Incision of skin and subcutaneous tissue	11
Diagnostic procedures on skin and subcutaneous tissue	20
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	8
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	28
Free skin graft	2
Pedicle grafts or flaps	1
Other repair and reconstruction of skin and subcutaneous tissue	6

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Soft tissue x-ray of face, head, and neck	5
Other x-ray of face, head, and neck	1
X-ray of spine	4
Other x-ray of thorax	1
Biliary tract x-ray	5
X-ray of urinary system	10
Soft tissue x-ray of abdomen	1
Other x-ray of abdomen	2
Other x-ray	2
Arteriography using contrast material	5
Angiocardiography using contrast material	1
Anatomic and physiologic measurements and manual examinations -- genitourinary system	13
Other anatomic and physiologic measurements and manual examinations	7
Circulatory monitoring	1
Radioisotope scan and function study	1
Therapeutic radiology and nuclear medicine	11
Other physical therapy therapeutic procedures	2
Skeletal traction and other traction	1
Other immobilization, pressure, and attention twound	12
Osteopathic manipulative treatment	1
General and subjective eye examination	4
Special vision services	2
Nonoperative procedures related to hearing	1
95.5	1
Nonoperative intubation of gastrointestinal and respiratory tracts	3
Other nonoperative insertion	5
Nonoperative dilation and manipulation	2
Other nonoperative irrigation and cleaning	13
Nonoperative replacement of gastrointestinal appliance	1
Other nonoperative replacement	1
Nonoperative removal of therapeutic device from head and neck	8
Nonoperative removal of therapeutic device from urinary system	4
Nonoperative removal of therapeutic device from genital system	1
Other nonoperative removal of therapeutic device	6
Removal of other foreign body without incision	1

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

*Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Miscellaneous(00, 87-99)*

Procedure/ICD code	# survivors
Injection or infusion of other therapeutic or prophylactic substance	2
Other miscellaneous procedures	7

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Cranial puncture	1
Diagnostic procedures on skull, brain, and cerebral meninges	8
Craniotomy and craniectomy	19
Incision of brain and cerebral meninges	1
Other excision or destruction of brain and meninges	18
Excision of lesion of skull	2
Cranioplasty	12
Repair of cerebral meninges	3
Extracranial ventricular shunt	1
Other operations on skull, brain, and cerebral meninges	3
Exploration and decompression of spinal canal structures	14
Diagnostic procedures on spinal cord and spinal canal structures	9
Excision or destruction of lesion of spinal cord or spinal meninges	12
Plastic operations on spinal cord structures	1
Other operations on spinal cord and spinal canal structures	2
Incision, division, and excision of cranial and peripheral nerves	11
Diagnostic procedures on peripheral nervous system	3
Lysis of adhesions and decompression of cranial and peripheral nerves	2
Cranial or peripheral nerve graft	2
Other cranial or peripheral neuroplasty	5
Division of sympathetic nerve or ganglion	1
Sympathectomy	3
Other operations on nervous system	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Incision of thyroid field	8
Complete thyroidectomy	1
Excision of thyroglossal duct or tract	2
Diagnostic procedures on adrenal glands, pituitary gland, pineal gland, and thymus	1
Partial adrenalectomy	2
Other operations on adrenal glands, nerves, and vessels	1

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Diagnostic procedures on eyelid	9
Excision or destruction of lesion or tissue of eyelid	7
Repair of blepharoptosis and lid retraction	6
Other adjustment of lid position	11
Reconstruction of eyelid with flaps or grafts	8
Other reconstruction of eyelid	2
Other repair of eyelid	3
Other operations on eyelids	2
Excision of lesion or tissue of lacrimal gland	1
Manipulation of lacrimal passage	5
Incision of lacrimal sac and passages	1
Fistulization of lacrimal tract to nasal cavity	1
Other incision of conjunctiva	1
Excision or destruction of lesion or tissue of conjunctiva	2
Conjunctivoplasty	4
Excision or destruction of tissue or other lesion of cornea	1
Repair of cornea	1
Corneal transplant	3
Other operations on cornea	1
Other procedures for relief of elevated intraocular pressure	1
Intracapsular extraction of lens	11
Extracapsular extraction of lens by simple aspiration (and irrigation) technique	2
Other extracapsular extraction of lens	1
Other cataract extraction	3
Insertion of prosthetic lens [pseudophakos]	3
Other operations on lens	1
Operations on vitreous	1
Diagnostic procedures on extraocular muscles or tendons	1
Operations on one extraocular muscle involving temporary detachment from globe	3
Operations on two or more extraocular muscles involving temporary detachment from globe, one or both eyes	2
Other operations on two or more extraocular muscles, one or both eyes	1
Orbitotomy	35
Removal of penetrating foreign body from eye, not otherwise specified	1
Diagnostic procedures on orbit and eyeball	46
Evisceration of eyeball	2
Enucleation of eyeball	4

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Exenteration of orbital contents	21
Secondary procedures after removal of eyeball	8
Removal of ocular or orbital implant	1
Other operations on orbit and eyeball	27
Incision of external ear	2
Diagnostic procedures on external ear	7
Excision or destruction of lesion of external ear	9
Other excision of external ear	4
Reconstruction of external auditory canal	3
Other plastic repair of external ear	3
Other operations on ossicular chain	1
Myringoplasty	4
Other tympanoplasty	1
Myringotomy	55
Removal of tympanostomy tube	4
Incision of mastoid and middle ear	6
Diagnostic procedures on middle and inner ear	20
Mastoidectomy	19
Other excision of middle ear	5
Incision, excision, and destruction of inner ear	1
Operations on Eustachian tube	6
Other operations on inner and middle ear	2
Control of epistaxis	2
Incision of nose	16
Diagnostic procedures on nose	16
Local excision or destruction of lesion of nose	16
Resection of nose	1
Submucous resection of nasal septum	1
Turbinectomy	1
Reduction of nasal fracture	2
Repair and plastic operations on the nose	12
Other operations on nose	2
Aspiration and lavage of nasal sinus	5
Diagnostic procedures on nasal sinus	22
Intranasal antrotomy	7

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
External maxillary antrotomy	15
Other nasal sinusotomy	2
Other nasal sinusectomy	25
Forceps extraction of tooth	12
Surgical removal of tooth	12
Restoration of tooth by filling	3
Other dental restoration	11
Implantation of tooth	1
Prosthetic dental implant	1
Apicoectomy and root canal therapy	2
Diagnostic procedures on teeth, gums, and alveoli	1
Other operations on gum	1
Excision of dental lesion of jaw	2
Alveoloplasty	1
Application of orthodontic appliance	2
Other dental operations	2
Excision or destruction of lesion or tissue of tongue	3
Partial glossectomy	1
Complete glossectomy	1
Incision of salivary gland or duct	1
Diagnostic procedures on salivary glands and ducts	6
Excision of lesion of salivary gland	8
Sialoadenectomy	14
Other operations on salivary gland or duct	1
Drainage of face and floor of mouth	2
Diagnostic procedures on oral cavity	23
Excision of lesion or tissue of bony palate	9
Excision of other parts of mouth	21
Plastic repair of mouth	9
Palatoplasty	3
Diagnostic procedures on tonsils and adenoids	2
Tonsillectomy without adenoidectomy	4
Tonsillectomy with adenoidectomy	14
Adenoidectomy without tonsillectomy	5
Other operations on tonsils and adenoids	1
Diagnostic procedures on pharynx	53

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

*Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)*

Procedure/ICD code	# survivors
Excision of branchial cleft cyst or vestige	2
Excision or destruction of lesion or tissue of pharynx	16
Other operations on pharynx	4

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Excision or destruction of lesion or tissue of larynx	2
Other partial laryngectomy	2
Radical laryngectomy	1
Temporary tracheostomy	8
Permanent tracheostomy	7
Other incision of larynx or trachea	1
Diagnostic procedures on larynx and trachea	27
Local excision or destruction of lesion or tissue of trachea	1
Repair and plastic operations on trachea	4
Other operations on larynx and trachea	1
Local excision or destruction of lesion or tissue of bronchus	2
Local excision or destruction of lesion or tissue of lung	32
Segmental resection of lung	10
Lobectomy of lung	5
Complete pneumonectomy	2
Incision of bronchus	1
Diagnostic procedures on lung and bronchus	37
Surgical collapse of lung	1
Repair and plastic operation on lung and bronchus	1
Other operations on lung and bronchus	1
Incision of chest wall and pleura	48
Incision of mediastinum	3
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	21
Excision or destruction of lesion or tissue of mediastinum	7
Excision or destruction of lesion of chest wall	39
Pleurectomy	2
Repair of chest wall	7
Operations on diaphragm	3
Other operations on thorax	4

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)***

Procedure/ICD code	# survivors
Open heart valvuloplasty without replacement	3
Replacement of heart valve	2
Repair of atrial and ventricular septa with prosthesis	1
Repair of atrial and ventricular septa with tissue graft	1
Total repair of certain congenital cardiac anomalies	1
Other operations on valves and septa of heart	1
Other heart revascularization	1
Cardiotomy and pericardiotomy	1
Diagnostic procedures on heart and pericardium	6
Pericardiectomy and excision of lesion of heart	4
Heart replacement procedures	1
Other operations on heart and pericardium	1
Incision of vessel	4
Diagnostic procedures on blood vessels	1
Resection of vessel with replacement	1
Ligation and stripping of varicose veins	2
Other excision of vessel	4
Other surgical occlusion of vessels	4
Puncture of vessel	1
Systemic to pulmonary artery shunt	1
Other shunt or vascular bypass	2
Other repair of vessels	5
Extracorporeal circulation and procedures auxiliary to heart surgery	2
Other operations on vessels	3
Incision of lymphatic structures	1
Diagnostic procedures on lymphatic structures	149
Simple excision of lymphatic structure	93
Regional lymph node excision	25
Radical excision of cervical lymph nodes	21
Radical excision of other lymph nodes	44
Bone marrow or hematopoietic stem cell transplant	3
Diagnostic procedures on bone marrow and spleen	35
Total splenectomy	2
Other operations on spleen and bone marrow	3

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	10
Other operations on esophagus	2
Gastrotomy	3
Gastrostomy	17
43.2	1
Pyloromyotomy	2
Local excision or destruction of lesion or tissue of stomach	3
Partial gastrectomy with anastomosis to duodenum	1
Partial gastrectomy with anastomosis to jejunum	2
Other partial gastrectomy	4
Total gastrectomy	1
Diagnostic procedures on stomach	7
Pyloroplasty	1
Control of hemorrhage and suture of ulcer of stomach or duodenum	1
Other repair of stomach	5
Enterotomy	2
Diagnostic procedures on small intestine	5
Diagnostic procedures on large intestine	15
Local excision or destruction of lesion or tissue of small intestine	2
Isolation of intestinal segment	1
Other excision of small intestine	11
Partial excision of large intestine	9
Total intra-abdominal colectomy	1
Intestinal anastomosis	22
Exteriorization of intestine	2
Colostomy	14
Ileostomy	5
Other enterostomy	1
Revision of intestinal stoma	7
Closure of intestinal stoma	10
Dilation and manipulation of intestine	6
Appendectomy	12
Incidental appendectomy	66
Other operations on appendix	1
Prototomy	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Proctostomy	1
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	20
Pull-through resection of rectum	3
Abdominoperineal resection of rectum	2
Incision or excision of perirectal tissue or lesion	3
Incision or excision of perianal tissue	1
Incision or excision of anal fistula	1
Diagnostic procedures on anus and perianal tissue	3
Diagnostic procedures on liver	33
Local excision or destruction of liver tissue or lesion	5
Total hepatectomy	1
Liver transplant	1
Cholecystotomy and cholecystostomy	2
Cholecystectomy	10
Anastomosis of gallbladder or bile duct	1
Local excision or destruction of lesion or tissue of biliary ducts and sphincter of Oddi	2
Total pancreatectomy	1
Other unilateral repair of inguinal hernia	8
Other bilateral repair of inguinal hernia	3
Repair of other hernia of anterior abdominal wall (without graft or prosthesis)	1
Other hernia repair	3
Incision of abdominal wall	16
Laparotomy	131
Diagnostic procedures of abdominal region	29
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	28
Excision or destruction of peritoneal tissue	35
Lysis of peritoneal adhesions	22
Suture of abdominal wall and peritoneum	6
Other repair of abdominal wall and peritoneum	4
Other operations of abdominal region	1

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Nephrotomy and nephrostomy	12
Pyelotomy and pyelostomy	3
Diagnostic procedures on kidney	5
Local excision or destruction of lesion or tissue of kidney	1
Complete nephrectomy	9
Transplant of kidney	1
Other repair of kidney	1
Other operations on kidney	1
Ureteral meatotomy	1
Ureterotomy	1
Diagnostic procedures on ureter	5
Ureterectomy	6
Cutaneous uretero-ileostomy	40
Other external urinary diversion	9
Other anastomosis or bypass of ureter	29
Repair of ureter	6
Transurethral clearance of bladder	2
Cystotomy and cystostomy	12
Vesicostomy	5
Diagnostic procedures on bladder	124
Transurethral excision or destruction of bladder tissue	18
Other excision or destruction of bladder tissue	8
Partial cystectomy	18
Total cystectomy	33
Other repair of urinary bladder	17
Other operations on bladder	9
Urethrotomy	2
Urethral meatotomy	1
Diagnostic procedures on urethra	13
Excision or destruction of lesion or tissue of urethra	9
Repair of urethra	3
Release of urethral stricture	1
Dilation of urethra	7
Other operations on urethra and periurethral tissue	3
Dissection of retroperitoneal tissue	8
Diagnostic procedures on perirenal and perivesical tissue	3

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

*Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Urinary system (55-59)*

Procedure/ICD code	# survivors
Ureteral catheterization	7
Other operations on urinary system	2

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Diagnostic procedures on prostate and seminal vesicles	20
Transurethral prostatectomy	1
Suprapubic prostatectomy	1
Retropubic prostatectomy	1
Radical prostatectomy	12
Other prostatectomy	6
Incision and drainage of scrotum and tunica vaginalis	3
Diagnostic procedures on scrotum and tunica vaginalis	5
Excision of hydrocele (of tunica vaginalis)	3
Excision or destruction of lesion or tissue of scrotum	18
Other operations on scrotum and tunica vaginalis	5
Incision of testis	3
Diagnostic procedures on testes	7
Excision or destruction of testicular lesion	3
Unilateral orchiectomy	53
Bilateral orchiectomy	7
Orchiopexy	12
Repair of testes	1
Insertion of testicular prosthesis	6
Other operations on testes	1
Diagnostic procedures on spermatic cord, epididymis, and vas deferens	1
Excision of varicocele and hydrocele of spermatic cord	4
Excision of other lesion or tissue of spermatic cord and epididymis	4
Epididymectomy	1
Vasectomy and ligation of vas deferens	5
Other operations on spermatic cord, epididymis, and vas deferens	3
Circumcision	5
Local excision or destruction of lesion of penis	1
Oophorotomy	2
Diagnostic procedures on ovaries	1
Local excision or destruction of ovarian lesion or tissue	6
Unilateral oophorectomy	3
Unilateral salpingo-oophorectomy	7
Bilateral salpingo-oophorectomy	5
Repair of ovary	5

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Other operations on ovary	1
Other bilateral destruction or occlusion of fallopian tubes	1
Total unilateral salpingectomy	1
Total bilateral salpingectomy	5
Other salpingectomy	1
Diagnostic procedures on cervix	2
Conization of cervix	2
Amputation of cervix	1
Diagnostic procedures on uterus and supporting structures	1
Subtotal abdominal hysterectomy	1
Total abdominal hysterectomy	7
Vaginal hysterectomy	3
Radical abdominal hysterectomy	4
Radical vaginal hysterectomy	1
Pelvic exenteration	9
Other and unspecified hysterectomy	7
Dilation and curettage of uterus	3
Excision or destruction of lesion or tissue of uterus and supporting structures	2
Aspiration curettage of uterus	2
Culdocentesis	1
Incision of vagina and rectouterine pouch	2
Diagnostic procedures on vagina and rectouterine pouch	33
Local excision or destruction of vagina and rectouterine pouch	8
Obliteration and total excision of vagina	12
Vaginal construction and reconstruction	9
Other repair of vagina	7
Obliteration of vaginal vault	1
Incision of vulva and perineum	4
Diagnostic procedures on vulva	1
Operations on Bartholin's gland	2
Other local excision or destruction of vulva and perineum	16
Operations on clitoris	2
Radical vulvectomy	3
Other vulvectomy	4
Repair of vulva and perineum	3
Other operations on vulva	2

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Incision of facial bone without division	2
Diagnostic procedures on facial bones and joints	8
Local excision or destruction of lesion of facial bone	8
Partial ostectomy of facial bone	9
Excision and reconstruction of facial bones	10
Temporomandibular arthroplasty	1
Other facial bone repair and orthognathic surgery	8
Other operations on facial bones and joints	18
Sequestrectomy	1
Other incision of bone without division	3
Wedge osteotomy	2
Other division of bone	15
Biopsy of bone	38
Excision and repair of bunion and other toe deformities	1
Local excision of lesion or tissue of bone	54
Excision of bone for graft	5
Other partial ostectomy	20
Total ostectomy	5
Bone graft	17
Application of external fixator device	2
Limb shortening procedures	8
Limb lengthening procedures	5
Other repair or plastic operations on bone	4
Internal fixation of bone without fracture reduction	13
Removal of implanted devices from bone	11
Closed reduction of fracture with internal fixation	1
Open reduction of fracture with internal fixation	2
Closed reduction of separated epiphysis	1
Open reduction of separated epiphysis	1
Open reduction of dislocation	1
Other arthrotomy	1
Arthroscopy	3
Biopsy of joint structure	12
Division of joint capsule, ligament, or cartilage	3
Synovectomy	1
Other local excision or destruction of lesion of joint	9

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Spinal fusion	7
Arthrodesis and arthroereisis of foot and ankle	1
Arthrodesis of other joint	3
Other repair of joint of lower extremity	2
Joint replacement of lower extremity	3
Other operations on joint structures	1
[[Incision of muscle, tendon, fascia, and bursa of hand	2
Excision of lesion of muscle, tendon, and fascia of hand	6
Transplantation of muscle and tendon of hand	1
Reconstruction of thumb	1
Plastic operation on hand with graft or implant	1
Other plastic operations on hand	2
Other operations on muscle, tendon, and fascia of hand	1
Incision of muscle, tendon, fascia, and bursa	13
Division of muscle, tendon, and fascia	5
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	158
Excision of lesion of muscle, tendon, fascia, and bursa	197
Other excision of muscle, tendon, and fascia	88
Suture of muscle, tendon, and fascia	2
Reconstruction of muscle and tendon	13
Other plastic operations on muscle, tendon, and fascia	17
Other operations on muscle, tendon, fascia, and bursa	4
Amputation of upper limb	23
Amputation of lower limb	57
Revision of amputation stump	7
Implantation or fitting of prosthetic limb device	5
Other operations on musculoskeletal system	1
Diagnostic procedures on breast	2
Excision or destruction of breast tissue	7
Reduction mammoplasty and subcutaneous mastectomy	2
Mastectomy	5
Augmentation mammoplasty	1
Incision of skin and subcutaneous tissue	31
Diagnostic procedures on skin and subcutaneous tissue	24
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	21

***Surgery-Detailed report: Soft tissue sarcoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	62
Radical excision of skin lesion	43
Suture or other closure of skin and subcutaneous tissue	5
Free skin graft	67
Pedicle grafts or flaps	34
Other repair and reconstruction of skin and subcutaneous tissue	20
Other operations on skin and subcutaneous tissue	6

***Surgery-Detailed report: Ewings sarcoma
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
X-ray of spine	2
X-ray of urinary system	1
Skeletal x-ray of extremities and pelvis	1
Arteriography using contrast material	1
Anatomic and physiologic measurements and manual examinations -- genitourinary system	1
Other anatomic and physiologic measurements and manual examinations	1
Therapeutic radiology and nuclear medicine	2
Skeletal traction and other traction	1
Other immobilization, pressure, and attention twound	6
Nonoperative intubation of gastrointestinal and respiratory tracts	1
Nonoperative alimentary tract irrigation, cleaning, and local instillation	1
Other nonoperative irrigation and cleaning	1
Nonoperative removal of therapeutic device from head and neck	1
Therapeutic apheresis or other injection, administration, or infusion of other therapeutic or prophylactic substance	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Ewings sarcoma
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Diagnostic procedures on skull, brain, and cerebral meninges	5
Craniotomy and craniectomy	8
Other excision or destruction of brain and meninges	7
Excision of lesion of skull	4
Cranioplasty	5
Ventriculostomy	1
Exploration and decompression of spinal canal structures	22
Excision or destruction of lesion of spinal cord or spinal meninges	21
Other operations on spinal cord and spinal canal structures	3
Incision, division, and excision of cranial and peripheral nerves	1
Cranial or peripheral nerve graft	1
Other cranial or peripheral neuroplasty	2
Injection into peripheral nerve	1
Diagnostic procedures on sympathetic nerves or ganglia	1
5.4	1

***Surgery-Detailed report: Ewings sarcoma
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Diagnostic procedures on thyroid and parathyroid glands	1
Other partial thyroidectomy	1
Substernal thyroidectomy	1
Parathyroidectomy	1

***Surgery-Detailed report: Ewings sarcoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Other adjustment of lid position	1
Other operations on eyelids	1
Intracapsular extraction of lens	1
Other cataract extraction	1
Orbitotomy	1
Diagnostic procedures on orbit and eyeball	1
Excision or destruction of lesion of external ear	1
Myringotomy	1
Reduction of nasal fracture	1
Repair and plastic operations on the nose	1
Intranasal antrotomy	1
External maxillary antrotomy	1
Other nasal sinusectomy	1
Surgical removal of tooth	5
Restoration of tooth by filling	2
Other dental restoration	3
Apicoectomy and root canal therapy	1
Diagnostic procedures on teeth, gums, and alveoli	2
Sialoadenectomy	1
Diagnostic procedures on oral cavity	1
Excision of other parts of mouth	1
Plastic repair of mouth	1
Palatoplasty	1
Tonsillectomy without adenoidectomy	1
Other repair of pharynx	1
Other operations on pharynx	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Ewings sarcoma
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Local excision or destruction of lesion or tissue of lung	31
Segmental resection of lung	7
Lobectomy of lung	4
Complete pneumonectomy	1
Radical dissection of thoracic structures	1
Other excision of lung	1
Diagnostic procedures on lung and bronchus	23
Other endoscopic procedures in bronchus or lung	1
Incision of chest wall and pleura	49
Incision of mediastinum	1
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	19
Excision or destruction of lesion or tissue of mediastinum	3
Excision or destruction of lesion of chest wall	20
Pleurectomy	4
Repair of chest wall	6
Operations on diaphragm	6
Other operations on thorax	4

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

Surgery-Detailed report: Ewings sarcoma
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)

Procedure/ICD code	# survivors
Other and unspecified repair of atrial and ventricular septa	1
Diagnostic procedures on heart and pericardium	5
Interruption of the vena cava	1
Other shunt or vascular bypass	3
Revision of vascular procedure	2
Other repair of vessels	2
Extracorporeal circulation and procedures auxiliary to heart surgery	1
Diagnostic procedures on lymphatic structures	22
Simple excision of lymphatic structure	3
Regional lymph node excision	2
Radical excision of cervical lymph nodes	2
Radical excision of other lymph nodes	1
Bone marrow or hematopoietic stem cell transplant	3
Diagnostic procedures on bone marrow and spleen	17
Other operations on spleen and bone marrow	9

***Surgery-Detailed report: Ewings sarcoma
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	2
Local excision or destruction of lesion or tissue of stomach	1
Diagnostic procedures on small intestine	2
Diagnostic procedures on large intestine	1
Other excision of small intestine	1
Partial excision of large intestine	2
Colostomy	2
Revision of intestinal stoma	1
Appendectomy	4
Incidental appendectomy	7
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	2
Repair of rectum	1
Other operations on rectum and perirectal tissue	1
Diagnostic procedures on liver	3
Cholecystotomy and cholecystostomy	1
Cholecystectomy	2
Other unilateral repair of inguinal hernia	1
Repair of diaphragmatic hernia, abdominal approach	1
Incision of abdominal wall	2
Laparotomy	15
Diagnostic procedures of abdominal region	6
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	6
Excision or destruction of peritoneal tissue	3
Lysis of peritoneal adhesions	2
Other repair of abdominal wall and peritoneum	1

***Surgery-Detailed report: Ewings sarcoma
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Partial nephrectomy	1
Nephropexy	1
Other repair of kidney	1
Cutaneous uretero-ileostomy	1
Diagnostic procedures on bladder	11
Transurethral excision or destruction of bladder tissue	3
Other operations on bladder	1
Diagnostic procedures on urethra	1
Release of urethral stricture	1
Ureteral catheterization	1

***Surgery-Detailed report: Ewings sarcoma
 Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Transurethral prostatectomy	1
Diagnostic procedures on testes	3
Orchiopexy	1
Diagnostic procedures on spermatic cord, epididymis, and vas deferens	1
Excision of varicocele and hydrocele of spermatic cord	1
Local excision or destruction of ovarian lesion or tissue	1
Unilateral salpingo-oophorectomy	1
Diagnostic procedures on uterus and supporting structures	1
Excision or destruction of lesion or tissue of uterus	1
Other and unspecified hysterectomy	2
Dilation and curettage of uterus	3
Incision of vagina and rectouterine pouch	1
Diagnostic procedures on vagina and rectouterine pouch	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Ewings sarcoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Diagnostic procedures on facial bones and joints	4
Local excision or destruction of lesion of facial bone	1
Partial ostectomy of facial bone	2
Excision and reconstruction of facial bones	2
Temporomandibular arthroplasty	1
Other operations on facial bones and joints	1
Sequestrectomy	1
Other incision of bone without division	2
Other division of bone	2
Biopsy of bone	217
Excision and repair of bunion and other toe deformities	2
Local excision of lesion or tissue of bone	66
Excision of bone for graft	5
Other partial ostectomy	44
Total ostectomy	22
Bone graft	21
Application of external fixator device	3
Limb shortening procedures	11
Limb lengthening procedures	6
Other repair or plastic operations on bone	6
Internal fixation of bone without fracture reduction	18
Removal of implanted devices from bone	16
Closed reduction of fracture with internal fixation	2
Open reduction of fracture with internal fixation	4
Debridement of open fracture site	1
Open reduction of dislocation	1
Arthrotomy for removal of prosthesis	2
Other arthrotomy	3
Biopsy of joint structure	3
Division of joint capsule, ligament, or cartilage	3
Excision or destruction of intervertebral disc	3
Other local excision or destruction of lesion of joint	5
Spinal fusion	9
Arthrodesis and arthroereisis of foot and ankle	2
Arthrodesis of other joint	6

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Ewings sarcoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Joint replacement of lower extremity	7
Arthroplasty and repair of shoulder and elbow	2
Other operations on joint structures	3
[[Incision of muscle, tendon, fascia, and bursa of hand	1
Incision of muscle, tendon, fascia, and bursa	2
Division of muscle, tendon, and fascia	1
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	38
Excision of lesion of muscle, tendon, fascia, and bursa	16
Other excision of muscle, tendon, and fascia	9
Suture of muscle, tendon, and fascia	1
Reconstruction of muscle and tendon	2
Other plastic operations on muscle, tendon, and fascia	7
Amputation of upper limb	3
Amputation of lower limb	48
Revision of amputation stump	3
Implantation or fitting of prosthetic limb device	7
Excision or destruction of breast tissue	3
Augmentation mammoplasty	3
Total reconstruction of breast	1
Incision of skin and subcutaneous tissue	14
Diagnostic procedures on skin and subcutaneous tissue	8
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	10
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	7
Radical excision of skin lesion	1
Suture or other closure of skin and subcutaneous tissue	2
Free skin graft	7
Pedicle grafts or flaps	5
Other repair and reconstruction of skin and subcutaneous tissue	2

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Soft tissue x-ray of thorax	1
Other x-ray	1
Arteriography using contrast material	11
Diagnostic ultrasound=	1
specimen from skin and other integument	1
Other physical therapy musculoskeletal manipulation	2
Skeletal traction and other traction	3
Other immobilization, pressure, and attention tound	22
Other nonoperative irrigation and cleaning	5
Nonoperative replacement of musculoskeletal and integumentary system appliance	2
Other nonoperative removal of therapeutic device	5
Removal of other foreign body without incision	1
Injection or infusion of other therapeutic or prophylactic substance	2
Other miscellaneous procedures	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Diagnostic procedures on skull, brain, and cerebral meninges	2
Craniotomy and craniectomy	3
Other excision or destruction of brain and meninges	1
Excision of lesion of skull	2
Other operations on skull, brain, and cerebral meninges	1
Exploration and decompression of spinal canal structures	4
Excision or destruction of lesion of spinal cord or spinal meninges	2
Incision, division, and excision of cranial and peripheral nerves	3
Cranial or peripheral nerve graft	3
Other cranial or peripheral neuroplasty	1
Injection into peripheral nerve	1
Sympathectomy	2
Other operations on nervous system	1

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Endocrine system (06-07)***

Procedure/ICD code	# survivors
Incision of thyroid field	1
Diagnostic procedures on thyroid and parathyroid glands	1
Unilateral thyroid lobectomy	1
Other partial thyroidectomy	1
Thymectomy	1

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Other adjustment of lid position	1
Reconstruction of eyelid with flaps or grafts	1
Enucleation of eyeball	1
Other plastic repair of external ear	1
Diagnostic procedures on middle and inner ear	1
Mastoidectomy	1
Incision of nose	1
Submucous resection of nasal septum	1
External maxillary antrotomy	1
Other nasal sinusotomy	1
Other nasal sinusectomy	2
Surgical removal of tooth	3
Partial glossectomy	1
Repair of tongue and glossoplasty	1
Sialoadenectomy	1
Diagnostic procedures on oral cavity	2
Other operations on mouth and face	1
Tonsillectomy without adenoidectomy	1
Tonsillectomy with adenoidectomy	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Excision or destruction of lesion or tissue of larynx	1
Temporary tracheostomy	3
Permanent tracheostomy	3
Diagnostic procedures on larynx and trachea	2
Other operations on larynx and trachea	1
Local excision or destruction of lesion or tissue of bronchus	9
Other excision of bronchus	1
Local excision or destruction of lesion or tissue of lung	98
Segmental resection of lung	37
Lobectomy of lung	15
Complete pneumonectomy	4
Incision of lung	1
Diagnostic procedures on lung and bronchus	36
Surgical collapse of lung	1
Repair and plastic operation on lung and bronchus	1
Other operations on lung and bronchus	1
Incision of chest wall and pleura	109
Incision of mediastinum	1
Diagnostic procedures on chest wall, pleura, mediastinum, and diaphragm	3
Excision or destruction of lesion or tissue of mediastinum	3
Excision or destruction of lesion of chest wall	10
Pleurectomy	4
Repair of chest wall	1
Operations on diaphragm	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

Surgery-Detailed report: Osteosarcoma
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)

Procedure/ICD code	# survivors
Diagnostic procedures on heart and pericardium	3
Pericardiectomy and excision of lesion of heart	3
Heart replacement procedures	1
Incision of vessel	5
Resection of vessel with replacement	1
Other excision of vessel	1
Other surgical occlusion of vessels	4
Puncture of vessel	2
Other shunt or vascular bypass	5
Suture of vessel	3
Other repair of vessels	5
Extracorporeal circulation and procedures auxiliary to heart surgery	1
Other operations on vessels	1
Diagnostic procedures on lymphatic structures	44
Simple excision of lymphatic structure	11
Radical excision of cervical lymph nodes	1
Radical excision of other lymph nodes	1
Puncture of spleen	1
Diagnostic procedures on bone marrow and spleen	7

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Diagnostic procedures on esophagus	1
Enterotomy	1
Diagnostic procedures on small intestine	2
Diagnostic procedures on large intestine	3
Other excision of small intestine	1
Partial excision of large intestine	2
Intestinal anastomosis	1
Ileostomy	3
Other enterostomy	1
Closure of intestinal stoma	1
Other repair of intestine	2
Appendectomy	3
Incidental appendectomy	4
Diagnostic procedures on rectum, rectosigmoid and perirectal tissue	1
Diagnostic procedures on liver	3
Local excision or destruction of liver tissue or lesion	1
Liver transplant	1
Cholecystectomy	1
Other hernia repair	2
Laparotomy	6
Diagnostic procedures of abdominal region	1
Excision or destruction of lesion or tissue of abdominal wall or umbilicus	2
Excision or destruction of peritoneal tissue	1

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Urinary system (55-59)***

Procedure/ICD code	# survivors
Nephrotomy and nephrostomy	1
Diagnostic procedures on kidney	1
Complete nephrectomy	3
Repair of ureter	1
Diagnostic procedures on bladder	1
Partial cystectomy	1
Other repair of urinary bladder	1
Other operations on bladder	1

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Genital organs and obstetrical procedures (60-75)***

Procedure/ICD code	# survivors
Unilateral orchiectomy	1
Orchiopexy	1
Total abdominal hysterectomy	1
Excision or destruction of lesion or tissue of uterus and supporting structures	1
Aspiration curettage of uterus	2
Cesarean section of unspecified type	1

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Diagnostic procedures on facial bones and joints	3
Local excision or destruction of lesion of facial bone	2
Partial ostectomy of facial bone	11
Excision and reconstruction of facial bones	7
Other facial bone repair and orthognathic surgery	1
Reduction of facial fracture	1
Other operations on facial bones and joints	4
Sequestrectomy	10
Other incision of bone without division	21
Wedge osteotomy	3
Other division of bone	17
Biopsy of bone	486
Excision and repair of bunion and other toe deformities	3
Local excision of lesion or tissue of bone	130
Excision of bone for graft	19
Other partial ostectomy	108
Total ostectomy	26
Bone graft	71
Application of external fixator device	6
Limb shortening procedures	11
Limb lengthening procedures	3
Other repair or plastic operations on bone	15
Internal fixation of bone without fracture reduction	44
Removal of implanted devices from bone	36
Insertion of bone growth stimulator	3
Closed reduction of fracture without internal fixation	5
Closed reduction of fracture with internal fixation	2
Open reduction of fracture without internal fixation	2
Open reduction of fracture with internal fixation	12
Debridement of open fracture site	1
Closed reduction of dislocation	1
Open reduction of dislocation	1
Unspecified operation on bone injury	1
Arthrotomy for removal of prosthesis	16
Other arthrotomy	9

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Arthroscopy	6
Biopsy of joint structure	8
Division of joint capsule, ligament, or cartilage	2
Excision or destruction of intervertebral disc	1
Excision of semilunar cartilage of knee	2
Synovectomy	3
Other local excision or destruction of lesion of joint	11
Other excision of joint	9
Spinal fusion	4
Arthrodesis and arthroereisis of foot and ankle	1
Arthrodesis of other joint	19
Other repair of joint of lower extremity	13
Joint replacement of lower extremity	110
Arthroplasty and repair of shoulder and elbow	12
Other operations on joint structures	6
Excision of lesion of muscle, tendon, and fascia of hand	1
Incision of muscle, tendon, fascia, and bursa	4
Division of muscle, tendon, and fascia	3
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	17
Excision of lesion of muscle, tendon, fascia, and bursa	16
Other excision of muscle, tendon, and fascia	13
Bursectomy	5
Reconstruction of muscle and tendon	6
Other plastic operations on muscle, tendon, and fascia	14
Amputation of upper limb	39
Amputation of lower limb	420
Revision of amputation stump	37
Implantation or fitting of prosthetic limb device	68
Other operations on musculoskeletal system	1
Reduction mammoplasty and subcutaneous mastectomy	2
Total reconstruction of breast	1
Incision of skin and subcutaneous tissue	20
Diagnostic procedures on skin and subcutaneous tissue	4
Excision or destruction of lesion or tissue of skin and subcutaneous tissue	39
Other local excision or destruction of lesion or tissue of skin and subcutaneous tissue	11

***CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction
Surgery groups based on classification of ICD9-CM codes***

***Surgery-Detailed report: Osteosarcoma
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Radical excision of skin lesion	4
Suture or other closure of skin and subcutaneous tissue	7
Free skin graft	24
Pedicle grafts or flaps	11
Other repair and reconstruction of skin and subcutaneous tissue	15
Other operations on skin and subcutaneous tissue	1

***Surgery-Detailed report: Other bone tumors
Procedure Group: Miscellaneous(00, 87-99)***

Procedure/ICD code	# survivors
Soft tissue x-ray of face, head, and neck	4
X-ray of spine	1
Arteriography using contrast material	2
Other immobilization, pressure, and attention twound	2
Nonoperative removal of therapeutic device from head and neck	2

***Surgery-Detailed report: Other bone tumors
Procedure Group: Nervous system (01-05)***

Procedure/ICD code	# survivors
Craniotomy and craniectomy	1
Incision of brain and cerebral meninges	1
Other excision or destruction of brain and meninges	4
Excision of lesion of skull	2
Repair of cerebral meninges	1
Extracranial ventricular shunt	2
Exploration and decompression of spinal canal structures	4
Excision or destruction of lesion of spinal cord or spinal meninges	4

***Surgery-Detailed report: Other bone tumors
 Procedure Group: Eye, ear, nose, mouth, and pharynx (08-29)***

Procedure/ICD code	# survivors
Other adjustment of lid position	1
Other operations on one extraocular muscle	2
Myringotomy	2
Other operations on inner and middle ear	1
Incision of nose	1
Diagnostic procedures on nose	1
Repair and plastic operations on the nose	1
Other nasal sinusectomy	1
Forceps extraction of tooth	1
Other operations on tongue	2
Excision of other parts of mouth	1
Other operations on mouth and face	1
Tonsillectomy with adenoidectomy	1
Diagnostic procedures on pharynx	1
Other repair of pharynx	1
Other operations on pharynx	2

***Surgery-Detailed report: Other bone tumors
Procedure Group: Respiratory system (30-34)***

Procedure/ICD code	# survivors
Temporary tracheostomy	1
Permanent tracheostomy	1
Diagnostic procedures on larynx and trachea	1
Repair and plastic operations on trachea	1
Local excision or destruction of lesion or tissue of lung	1
Segmental resection of lung	1
Diagnostic procedures on lung and bronchus	2
Incision of chest wall and pleura	4
Excision or destruction of lesion or tissue of mediastinum	1
Excision or destruction of lesion of chest wall	1
Operations on diaphragm	2

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes

***Surgery-Detailed report: Other bone tumors
Procedure Group: Cardiovascular, hemic and lymphatic system (35-41)***

Procedure/ICD code	# survivors
Other surgical occlusion of vessels	1
Puncture of vessel	2
Suture of vessel	1
Diagnostic procedures on lymphatic structures	4
Simple excision of lymphatic structure	1
Radical excision of cervical lymph nodes	1

***Surgery-Detailed report: Other bone tumors
Procedure Group: Digestive system (42-54)***

Procedure/ICD code	# survivors
Gastrostomy	2
Local excision or destruction of pancreas and pancreatic duct	1
Other unilateral repair of inguinal hernia	1
Laparotomy	1
Diagnostic procedures of abdominal region	2

Surgery-Detailed report: Other bone tumors
Procedure Group: Genital organs and obstetrical procedures (60-75)

Procedure/ICD code	# survivors
Repair of ovary	1

***Surgery-Detailed report: Other bone tumors
Procedure Group: Musculoskeletal or integumentary system (76-86)***

Procedure/ICD code	# survivors
Incision of facial bone without division	1
Partial ostectomy of facial bone	3
Excision and reconstruction of facial bones	1
Other operations on facial bones and joints	1
Other incision of bone without division	2
Other division of bone	3
Biopsy of bone	15
Local excision of lesion or tissue of bone	13
Excision of bone for graft	1
Other partial ostectomy	13
Total ostectomy	2
Bone graft	18
Application of external fixator device	1
Other repair or plastic operations on bone	2
Internal fixation of bone without fracture reduction	4
Removal of implanted devices from bone	3
Arthroscopy	1
Biopsy of joint structure	1
Spinal fusion	1
Arthrodesis of other joint	1
Joint replacement of lower extremity	1
[[Incision of muscle, tendon, fascia, and bursa of hand	1
Excision of lesion of muscle, tendon, and fascia of hand	1
Diagnostic procedures on muscle, tendon, fascia, and bursa, including that of hand	1
Excision of lesion of muscle, tendon, fascia, and bursa	2
Other excision of muscle, tendon, and fascia	1
Suture of muscle, tendon, and fascia	1
Other plastic operations on muscle, tendon, and fascia	2
Other operations on muscle, tendon, fascia, and bursa	1
Amputation of lower limb	6
Augmentation mammoplasty	1
Radical excision of skin lesion	2
Free skin graft	1
Pedicle grafts or flaps	1

CCSS data from February 2006 data freeze--Data from original diagnosis, for patients with medical records abstraction

Surgery groups based on classification of ICD9-CM codes