# Preventable Readmissions Following Common Cancer Surgeries: Lessons Learned from New York State and Targets for Improvement

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#### **ABSTRACT**

**Background:** Potentially preventable readmissions of surgical oncology patients offer opportunities to improve quality of care. Identifying and subsequently addressing remediable causes of readmissions may improve patient-centered care. **Objectives:** To identify factors associated with potentially pre-

**Objectives:** To identify factors associated with potentially preventable readmissions after index cancer operation.

**Methods:** The New York State hospital discharge database was used to identify patients undergoing common cancer operations via principal diagnosis and procedure codes between the years 2010 and 2014. The 30-day readmissions were identified and risk factors for potentially preventable readmissions were analyzed using competing risk analysis.

Results: A total of 53,740 cancer surgeries performed for the following tumor types were analyzed: colorectal (CRC) (42%), kidney (22%), liver (2%), lung (25%), ovary (4%), pancreas (4%), and uterine (1%). The 30-day readmission rate was 11.97%, 47% of which were identified as potentially preventable. The most common cause of potentially preventable readmissions was sepsis (48%). Pancreatic cancer had the highest overall readmission rate (22%) and CRC had the highest percentage of potentially preventable readmissions (51%, hazard ratio [HR] 1.42, 95% confidence interval [95%CI] 1.28–1.61). Risk factors associated with preventable readmissions included discharge disposition to a skilled nursing facility (HR 2.22, 95%CI 1.99–2.48) and the need for home healthcare (HR 1.61, 95% CI 1.48–1.75).

**Conclusions:** Almost half of the 30-day readmissions were potentially preventable and attributed to high rates of sepsis, surgical site infections, dehydration, and electrolyte disorders. These results can be further validated for identifying broad targets for improvement.

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**KEY WORDS:** cancer surgery, New York, preventable hospital admissions, readmission reduction

requent readmissions, overcrowded departments and pro- $\Gamma$  longed lengths of stay are highly prevalent and important issues facing hospitals, not only in Israel but also globally [1]. In this setting, readmissions are a significant contributor to health care costs and work load. In the United States, 30-day readmission rates are currently used as a measure of health care quality and affect hospital reimbursement. Identifying potentially preventable readmissions is important for ultimately improving patient outcomes and optimizing high value medical care to reduce costs. Readmissions are viewed as potentially preventable if an improvement in the health care delivery process could have eliminated the need for readmission [2,3]. These can be achieved through enhanced quality of care in initial hospitalization, appropriate timing and planning for discharge, appropriate discharge follow-up, and coordination of inpatient and outpatient health care [2,4]. Furthermore, some contend that a significant proportion of readmissions might be preventable if supportive palliative care were adequately utilized [5].

We identified modifiable risk factors associated with potentially preventable readmissions after cancer surgery. Rather than utilizing single institutional data as many comparable studies have to date [3,4,6], we used a statewide population sample to identify areas with the potential for improvement in outcomes and possible cost saving.

### **PATIENTS AND METHODS**

## **DATA SOURCES AND COHORT SELECTION**

Data were derived from the Statewide Planning and Research Cooperative System (SPARCS), New York State's hospital discharge data. These records were linked with New York (NY) State Vital Statistics death records. The original cohort was defined via International classification of diseases, 9th edition, clinical modification (ICD9-CM), principal diagnosis for most common cancers including: colon, rectal, liver, pancreas, lung,

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uterus, ovary, and kidney with procedure codes for respective cancer operations [Supplementary Table 1]. We included patients who underwent surgery between 2010 and 2014, and incorporated information from this cohort from 2009 to capture existing co-morbidities prior to surgery and during index hospitalization. Co-morbidities were classified with the Elixhauser Comorbidity Index [7,8]. A consort diagram detailing the study cohort is reported in Figure 1.

We excluded cancer patients who were younger than 18 years, diagnosed with metastatic cancer, resided outside of New York State, died during index hospitalization, or had multiple cancers treated in a single index hospitalization. Colon and rectal cancer surgeries were combined into a single colorectal cancer (CRC) category.

The study was approved by the data protection review board of the NY State Department of Health as well as the Program for Protection of Human Subjects at the Icahn School of Medicine at Mount Sinai. The approval included a waiver of informed consent. Cancer Center Grant #P30CA196521.

#### READMISSIONS

The index admission was defined as the one comprising the cancer surgery. Readmission was defined as any return to an acute inpatient hospital within 30-days of discharge. Any hospitalizations to psychiatric or rehabilitation facilities were not counted as readmissions. Any admission to a different hospital that occurred within 24 hours after discharge was considered a transfer, and both hospitalizations were analyzed as a single admission attributed to the facility where the surgery was performed. Subacute

rehabilitation and skilled nursing facilities (SNFs) were grouped into a single category due to a similar number of services.

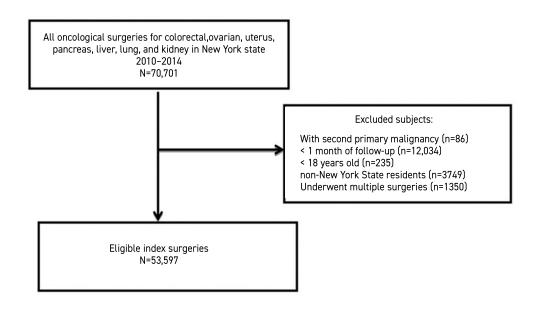
## **IDENTIFYING POTENTIALLY PREVENTABLE READMISSIONS**

Following a thorough literature review [2,4,5,9-15], a working group of surgical oncology surgeons, internal medicine physicians, and health policy specialists defined terms and created a list of potentially preventable readmissions reasons following major cancer operations. This classification scheme is based on previously validated algorithms from the literature and includes surgical as well as nonsurgical reasons for readmission [Supplementary Table 2]. The causes of potentially preventable readmissions were classified as follows: surgical site infection, urinary tract infection (UTI), pneumonia, sepsis, venous thromboembolic event, postoperative cardiovascular event, dehydration/malnutrition/electrolyte disorders, pain, line complications, altered mental status, and other surgery related complications.

#### STATISTICAL ANALYSIS

Continuous variables were reported as mean with standard deviation. Categorical variables were expressed as proportions. We used a multivariable competing risk model to analyze 30-day readmissions where death within 30 days after discharge was a competing event. To account for clustering of patients within the hospitals, we used a marginal Cox model with a robust sandwich variance estimator. The model included patient characteristics (cancer type diagnosis, patient's age, sex, race/ethnicity, insurance status, co-morbidities, discharge disposition) and hospital characteristics (location (urban/rural), type (public/private),

**Figure 1.** Study population Some patients belong to several exclusion criteria



teaching/non-teaching) as covariate. All tests were 2-tailed. An alpha level of 0.05 was considered statistically significant. All statistical analyses were performed using SAS version 9.4 (SAS Institute Inc., Cary, NC, USA).

#### **RESULTS**

#### **INDEX HOSPITALIZATIONS**

A total of 205 New York State hospitals had an index admission for the common cancer surgeries included. Patient characteristics and 30-day readmission rates are outlined in Table 1. A total of 70,701 hospitalizations were identified between 2009 and 2014. A total of 53,740 surgeries were included in our analysis. The largest number of index hospitalizations was among patients 50-64 years of age; 51% of the patients were female; 69% were white, 11% black, 4% Asian, 6% Hispanic, and 11% other race/ethnicity. Almost half of the patients had Medicare insurance (48%), 20% Medicaid, 29% private, 1% uninsured, and 1% other insurance. Index cancer surgery types included CRC (42%), kidney (22%), liver (2%), lung (25%), ovary (4%), pancreas (4%), and uterus (1%). Most patients were discharged home (62%), with 26% discharged home with home healthcare, 10% discharged to a SNF, and approximately 1% to hospice, home hospice, or other locations.

## **REASON FOR READMISSION AND PREVENTABILITY**

Readmission rate after cancer surgeries was 12% (6435/53740) [Table 1]. The malignancy with highest 30-day readmission rate was pancreas (22%), followed by CRC (14%), liver (14%), ovary (12%), lung (11%), uterus (11%), and kidney (8%). Of all readmissions within 30 days 3056 (47%) were identified as potentially preventable. CRC had the highest percentage of potentially preventable 30-day readmissions (51%), followed by kidney, liver, pancreas, lung, ovary, and uterus [Table 1]. The most common cause of potentially preventable readmission was sepsis (48% of readmissions), followed by surgical site infection (28%), dehydration/malnutrition/electrolyte disorders (11%), pneumonia (10%), venous thromboembolic event (9%), other surgical complications (7%), urinary tract infection (6%), pain (3%), post-operative cardiovascular event (2%), and line complications (1%) [Table 2].

Multivariable analysis of risk factors associated with potentially preventable 30-day readmissions [Table 3] showed that patients discharged to SNF/rehabilitation and home healthcare were at higher risk of readmissions: hazard ratio (HR) 2.22, 95% confidence interval (95%CI) 1.99–2.48; and HR 1.61, 95%CI 1.48–1.75, respectively, P < 0.001). The malignancy with highest risk for 30-day potentially preventable readmissions is pancreatic cancer (HR 1.82, 95%CI 1.49–2.22) followed by CRC (HR 1.43, 95%CI 1.28–1.61), and liver cancer (HR 1.32, 95%CI 1.01–1.73). Drug abuse is the co-morbidity with the highest

statistically significant risk for 30-day potentially preventable readmissions (HR 1.71, 95%CI 1.20–2.43), followed by coagulopathy (HR 1.45, 95%CI 1.21–1.74), fluid and electrolytes disorders (HR 1.29), diabetes with chronic complications (HR 1.25, 95%CI 1.04–1.50), renal failure (HR 1.28), other neurological disorders (HR 1.25, 95%CI 1.05–1.49), peripheral vascular disease (HR 1.23), and congestive heart failure (HR 1.19). Female sex exerted a protective effect on potentially preventable readmissions (HR 0.82, 95%CI 0.75–0.89).

# **DISCUSSION**

Our results demonstrate a 30-day readmission rate of 12% with almost half of the readmissions identified as potentially preventable. Multiple factors were associated with increased rate of readmissions after cancer surgery. Co-morbidities raise the likelihood of readmissions. Cancer surgeries performed in the abdominal cavity were associated with higher readmission rates for sepsis and surgical site infection. Readmission rates identified in our study are comparable to the American College of Surgeons National Surgical Quality Improvement Program (NSQIP) 12.8% 30-day readmission rate for its cohort of more than 500 hospitals [16], although higher than the 8.3% overall readmission rate of general surgery patients readmitted to a single hospital within 30 days of discharge [3]. Other studies report 30-day overall surgical readmission rate for cancer of 13% to 43%, depending on cancer site [10,17-21] and malignant-related treatments [15,22]. In the present study, as well as in previously published studies [9,19], race and ethnicity were not associated with an increased risk of readmission.

Identifying and addressing risk factors for potentially preventable readmissions from cancer surgeries is challenging but essential. The surgical oncology community has been focusing efforts to improve care quality and patient outcomes, and to eliminate potentially preventable readmissions. Most efforts directed to identify preventable surgical readmissions have consisted of physician adjudication based on chart reviews, and there is no validated objective method to determine whether a readmission is truly preventable or not. The determination of potentially preventable readmission is subjective and therefore may suffer from assignment bias. New tools to accurately identify potentially preventable 30-day readmissions have been internationally validated for medical inpatients [14]. These challenges also have been addressed for surgical patients in general [2] but to the best of our knowledge, complex surgical oncology patients in particular, have no established specific standard for determining preventability of hospital readmissions. Data in our study show a lower rate of potentially preventable readmissions compared to a nationally based study of complex cancer surgeries [15]. Despite our similar readmission classifications and our use of Goldfield criteria as the basis to define preventability, our definition is somehow narrower addressing surgeries for cancer in particular [2].

**Table 1.** Patient characteristics and 30-day readmission rates

	All index ho	ospitalizations		rged alive lex surgery	30-day	readmissions**		ntable 30-day missions***
	N	%*	N	%	N	% of index hospitalization	N	% of 30-day readmissions
	54,597		53,740		6435	12	3054	47
Age, years								
18-49	5606	10	5586	10	559	10	280	5
50-64	17,426	32	17,322	32	1754	10	807	46
65-74	15,715	29	15,493	29	1816	12	834	46
75-84	12,219	22	11,906	22	1716	14	823	48
≽ 85	3631	7	3433	7	590	17	310	53
Sex								
Female	27,713	51	27,350	51	3075	11	1440	47
Male	26,884	49	26,390	49	3360	13	1614	48
Race/ethnicity								
White	37,811	69	37,190	69	4382	12	2100	48
Black	5891	11	5796	11	791	14	357	45
Asian	1968	4	1948	4	191	10	99	52
Hispanic	3045	6	2997	6	431	14	185	43
Other	5882	11	5809	11	640	11	313	49
Insurance								
Medicare	26,451	48	25,869	48	3400	13	1635	48
Medicaid	10,769	20	10,574	20	1432	14	653	46
Private	16,009	29	15,945	29	1461	9	701	48
Uninsured	775	1	770	1	76	10	41	54
Other	593	1	582	1	66	11	24	39
Disposition								
Home	34,107	62	34,107	62	3003	9	1384	46
ннс	13,943	26	13,943	26	2147	15	987	46
SNF	5208	10	5208	10	1203	23	649	54
Hospice	64	0	64	0	4	6	3	75
Home hospice	38	0	38	0	3	8	2	67
Other	380	1	380	1	75	20	19	36
Died	857	2						
Cancer type								
Colorectal	23,029	42	22,545	42	3104	14	1586	51
Kidney	12,047	22	11,981	22	999	8	499	50
Liver	1257	2	1196	2	165	14	79	48
Lung	13,485	25	13,303	25	1410	11	584	41
Ovary	2250	4	2237	4	273	12	99	36
Pancreas	2011	4	1961	4	426	22	186	44
Uterus	518	1	517	1	58	11	21	36

HHC = home healthcare, SNF = skilled nursing facility

<sup>\*</sup>Denominator is the number of index hospitalizations (n=54597)

<sup>\*\*</sup>Denominator for 30-day readmission is the number of discharged alive after index surgery for each age group, sex, race, insurance #Denominator is the number of discharge alive (n=53740)

<sup>\*\*\*</sup>Denominator for preventable 30-day readmissions is the number of 30-day readmissions for each age group, sex, race

Table 2. Preventable readmission rates by cancer type

	A readmi		Color	ectal	Kid	ney	Liv	/er	Lu	ng	0v	ary	Pano	reas	Ute	erus
	N	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
All causes	3054		1588		499		78		584		99		185		21	
SSI	845	28	529	33	76	15	36	46	62	11	49	49	82	44	11	52
UTI	170	6	96	6	42	8	3	4	18	3	3	3	8	4	0	0
Pneumonia	302	10	73	5	40	8	2	3	170	29	5	5	10	5	2	10
Sepsis	1454	48	853	54	180	36	47	60	188	32	57	58	115	62	14	67
VTE	261	9	112	7	44	9	6	8	80	14	7	7	9	5	3	14
Postop CV	53	2	23	1	17	3	2	3	11	2	0	0	0	0	0	0
Dehydration / Malnutrition / Electrolyte disorders	338	11	210	13	59	12	7	9	36	6	10	10	15	8	1	5
Pain	106	3	50	3	22	4	2	3	18	3	4	4	10	5	0	0
Line complications	24	1	8	1	2	0	1	1	8	1	0	0	5	3	0	0
Altered mental status	53	2	24	2	13	3	3	4	11	2	1	1	1	1	0	0
Other surgery related complications	227	7	108	7	71	14	3	4	29	5	5	5	10	5	1	

Percents may exceed 100% if patients were hospitalized with >1 potentially preventable diagnoses.

CRC = colorectal cancer, Postop CV = postoperative cardiovascular, SSI = surgical site infection, UTI = urinary tract infection, VTE = venous thromboembolic events

Perhaps the most salient matter in reducing readmissions is determining how much is truly preventable. For instance, the extent to which sepsis is preventable, is unknown. Though, it might be a more comprehensive to state that readmission due to sepsis is in part preventable. The surgical quality NSQIP review of unplanned readmissions found, similar to our study, that most readmissions were related to the procedures but also to the post-discharge site [23]. A significant reduction in 30-day all-cause hospital readmissions after sleeve gastrectomy was accomplished through the first-ever joint national quality improvement collaboration between the American College of Surgeons and the American Society for Metabolic and Bariatric Surgery via a quality improvement program, known as the DROP program (Decreasing Readmissions through Opportunities Provided) [24]. With this program, efforts to reduce potentially preventable hospital readmissions among bariatric surgery patients found that nausea, dehydration and side effects from medications were common reasons for readmission. DROP took a multi-pronged approach to tackle readmissions: they had surgeons perform intra-operative leak checks and mobilize patients quickly; encouraged patients to perform incentive spirometry; worked with nurses, dieticians, psychologists and pharmacists who provided education on diet, hydration, activity, warning signs, stress and anxiety management; and they provided a discharge checklist and

card with provider names and contact information. They reduced readmissions from 8% to 2.5% [24]. Although the surgery type was not oncologic in nature, the use of a multi-disciplinary, multipronged approach to reduce readmissions can provide a guide for oncologic surgery. Most oncologic surgeries are elective and not emergent. The elective nature of surgery provides an opportunity in this unique population to intervene perioperatively to decrease the risk of readmission postoperatively. The high proportion of sepsis and surgical infections as a cause for readmission suggests the need for hospital surgical quality personnel to create multi-disciplinary teams to identify and address the pre-, intra- and post-operative care lapses that contribute to these high rates.

Discharge disposition impacts risk of readmission. We found, as others have [25,15], higher rates of readmissions among patients discharged to SNF compared to those discharged home. We would expect sicker patients and those requiring skilled nursing to be at greater risk of readmission. However, the disturbing statistic is the nearly doubled rate of readmission for potentially preventable reasons among patients discharged to SNFs as compared to home. Teams from hospital surgical oncology should consider working with SNF personnel to review and train staff on common post-surgical care procedures that might mitigate readmission. Common sense suggests that patients discharged with homecare may not have been as sick

**Table 3.** Multivariable analysis of risk factors associated with potentially preventable readmissions

Parameter		Hazard ratio	95% confide	nce intervals	P value
Sex	Female	0.819	0.757	0.885	< 0.0001
<u> </u>	50-64	0.844	0.741	0.961	0.0107
	65-74	0.82	0.694	0.969	0.02
Age, years	75-84	0.871	0.711	1.066	0.1808
	85+	0.851	0.68	1.066	0.1614
	Asian	0.963	0.804	1.155	0.6853
	Black	1.029	0.916	1.156	0.6268
Race/ethnicity	Hispanic	1.084	0.906	1.298	0.3787
	Other	0.997	0.874	1.137	0.9666
	Medicaid	1.059	0.917	1.223	0.435
	Medicare	1.08	0.937	1.244	0.2864
nsurance status	Other	0.971	0.723	1.303	0.8419
	Uninsured	1.137	0.723	1.514	0.3811
	Colorectal	1.432	1.278	1.605	<.0001
	Liver	1.318	1.007	1.726	0.0444
		0.925	0.809	1.726	0.2572
Cancer type	Lung		0.809	1.488	0.2372
	Ovary	1.199 <b>1.819</b>	0.967 <b>1.494</b>	2.216	<.0001
	Pancreas		0.69		
	Uterus	1.094		1.736	0.7013
	Congestive heart failure	1.168	1.035	1.317	0.0118
	Valvular disease	0.853	0.743	0.98	0.0244
	Pulmonary circulation disorder	1.179	0.938	1.483	0.1581
	Peripheral vascular disease	1.232	1.055	1.44	0.0086
	Hypertension	1.033	0.952	1.122	0.4317
	Paralysis	0.857	0.604	1.215	0.3867
	Other neurological disorders	1.252	1.05	1.492	0.0123
	Chronic pulmonary disease	1.094	0.994	1.203	0.0652
	Diabetes without chronic complications	1.162	1.061	1.273	0.0012
	Diabetes with chronic complications	1.247	1.035	1.503	0.0202
	Hypothyroidism	1.042	0.906	1.2	0.5634
	Renal failure	1.277	1.131	1.441	<.0001
Co-morbidities	Liver disease	0.974	0.745	1.274	0.8482
	Peptic ulcer disease	1.098	0.277	4.349	0.8941
	Rheumatoid arthritis	1.113	0.854	1.451	0.4275
	Coagulopathy	1.451	1.209	1.742	<.0001
	Obesity	1.089	0.964	1.23	0.1697
	Weight loss	1.134	0.99	1.299	0.069
	Fluid and electrolyte disorders	1.286	1.168	1.416	<.0001
	Blood loss anemia	0.89	0.702	1.13	0.34
	Anemia deficiency	0.956	0.871	1.05	0.3494
	Alcohol abuse	0.876	0.682	1.124	0.2963
	Drug abuse	1.706	1.198	2.427	0.003
	Psychoses	1.093	0.867	1.379	0.4507
	Depression	1.085	0.972	1.212	0.1464
	Rural	0.926	0.658	1.302	0.6572
lospital characteristics	Teaching hospital	1.051	0.94	1.175	0.3864
	PC_M_D	1	0.997	1.003	0.9211
	Home healthcare	1.606	1.477	1.746	<.0001
Nenoeition	Hospice	0.345	0.083	1.43	0.1425
Disposition	Other	1.376	0.863	2.193	0.1796
	SNF	2.221	1.987	2.484	<.0001

SNF = skilled nursing facility, PC\_M\_D = percent Medicaid

as those discharged to a care facility; however, their high readmission rate suggests that they may not have received adequate post-surgical care support, highlighting another opportunity to train patients and those providing wound care at home.

Data in this study show no statistical difference in 30-day readmission rate regarding nonmodifiable risk factors such as hospital characteristic, including location and teaching versus non-teaching, and insurance status.

#### **LIMITATIONS**

First, while we used a previously created list of ICD-9 codes categorized as potentially preventable causes of readmission following cancer surgery, true validation of this list would require successful intervention to truly know if such readmissions are preventable. Second, it is challenging to determine whether a hospital readmission is attributed to the index admission and potentially preventable, or rather an admission attributable to cancer progression or other co-morbid medical conditions. To address this potential limitation, we chose to analyze 30 days following the index procedure, recognizing that we may capture fewer readmissions but will end with data that are more reliable. Lastly, our findings are subject to the same limitations and biases of any retrospective analysis based on administrative data.

# CONCLUSIONS

Identifying potentially preventable readmissions empowers healthcare facilities to provide more patient-centered care and, simultaneously, to reduce unnecessary costs while improving patient outcomes. Our data suggest the importance of improving discharges to SNFs and to ensure that receiving facilities are adequately equipped and trained to handle cancer surgery patients. In addition, hospitals need to identify specific causes of sepsis, surgical site infections, dehydration, and electrolyte disorders that result in potentially preventable readmissions. Our sample represents a large retrospective cohort from New York state and includes a variety of health care systems and diversity of patients. Our results may be generalizable to other states and institutions throughout the world and should be further validated to identify specific targets for improvement.

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# Supplementary Table 1. Procedure codes

	PICD-9-CM procedure code	Procedure description
	17.31	Laparoscopic multiple segmental resection of large intestine
	17.32	Laparoscopic cecectomy
	17.33	Lap right hemicolectomy
	17.34	Lap res transvers colon
	17.35	Lap left hemicolectomy
	17.36	Lap sigmoidectomy
	17.39	Other laparoscopic partial excision of large intestine
	45.74	Open and other resection of transverse colon
ctal	45.49	Other destruction of lesion of large intestine
Colorectal	45.71	Open and other multiple segmental resection of large intestine
	45.73	Open and other right hemicolectomy
	45.75	Open and other left hemicolectomy
	45.76	Open and other sigmoidectomy
	45.79	Other and unspecified partial excision of large intestine
	45.8	Total intra-abdominal colectomy
	48.62	Anterior resection of rectum with synchronous colostomy
	48.63	Other anterior resection of rectum
	48.5	Abdominoperineal resection of rectum
	50.4	Total hepatectomy
Liver	50.22	Partial hepatectomy
	50.3	Lobectomy of liver
as	52.5	Partial pancreatectomy
Pancreas	52.6	Total pancreatectomy
	52.7	Radical pancreaticoduodenectomy

	PICD-9-CM procedure code	Procedure description
	32.20	Thoracoscopic excision of lesion or tissue of lung
	32.30	Thoracoscopic segmental resection of lung
Lung	32.39	Other and unspecified segmental resection of lung
	32.4	Lobectomy of lung
	32.5	Pneumonectomy
	65.31	Laparoscopic unilateral oophorectomy
	65.39	Other unilateral oophorectomy
	65.64	Laparoscopic removal of remaining ovary and tube
	68.6	Radical abdominal hysterectomy
	68.31	Laparoscopic supracervical hysterectomy [LSH]
	68.39	Other and unspecified subtotal abdominal hysterectomy
	68.4	Total abdominal hysterectomy
vary	68.61	Laparoscopic radical abdominal hysterectomy
Uterine and ovary	68.69	Other and unspecified radical abdominal hysterectomy
erin	68.5	Vaginal hysterectomy
5	68.7	Radical vaginal hysterectomy
	68.8	Pelvic evisceration
	54.4	Excision or destruction of peritoneal tissue
	65.4	Unilateral salpingo-oophorectomy
	65.51	Other removal of both ovaries at same operative episode
	65.53	Laparoscopic removal of both ovaries at same operative episode
	65.54	Laparoscopic removal of remaining ovary
Iney	55.4	Partial nephrectomy
ᇫ	55.5	Complete nephrectomy

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795. Prestoreative infection not deswhere classified 795. Prestoreative infection of skin and subcutaments issue 795. Prestoreative infection of skin and subcutaments issue 795. Other postoperative infection of skin and subcutaments issue 795. Other postoperative infection of skin and subcutaments issue 797. Other infection due to medical care not elsewhere classified 797. Other infection due to medical care not elsewhere dissified 797. Other infection due to medical care not elsewhere dissified 797. Other infection due to medical care not elsewhere dissified 797. Other infection due to medical care not elsewhere dissified 797. Other infection due to medical care not elsewhere dissified 797. Other postoperative infection 797. Other postoperative infection of skin and subcutaments in state of promote cytical care infection and infammatory reaction due to indexified and infection and infammatory reaction due to indexified and infammatory reaction due to indexified and infammatory reaction due to other infections 797. Infamiliar and in cytical care infections organisms 797. Dies bacterial presumonial in cyticonegalis due to mycopleanan preumoniale preumonial in cyticonegalis due to mycopleanan preumoniale preumonial in cyticonegalis due to mycopleanan preumoniale due to mycopleanan preumoniale due to mycopleanan preumoniale due to mycopleanan preumoniale in cyticonegalisms 797. Dies bacterial preumonial in cyticonegalism unspecified 797. Preumonial in other specified aviant influence avins with preumonial in cyticonegalisms under specified aviant influence avins with preumonial in antifications 797. Dies bacterial preumonial in mytop cough 797. Dies bac			al septicemia	<u>- 5</u>	CM CM 63-9-	<b>Definition</b> Mechanical complication due to other implant and internal device.
998.5. Postoperative infection not elsewhere classified         98.8.           998.5. Infected postoperative serona         998.9.           998.5. Infected postoperative infection of skin and subcutaneous tissue         998.9.           998.5. Infected postoperative infection of skin and subcutaneous tissue         998.9.           999.5. Other postoperative infection of skin and subcutaneous tissue         998.0.           1112. Condiciasis of other progenital sites         998.0.           590.1. Postouce printis         998.0.           590.2. Postouce printis         998.0.           590.3. Postouce printis         998.0.           590.4. Infection and inflammatory reaction due to indwalling urnary catheter         405.1.           599.5. Infiguitis         998.6.         1112.4.         998.0.           117.5. Observation and inflammatory reaction due to indwalling urnary catheter         451.1.         998.2.           998.6. Infiguitis         117.9. Obter and unispecified mycoses         451.1.         998.2.         451.1.           488.1. Infiguitis         1999.0.         1999.0.         1999.0.         451.1.         999.0.           488.2. Infiguitis         1999.0.         1999.0.         451.1.         452.2.         453.2.           488.4. Infiguitis         1999.0.         1999.0.         453.2.	events cardiovascular		Streptococcal septicemia			echanical complication due to other implant and internal device
978.51         Interest gostoperative serona         795.51           56.98         10 Unspecified local infection of skin and subcutaneous tissue         975.73           56.98         112.2         Candidissis of other ungenital sites         978.53           590.1.1         Acute pyelorephritis         978.73           590.1.2         Candidissis of other ungenital sites         978.53           590.1.3         Acute pyelorephritis         978.73           590.2.4         Acute pyelorephritis         978.24           590.2         Other postorephritis or pyroephrosis not specified as acute or chronic         978.24           590.2         Other pyelorephritis or pyroephrosis not specified         404.73           590.3         Uninary tract infection, site not specified         404.73           590.4         Uninary tract infection, site not specified         451.11           690.6.4         Infection and inflammatany reaction due to indwelling urhany catheter         451.11           790.6.4         Infection and inflammatany reaction due to indwelling urhany catheter         451.11           790.6.4         Infection and inflammatany reaction due to indwelling urhany catheter         451.11           790.6.4         Infection and inflammatany reaction due to indemite any catheter         451.11           790.6.6 <t< td=""><td>events cardiovascular</td><td></td><td></td><td></td><td></td><td>of pleasing classified</td></t<>	events cardiovascular					of pleasing classified
998.59         1998.79         998.50           998.61         117.20         Candidasis of other undecided care not elsewhere classified         998.57           999.31         117.20         Candidasis of other undecided care not elsewhere classified         998.57           117.20         Candidasis of other undecided care not elsewhere classified         998.57           590.32         Pyeloureptritis of pyonephrois not specified as acute or chronic         998.27           590.33         Pyeloureptritis or pyonephrois not specified         998.27           590.45         Acute cystitis         17.4         404.7           595.53         Trigonitis         404.7         404.7           596.64         Infection and infammatory reaction due to indwelling unnary cathered         404.7           597.65         Acute cystitis         411.7         404.7           598.64         Infection and infammatory reaction due to indwelling unnary cathered         451.1           698.17         Phenomosary actinomycotic infection         451.1           117.24         Candidasis of lung         471.2           698.17         Phenomosary actinomycotic infection         451.2           698.17         Phenomosary actinomycotic infection         452.2           698.17         Phenomosary actinomycotic in	events cardiovascular		Septic shock		+	ot etsewilere cusssined fertion and inflammatory reaction due to other internal proethe
59.58.1         Universerided local infection of skin and subcutaneous itssue         99.57.2           112.2         Condiciasis of other unogenital sites         99.81.2           590.1*         Acute pelcinephritis         99.81.2           590.2         Acute opelionephritis or pytonephrosis not specified as acute or chronic         99.81.2           590.3         Pytoureerfitis cystica         99.81.2           590.4         Other pytonephritis or pytonephrosis not specified as acute or chronic         99.82.7           595.3         Trigonitis         41.51.7           599.4         Universery actinomycotic infection         41.51.7           699.5         Trigonitis         41.51.7           112.4         Candidisasis of lung         451.51.2           112.5         Chera and unspecified mycoses         451.51.2           480.7         Pherumonia processal preumonia [Streptococcus pneumoniae pneumoniae]         451.51.2           481.7         Pherumonia nu cytonegalic inclusion disease         263.8           482.8         Pherumonia in other systemic mycoses         263.8           484.1         Pherumonia in other systemic mycoses         263.8           485.2         Pherumonia in other systemic mycoses and processes of unogenian and parietasid velar and parietasid preuse and parietasid velar preumonia in anthrax and pari	events cardiovascular		Sepsis		69 966	device, implant, and graft
1973.2 Other infection due to medical care and elsewhere classified         998.00           590.3 Pollucate infection due to medical care and elsewhere classified         998.02           590.4 Autro pyelonephritis or strice         998.02           590.5 Acute cystikis         998.02           595.6 Acute upelonephritis or pyonephrosis not specified as acute or chronic         998.02           595.6 Acute cystikis         998.02           595.7 Homonary actinomycotic infection         406.17           998.44 Infection and inflammatory reaction due to indwelling uninary catherer         451.17           998.44 Infection and inflammatory reaction due to indwelling uninary catherer         451.11           998.42 Infection and inflammatory reaction due to independent and unspecified mycoses         451.11           480.1 Preumonia of mycoses         468.1 Preumonia mycomegalic industrial preumonia         451.11           481.2 Preumonia in other systemic mycoses         468.1 Preumonia in other systemic mycoses         468.1 Preumonia in other systemic mycoses           486.4 Preumonia in other systemic mycoses         468.1 Preumonia in other systemic mycoses         468.1 Preumonia in other systemic mycoses           486.5 Preumonia in other systemic mycoses         468.1 Preumonia in other systemic mycoses         468.1 Preumonia in other systemic mycoses           486.7 Preumonia in other systemic mycoses         468.2 Preumonia in other systemic mycoses	events cardiovascular		Severe sepsis	66 icatio	996.79	Other complications due to other internal prosthetic device, implant, and graft
590.31         Operate pelconseptivities of states of cure to operate states of the cure to operate states of the cure to operate states of the cure operate opera	events cardiovascular		Postoperative shock not elsewhere classified		V58.82 F	Fitting and adjustment of nonvascular catheter, NEC
590.3         Power performance of promotive process of the performance of promotive process of the performance of process of the permonial of performance of process of the permonial of performance of the permonial of performance of the permonial of performance of permonial of performance of permonial o	events cardiovascular		Other and uncondified infection due to control years as between	25	292.0 E	Drug withdrawal
90.08.47         59.53         Theraperonic organisms of procedure of spore phrons is not specified as acute or chronic         A04.7         A04.7           595.3 Trigonitis         59.53         Trigonitis         415.1*           595.3 Trigonitis         59.64         Hintertion and inflammatory reaction due to indwelling uninary catheter         451.1*           996.44         Hintertion and inflammatory reaction due to indwelling uninary catheter         451.1*           112.4         Candidiasis of Lung         451.2           117.9 Other and unspecified mycoses         468.1           486.1 Perumonya actinomycotic infection         487.2           486.1 Perumonya actinomycotic infection         488.1           486.1 Other boncholistic due to other infectious organisms         483.4           488.1 Preumonia in other systemic mycoses         488.7           488.2 Preumonia in other systemic mycoses         283.8           488.4 Preumonia in other systemic mycoses         283.8           488.5 Preumonia in other systemic mycoses         284.8           507* Preumonia in other systemic mycoses         284.8           507* Preumonia in other systemic mycoses         284.8           516.8 Other specified alvedar and parietalvedar preumonantia mycoses         284.8           516.8 Other specified alvedar and parietalvedar preumonantia mycoses <td< td=""><td>events cardiovascular</td><td></td><td>Ortice and dispectified illection due to certifiat vertous catrieter.  Postonerative shork sentic</td><td>29</td><td>292.81 E</td><td>Drug-induced delirium</td></td<>	events cardiovascular		Ortice and dispectified illection due to certifiat vertous catrieter.  Postonerative shork sentic	29	292.81 E	Drug-induced delirium
595.3         Trigonitis         404.7           595.3         Trigonitis         415.1*           595.3         Trigonitis         421.1*           595.4         Uninary tract infection, site not specified         415.1*           996.44         Infection and inflammatory reaction due to indwelling urinary catheter         451.1*           996.45         Influency actionmy oction infection         451.1*           117.4         Candidiasis of Lung         451.8           117.9         Other and unspecified mycoses         451.81           486.1         Preumocystosis         453.4           486.1         Preumonial control in cont	events cardiovascular		Intestinal infection due to Clostridium difficile			Delirium due to conditions classified elsewhere
595.3 Trigonitis         Trigonitis         415.1*           998.44 Infection and infammatory reaction due to indwelling uninary catheter         451.2*           102.4 Outlineary tract infection, site not specified         451.1*           102.4 Infection and infammatory reaction due to indwelling uninary catheter         451.2           112.4 Outle and unspecified mycoses         451.2           112.5 3 Pneumocial site of lung         464.1           464.19 Acute bronchiolitis due to other infectious organisms         453.9           468.1 Preumocial and unspecified mycoses         263.8           468.2 Other bacterial pneumonia of the composition in cytomegalic inclusion disease         263.8           468.4 Preumonia in other systemic mycoses         263.8           468.5 Pneumonia in other systemic mycoses         263.8           468.6 Pneumonia in other systemic mycoses         263.9           468.7 Pneumonia in other systemic mycoses         263.9           468.7 Pneumonia in other systemic mycoses         263.9           468.6 Pneumonia in other systemic mycoses         263.9           468.7 Pneumonia in other systemic mycoses         263.9           468.6 Pneumonia in other systemic mycoses         263.9           468.7 Pneumonia in mytoproneumonia organism unspecified         263.9           513.0 Abscessor fung         268.0	events cardiovascular		Enterocolitis due to Clostridium difficile		11.	
998.44         Infrinary tract infection, site not specified         451.1           998.46.         Infection and of infammatory reaction due to indwelling urinary catheter         451.2           1039.1.         Pulmonary actinomycolic infection         451.8           117.9         United and unspecified mycoses         453.9           486.1         Preumocystosis         453.9           486.1         Preumocystosis         453.9           487.2         Other bacterial preumonia         453.9           487.3         Preumonia in cytomegalic inclusion disease         263.8           488.4.         Preumonia in cytomegalic inclusion disease         283.9           488.4.         Preumonia in cytomegalic inclusion disease         283.9           488.5         Preumonia in cytomegalic inclusion disease         283.9           488.7         Preumonia in cytomegalic inclusion of food or vomitus         275.4           5513.0         Abscesso fund         276.5           513.0         Abscesso fund         276.5	events cardiovascular  Lipator Cardiovascular  by Cardiovascular  cardiovascular  cardiovascular  cardiovascular	*****	Pulmonary embolism and infarction	325 d me	296.34, D	Depressive disorder, not elsewhere classified
98.6.44 Infection and inflammatory reaction due to indwelling urinary catheter         451.2           103.1 Pulmonary actinomycotic infection         451.8           112.4 Candidiasis of lung         451.9           112.4 Candidiasis of lung         461.9           112.4 Candidiasis of lung         461.9           466.19 Other and urspecified mycoses         463.4           466.19 Feature bronchiolitis due to other infectious organisms         463.4           480* Virial pneumonia         482* Pheumonia due to mycolasma pneumonia en preumonia due to mycolasma pneumonia en preumonia due to mycolasma pneumonia due to mycolasma pneumonia in other systemic mycoses         263.8           484.7 Pheumonia in other systemic mycoses         484.0         Pheumonia in other systemic mycoses         263.8           484.7 Pheumonia in other systemic mycoses         484.0         Pheumonia in other systemic mycoses         275.4           487.0 Influenza with pneumonia         513.0         Abscess of lung         276.0           513.0 Abscess of lung         597.3         Pheumonia in anthrax         276.0           514.8 Dumonova y conglications         514.0         458.0           515.8 Other respiratory complications         514.0         458.0           514.9 Preumonia in anthrax         514.0         458.0           515.8 Preumonia in anthrax         514.0	events cardiovascular  atherem cardiovascular  but cardiovascular  cardiovascular  cardiovascular  cardiovascular	421.14	Phlebitis and thrombophlebitis		5.21, 6.23	
093-1.         Pulmonary actinomycotic infection         451.81           112.4.         Candidasis of lung         451.81           112.4.         Candidasis of lung         451.9           111.7.9.         Other and unspecified mycoses         453.4           466.19         Acute morphystosis         465.4           466.19         Acute morphystosis         463.8           480.2.         Virtal preumonia         467.9           481.         Preumonic due to mycoplasma pneumonia en promonial in cytomegalic inclusion disease         468.1           482.         Preumonia in oyomegalic inclusion disease         468.1           484.1         Preumonia in oyomegalic inclusion disease         263.8           486.2         Preumonia in oyomegalic inclusion disease         263.8           487.2         Preumonia in oyomegalic inclusion disease         263.8           488.7         Preumonia in other systemic mycoses         276.0           487.0         Influenza with pneumonia         276.0           513.0         Abscess of lung         276.1           514.8         Other specified alveolar and parietoalveolar pneumonapathies         276.1           517.3         Abscess of lung         277.2           518.4         Abscess of lung         2	events cardiovascular	451.2	Phlebitis and thrombophlebitis of lower extremities, unspecified			Paralysis agitans
112.4         Candidiasis of lung         451.9           112.5         Candidiasis of lung         451.9           117.9         Other and unspecified mycoses         453.4*           166.19         Acute bronchiotitis due to other infectious organisms         453.9         453.9           466.10         Acute bronchiotitis due to other infectious organisms         453.9         453.9           482.1         Pheumonia from the control in other systemic mycoses         468.7         Pheumonia in cytomegalic inclusion disease         263.9           484.7         Pheumonia in cytomegalic inclusion disease         263.9         263.9           486.8         Preumonia in other systemic mycoses         263.9         263.9           488.7         Preumonia in other systemic mycoses         276.2           488.7         Preumonia, organism unspecified         276.2           488.7         Preumonia, organism unspecified         276.4           488.0         Preumonia in whoope cough         276.4           516.8         Other respiratory complications         977.3           516.8         Other respiratory complications         977.3           516.4         Pulmonary condicated preumonia in whoop cough         276.2           516.4         Pulmonary condications and hypostasis	cardiovascular	451.81	Phlebitis and thrombophlebitis of iliac vein			Coma
117.7 Other and unspecified mycoses 136.3 Preumocystosis 466.19 Acute bronchiolits due to other infectious organisms 467.4 Viral preumocinist due to other infectious organisms 468.7 Acute bronchiolits due to other infectious organisms 488.7 Preumonia in other systemic mycoses 488.7 Preumonia in other systemic mycoses 488.7 Preumonia in other systemic mycoses 488.7 Preumonia in organism unspecified 488.7 Preumonia, organism unspecified 488.7 Preumonia, organism unspecified 488.7 Preumonia, organism unspecified 488.7 Preumonia organism unspecified 488.7 Preumonia organism unspecified 488.7 Preumonia in other systemic mycoses 488.8 Preumonia organism unspecified 488.9 Preumonia in other specified alvealar and parietoalveolar pneumonopathies 514.8 Pulmonary congestion and parietoalveolar pneumonopathies 514.9 Pulmonary complications 514.9 Pulmonary complications 514.9 Pulmonary complications 514.9 Pulmonary congestion and hypostasis 514.1 Influenza due to identified avian influenza virus with other respiratory manifestations 488.0 Influenza due to identified avian influenza virus with other 488.0 Influenza due to identified avian influenza virus with other 488.0 Influenza due to identified avian influenza virus with other 488.0 Influenza due to identified avian influenza virus with other 488.0 Influenza due to identified avian influenza virus with other 488.0 Influenza due to identified avian influenza virus with other 488.0 Influenza due to identified avian influenza virus with other 488.0 Influenza due to identified avian influenza virus with other 488.1 Influenza due to identified avian influenza virus with other 488.1 Influenza due to identified avian influenza virus with other 488.1 Influenza due to identified avian influenza virus with other 488.1 Influenza due to identified avian influenza virus with other 488.1 Influenza due to identified avian influenza virus with other 488.1 Influenza due to identified avian influenza virus with other 488.1 Influenza due to identified avian influenza virus with other 488.	cardiovascular	4519	Phlebitis and thrombophlebitis of unspecified site	78		Transient alteration of awareness, Syncope and collapse
466.17         Actual bronchiolitis due to other infectious organisms         Fig. 453.9         453.9           466.17         Actual bronchiolitis due to other infectious organisms         465.19         462.9         462.9           481         Preumococcal pneumonia         15.39         97.02         463.9         10.14           482*         Other bacterial pneumonia         26.38         410**         46.39         410**           483*         Pneumonia in other systemic muspecified         26.38         410**         46.39         410**           484.5         Pneumonia in other systemic mycoses         48.4         Pneumonia in other systemic mycoses         26.39         410**           485.6         Pneumonia in other systemic mycoses         48.6         Pneumonia in other systemic mycoses         26.39           486.7         Pneumonia in other systemic mycoses         48.6         Pneumonia mycogastion of predictions         276.0           513.0         Abscess of lung         276.1         276.5         276.5           514.8         Pulmonary congestion and hypostasis         46.8         476.5           514.8         Pulmonary congestion and hypostasis         48.4         48.4           514.8         Pulmonary congestion and hypostasis         48.4         48.7	cardiovascular [piicomnaud]	453,4*	Uther venous embolism and thrombosis	78		Other alteration of consciousness
480*         Arche or northcoloids out of the fractions or goingnins         25.77         42.07	e pneumonia]	433,8	Acute venous embousm and thrombosis of order specified veins	22	_	Vomiting following gastrointestinal surgery
481         Pineumococcat pneumonia [Streptococcus pneumonia]         997.02           482* Other bacterial pneumonia         482* Other bacterial pneumonia         410***           482* Other bacterial pneumonia         482* Other bacterial pneumonia         263.8           484.1 Pneumonia in cytomegalic inclusion disease         263.8           484.5 Pneumonia in other systemic mycoses         263.8           484.6 Pneumonia in other systemic mycoses         263.8           485.7 Pneumonia in other systemic mycoses         263.8           487.7 Pneumonia in other systemic mycoses         263.8           488.7 Pneumonia in other systemic mycoses         276.1           507.* Pneumonia in other specified         276.1           507.* Pneumonia of pool or vomitus         276.1           513.0 Abscess of lung         276.2           514.8 Other specified alveolar and parietoalveolar pneumonia         276.5           514.9 Pulmonary congestion and hypostasis         276.2           514.9 Pulmonary congestion and hypostasis         276.2           514.8 Influenza due to identified avian influenza virus with other         276.2	neumoniae pneumonia]				-	Colostomy and enterostomy complication, unspecified
482*         Other bacterial pneumonia         480*         Other bacterial pneumonia         410***           483*         Preumonia due to mycoplasma pneumoniae         263.8           484.1         Pneumonia in cytomegalic inclusion disease         263.9           484.5         Pneumonia in cytomegalic inclusion disease         263.9           484.6         Pneumonia in cytomegalic inclusion disease         263.9           486.7         Pneumonia in cytomegalicosis         275.42           487.0         Incluenza with pneumonia         275.42           487.0         Incluenza with pneumonia         276.0           507*         Poemononist due to inhalation of food or vomitus         276.1           513.0         Abscess of lung         276.2           514.8         Other specified alveolar and parietoalveolar pneumonia         276.5           997.31         Ventilator associated pneumonia         276.5           997.31         Ventilator associated pneumonia         276.5           997.32         Other respiratory complications         276.5           484.3         Pneumonia in whoop cough         484.3           484.3         Pneumonia in whoop cough         484.3           488.4         Influenza with other respiratory complications         488.0 </td <td></td> <td>997.02</td> <td>latrogenic cerebrovascular infarction or hemorrhage</td> <td>irger</td> <td>269.69 269.69</td> <td>Mechanical complication of cotostorny and enterostorny Other colostomy and enterostomy complication</td>		997.02	latrogenic cerebrovascular infarction or hemorrhage	irger	269.69 269.69	Mechanical complication of cotostorny and enterostorny Other colostomy and enterostomy complication
483*         Pineumonia due to mycoplasma pneumoniae         483*         410**           484.1         Pheumonia in cytomegalic inclusion disease         26.38           484.6         Pheumonia in cytomegalic inclusion disease         26.39           484.7         Pheumonia in other systemic mycoses         273.8           485.8         Bronchopneumonia, organism unspecified         275.42           487.0         Influenza with pneumonia programment in unspecified         276.0           513.0         Abscess of lung         276.1           513.0         Abscess of lung         276.2           514.8         Other respiratory complications         276.5           997.31         Ventilator associated pneumonia         276.5           997.32         Other respiratory complications         276.5           997.33         Respiratory complications         458.8           484.3         Pneumonia in whoop cough         458.8           484.3         Pneumonia in whoop cough         488.3           488.0         Influenza with other respiratory manifestations         584.4           488.0         Influenza due to identified avian influenza virus with other         789.00           488.0         Influenza due to identified avian influenza virus with other         789.01 </td <td></td> <td></td> <td></td> <td></td> <td></td> <td>Hemorrhage or hematoma complicating a procedure not elsewhere</td>						Hemorrhage or hematoma complicating a procedure not elsewhere
484.1         Pneumonia in cytomegalic inclusion disease         26.3.9           484.6         Pneumonia in specifilosis         26.3.9           484.7         Pneumonia in other systemic mycoses         26.3.9           485.7         Pneumonia organism unspecified         275.42           487.0         Influenza with pneumonia         276.0           50.7*         Pneumonitis due to inhalation of food or vomitus         276.1           50.7*         Pneumonitis due to inhalation of food or vomitus         276.1           513.0         Abscess of lugs         276.2           513.0         Abscess of lugs         276.2           514.8         Other specified alvedlar and parietoalveolar pneumonia         276.5           997.3         Ventilator associated pneumonia         276.5           997.3         Ventilator associated pneumonia         276.8           997.3         Ventilator associated pneumonia in whoop cough         276.2           484.3         Pneumonia in whoop cough         276.2           488.0         Influenza with other res		410**	Acute myocardial infarction		$\overline{}$	assified
484.6         Pneumonia in aspergillosis         263.9           484.7         Pneumonia in other systemic mycoses         253.8           485         Bronchopneumonia, organism unspecified         273.8           487         Pneumonia, organism unspecified         275.42           487.0         Influenza with pneumonia         276.0           507*         Pneumonitis due to inhalation of food or vomitus         276.1           513.0         Abscess of lung         276.2           513.0         Abscess of lung         276.2           513.0         Pheumonitis due to inhalation of food or vomitus         276.1           513.0         Abscess of lung         276.2           514.0         Other specified alvedlar and parietoalveolar pneumonia         276.5           997.3         Ventilator associated pneumonia         276.5           997.3         Ventilator associated pneumonia         276.8           997.3         Ventilator associated pneumonia         276.8           997.3         Preumonia in whoop cough         488.0           488.1         Influenza with other respiratory complications         488.0           488.0         Influenza due to identified avian influenza virus with other         789.00           488.0         Influenza due to ide		2636	Other protein-calorie malnutrition		$\neg$	Hemorrhage complicating a procedure
484.7         Pheumonia in other systemic mycoses           485         Bronchopneumonia, organism unspecified           486         Preumonia, organism unspecified           486         Preumonia, organism unspecified           487         Influenza with pneumonia           507*         Preumonitis due to inhalation of food or vomitus         276.1           513.0         Abscess of Lung         276.2           513.0         Abscess of Lung         276.2           513.0         Other specified alveolar and parietoalveolar pneumonia and preparations of process of Lung         276.2           513.0         Abscess of Lung         276.2           997.31         Ventilator associated pneumonia and preparations of process of Lung         276.8           997.31         Ventilator associated pneumonia and procession and hypostasis         276.8           997.32         Preumonia in whoop cough         484.5           484.5         Pneumonia in whoop cough         488.0           488.0         Influenza due to certain identified avian influenza virus with other         783.7           488.0         Influenza due to identified avian influenza virus with other and to identified 2009 H1		263.9	Uncoorified anotein-calorie malnutrition		$\top$	Disruption of operation wound
485         Bronchopneumonia, organism unspecified         486         Preumonia, organism unspecified         275.42           486         Pheumonia, organism unspecified         275.42         275.42           487.0         Influenza with pneumonia         276.1         276.1           507**         Pheumonitis due to inhalation of food or vomitus         276.2         276.1           516.8         Other specified alveolar and parietoalveolar pneumonia and alveolar a		273.8	Other disorders of plasma profein metabolism		$\top$	Reclosure of postoperative disruption of abdominal wall
486         Pneumonia, organism unspecified         276.0           487.0         Influenza with pneumonia         276.1           507*         Power pecified alveolar and parietoalveolar pneumonopathies         276.1           514.8         Other specified alveolar and parietoalveolar pneumonopathies         276.5           997.31         Ventitator associated pneumonia         276.8           997.32         Other respiratory complications         276.8           997.33         Other respiratory complications         484.3           997.31         Prepumonia in whoop cough         488.3           484.3         Pneumonia in whoop cough         488.4           488.4         Pneumonia in whoop cough         488.1           488.5         Influenza due to identified avian influenza virus with other         789.0           488.0         Influenza due to identified avian influenza virus with other         789.0           488.0         Influenza due to identified avian influenza virus with other         789.0           488.1         Influenza due to identified avian influenza virus with other         789.0           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.0           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.0 <tr< td=""><td></td><td>275.42</td><td>Hypercalcemia</td><td></td><td><math>\top</math></td><td>Acute post-hemorrhagic anemia</td></tr<>		275.42	Hypercalcemia		$\top$	Acute post-hemorrhagic anemia
487.0         Influenza due to identified avian influenza virus with pneumonia         78.76.1           507*         Pneumonia to invalation of food or vomitus         78.6.1           513.0         Abscess of lung         776.1           516.8         Other specified alveolar and parietoalveolar pneumonopathies         776.3           997.31         Ventilator associated pneumonia         776.3           997.33         Ventilator associated pneumonia         78.8           997.34         Ventilator associated pneumonia         78.8           997.35         Ventilator associated pneumonia         78.8           997.37         Ventilator associated pneumonia         78.8           997.39         Ventilator associated pneumonia         45.8           997.37         Pulmonary congetion and hypostasis         48.8           484.5         Pneumonia in anthrax         48.8           484.5         Pneumonia in anthrax         48.8           488.7         Influenza due to certain identified avian influenza virus with other         789.00           488.01         Influenza due to identified avian influenza virus with other         789.01           488.10         Influenza due to identified 2009 H1NI influenza virus with other         789.04           488.11         Influenza due to identified 2009	drati		Hyper caccernia Hyperocemolality and for hyperpatremia	4	$\rightarrow$	Other disorders of circulatory system, hemorrhage, unspecified
507*         Pneumonitis due to inhalation of food or vomitus         276.2           513.0         Abscess of lung         276.2           513.6         Abscess of lung         276.5           513.0         Abscess of lung         276.5           516.8         Other specified alveolar and parietoalveolar pneumonopathies         276.8           997.31         Ventilator associated pneumonia         458.0           997.32         Other respiratory complications         458.8           987.3         Pneumonia in whoop cough         468.3           484.5         Pneumonia in whoop cough         487.1           487.1         Influenza with other respiratory manifestations         584           487.8         Influenza due to identified avian influenza virus         783.7           488.0         Influenza due to identified avian influenza virus with other         789.00           488.0         Influenza due to identified avian influenza virus with other respiratory manifestations         789.01           488.1         Influenza due to identified avian influenza virus with other respiratory manifestations         789.01           488.1         Influenza due to identified 2009 H1N1 influenza virus with other         789.07           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.07	ion /		nyperosinotanty and/or hyperitati emia Hyperosinotality and/or hyperositemia	26	568.81 H	Hemoperitoneum
513.0         Abscess of lung           516.8         Other specified alveolar and parietoalveolar pneumonopathies         276.5           516.8         Other specified alveolar and parietoalveolar pneumonopathies         276.5           997.31         Ventilator associated pneumonia         458.0           997.32         Other respiratory complications         458.8           997.33         Pneumonia in whoop cough         468.3           484.5         Pneumonia in anthrax         487.1           487.1         Influenza with other respiratory manifestations         584.4           487.8         Influenza due to identified avian influenza virus with other         584.4           488.0         Influenza due to identified avian influenza virus with other         789.01           488.0         Influenza due to identified avian influenza virus with other         789.01           488.0         Influenza due to identified avian influenza virus with other         789.01           488.1         Influenza due to identified 2009 H1N1 influenza virus with other         789.01           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.01           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.01           488.1         Influenza due to identified 2009 H1NI influenza v		276.2	Aridosis			
516.8         Other specified alveolar and parietoalveolar pneumonopathies         276.8           997.31         Ventilator associated pneumonia         276.8           997.32         Ventilator associated pneumonia         458.0           51.4         Pulmonary complications         458.8           997.3         Respiratory complications         484.3           484.5         Pneumonia in whoop cough         484.5           487.1         Influenza with other respiratory manifestations         783.3           487.8         Influenza with other manifestations         584           488.0         Influenza due to identified avian influenza virus with other         789.01           488.0         Influenza due to identified avian influenza virus with other         789.01           488.0         Influenza due to identified avian influenza virus with other         789.01           488.0         Influenza due to identified avian influenza virus with other         789.01           488.1         Influenza due to identified 2009 H1N1 influenza virus with other         789.01           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.01           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.07           488.1         Influenza due to identified 2009 H1NI inf		276.5	Volume depletion disorder			
997.31         Ventilator associated pneumonia         458.0           997.32         Other respiratory complications         458.8           1514         Pulmonary congestion and hypostasis         458.9           997.33         Respiratory complications         458.9           484.3         Pneurmonia in whoop cough         458.9           484.5         Pneurmonia in anthrax         487.1           487.1         Influenza with other respiratory manifestations         783.7           488.0         Influenza due to identified avian influenza virus with pneumonia         784.7           488.0         Influenza due to identified avian influenza virus with other         789.01           488.0         Influenza due to identified avian influenza virus with other         789.01           488.0         Influenza due to identified avian influenza virus with other         789.01           488.0         Influenza due to identified 2009 H1N1 influenza virus with other         789.01           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.01           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.07           488.1         Influenza due to identified 2009 H1NI influenza virus with other         789.07           488.1         Influenza due to identified 200		276.8	Hypopotassemia			
997.39         Other respiratory complications         458.8           514         Pulmonary congestion and hypostasis         468.9           997.3         Respiratory complications         468.9           484.5         Pneurmonia in whoop cough         707.0           487.1         Influenza with other respiratory manifestations         586           487.8         Influenza with other manifestations         584*           488.0         Influenza due to identified avian influenza virus with pneumonia         778.7           488.0         Influenza due to identified avian influenza virus with other respiratory manifestations         789.00           488.0         Influenza due to identified avian influenza virus with other respiratory manifestations         789.01           488.1         Influenza due to identified avian influenza virus with other respiratory manifestations         789.02           488.1         Influenza due to identified 2009 H1N1 influenza virus with other respiratory manifestations         789.04           488.1         Influenza due to identified 2009 H1NI influenza virus with other respiratory manifestations         789.04           488.1         Influenza due to identified 2009 H1NI influenza virus with other respiratory manifestations         789.04           488.1         Influenza due to identified 2009 H1NI influenza virus with other respiratory manifestations         789.04	n / E	458.0	Orthostatic hypotension			
14   Pulmonary congestion and hypostasis   248.9   297.3   Respiratory complications   248.2   248.2   Pneumonia in whoop cough   248.2   Pneumonia in whoop cough   248.2   Pneumonia in anthrax and the respiratory manifestations   248.7   Influenza with other manifestations   248.0   Influenza due to identified avian influenza virus with pneumonia   278.4   278.0   278.		458,8	Other iatrogenic hypotension			
997.3 Respiratory complications         797.0 Months           484.3 Pneumonia in whoop cough         484.5 Pneumonia in whoop cough           484.5 Pneumonia in anthrast         783.3           487.1 Influenza with other manifestations         586           487.8 Influenza with other manifestations         584*           488.0 Influenza due to certain identified influenza virus with pneumonia         724.2           488.0 Influenza due to identified avian influenza virus with other respiratory manifestations         789.00           488.0 Influenza due to identified avian influenza virus with other manifestations         789.01           488.0 Influenza due to identified avian influenza virus with other manifestations         789.01           488.1 Influenza due to identified 2009 H1N1 influenza virus with other         789.04           488.1 Influenza due to identified 2009 H1N1 influenza virus with other         789.04           488.1 Influenza due to identified 2009 H1N1 influenza virus with other         789.04           488.1 Influenza due to identified 2009 H1N1 influenza virus with other         789.04           488.1 Influenza due to identified 2009 H1NI influenza virus with other         789.04           488.1 Influenza due to identified 2009 H1NI influenza virus with other         789.04		458.9	Hypotension, unspecified			
Preuntoitie in whole Cought Preuntoitie in whole Cought Preuntoitie in anthreas Influenza with other respiratory manifestations Influenza with other manifestations Influenza due to identified avian influenza viruses Influenza due to identified avian influenza virus with other respiratory manifestations Influenza due to identified avian influenza virus with other manifestations Influenza due to identified avian influenza virus with other manifestations Influenza due to identified 2009 H1NI influenza virus with other respiratory manifestations Influenza due to identified 2009 H1NI influenza virus with other respiratory manifestations Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified Influenza virus with other Influenza due to iden	te di	707.0	Pressure ulcer			
Influenza with other respiratory manifestations Influenza with other manifestations Influenza with other manifestations Influenza due to identified axian influenza viruses Influenza due to identified axian influenza virus with pneumonia Influenza due to identified avian influenza virus with other respiratory manifestations Influenza due to identified avian influenza virus with other manifestations Influenza due to identified avian influenza virus with pneumonia Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified Influenza virus with other Influenza due to identifi	sord	783.3	Feeding difficulties and mismanagement			
Influencia with other manifestations Influencia with other manifestations Influencia due to certain identified avian influencia viruses Influencia due to identified avian influencia viruses Influencia due to identified avian influencia virus with pneumonia Influencia due to identified avian influencia virus with other manifestations Influencia due to identified avian influencia virus with other manifestations Influencia due to identified 2009 h1n1 influencia virus with other Influencia due to identified 2009 h1n1 influencia virus with other Influencia due to identified 2009 h1n1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identified 2009 H1N1 influencia virus with other Influencia due to identif		783.7	Adult failure to thrive			
Influenza due to identified avian influenza viruss Influenza due to certain identified influenza viruses Influenza due to identified avian influenza virus with pneumonia Influenza due to identified avian influenza virus with other respiratory manifestations Influenza due to identified avian influenza virus with other manifestations Influenza due to identified 2009 h1 I influenza virus with pneumonia Influenza due to identified 2009 h1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified Influenza virus with other Influenza due to identified Influenza virus with other Influenza due to identified Influenza virus with other		286	Renal failure, unspecified			
Influenza due to certain identified influenza viruses Influenza due to identified avian influenza virus with pneumonia Influenza due to identified avian influenza virus with other respiratory manifestations Influenza due to identified avian influenza virus with other manifestations Influenza due to identified 2009 h1 Influenza virus with pneumonia Influenza due to identified 2009 h1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified 2009 H1NI influenza virus with other Influenza due to identified Influenza virus with other Influenza d	.uenza virus	284*	Acute kidney failure			
Influenza due to identified avian influenza virus with pneumonia 789,00 Influenza due to identified avian influenza virus with other respiratory manifestations 789,01 Influenza due to identified avian influenza virus with other manifestations 789,02 Influenza due to identified 2009 h1n1 influenza virus with pneumonia 789,06 Influenza due to identified 2009 h1N1 influenza virus with other 789,06 Influenza due to identified 2009 H1N1 influenza virus with other 789,07 respiratory manifestations 789,01 Influenza due to identified 2009 H1N1 influenza virus with other 789,07 Influenza due to identified 2009 H1N1 influenza virus with other 789,07 Influenza due to identified 2009 H1N1 influenza virus with other 789,09 Influenza due to identified 2009 H1N1 influenza virus with other 789,09	ıfluenza viruses	724.2	Lumbago			
Influenza due to identified avian influenza virus with other respiratory manifestations Influenza due to identified a vian influenza virus with other manifestations Influenza due to identified 2009 h1n1 influenza virus with pneumonia Influenza due to identified 2009 h1N1 influenza virus with pneumonia Influenza due to identified 2009 h1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified 2009 H1N1 influenza virus with other Influenza due to identified Influenza virus with other	uenza virus with pneumonia	-	Abdominal pain, unspecified site			
Influenza due to identified a wien influenza virus with other manifestations and influenza due to identified a wien influenza virus with pneumonia 1789.04 Influenza due to identified 2009 h1N1 influenza virus with pneumonia 1789.04 Influenza due to identified 2009 h1N1 influenza virus with other 1789.06 Influenza due to identified 2009 h1N1 influenza virus with other 1789.06 Influenza due to identified 2009 h1N1 influenza virus with other 1789.09 Influenza due to identified 2009 h1N1 influenza virus with other 1789.09 Influenza due to identified 2009 h1N1 influenza virus with other 1789.09	uenza virus with other		Abdominal pain, right upper quadrant			
Influenza due to identified 2009 h1n1 influenza virus with pneumonia 789.04 Influenza due to identified 2009 H1N1 influenza virus with pneumonia 789.06 Influenza due to identified 2009 H1N1 influenza virus with other 789.07 respiratory manifestations 789.06 Influenza due to identified 2009 H1N1 influenza virus with other 789.07 Influenza due to identified 2009 H1N1 influenza virus with other 789.09		789 03	Abdominat pain, tert upper quadrant Abdominat pain, right lower quadrant			
Influenza due to identified 2009 H1N1 influenza virus with pneumonia 789.06 Influenza due to identified 2009 H1N1 influenza virus with other 789.07 respiratory manifestations 789.07 Influenza due to identified 2009 H1N1 influenza virus with other 789.09 Influenza due to identified 2009 H1N1 influenza virus with other 338.18	1	789.04	Abdominal pain, left lower guadrant			
Influenza due to identified 2009 H1N1 influenza virus with other 789.07 respiratory manifestations 789.09 Influenza due to identified 2009 H1N1 influenza virus with other 339.18	1 influenza virus with pneumonia		Abdominal pain, epigastric			
respiratory mannessations 789.09 Influence are to identified 2009 H1N1 influence virus with other 338.18	11 influenza virus with other		Abdominal pain, generalized			
manifestations dentined 2007 HTM Initidenza Virus With Other 338.18	14. 14. 14. 14. 14. 14. 14. 14. 14. 14.	789.09	Abdominal pain, other specified site			
	VI Intruenza Virus With other	338.18	Other acute postoperative pain			
488.81 Influenza due to identified novel influenza A virus with pneumonia	uenza A virus with pneumonia					
484,8 Pneumonia in other infectious diseases classified elsewhere	ises classified elsewhere					
488.82 Influenza due to identified novel influenza A virus with other respiratory manifestations	uenza A virus with other					
Influenza due to identified novel influenza A virus with other	uenza A virus with other					