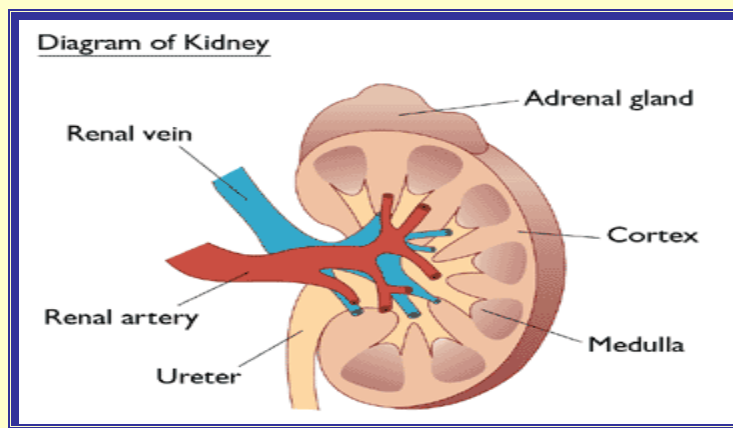


Riverside Community Hospital

Cancer Program

2008 Kidney & Renal Pelvis Cancer Study

2004 - 2008 Data



Cancer Committee

December 14, 2009

CANCER OF THE KIDNEY & RENAL PELVIS

In 2008, an estimated 54,390 new cases of kidney & renal pelvis cancer will arise in the United States and estimated deaths that will occur is approximately around 13,000 for both men and women this year alone. This year's Riverside Community Hospital's (RCH) annual report site-specific study covers the cancer registry statistics of 2004-2008 kidney cancer, with outcomes analysis covering RCH 2006-2007 survival analysis. In 2008, kidney cancer jumped to the fifth most common site in analytic cases seen at RCH. In the United States, most people who develop kidney cancer are older and it is uncommon to see this disease among young men and women under the age of 45 according to the American Cancer Society; however, 13% of RCH's population occurred from 20 to 49 years of age (page 2). The mean age at diagnosis at RCH is 62 with a surprising high number of 38% in the young 40-59 age range. Of the patients with kidney cancer at RCH, 54% were found in the range of 60-89 supporting that this disease does occur most often in the older population. In 2008, the lifetime risk of getting kidney cancer is about 1 in 75 with a higher risk in men than women¹. By gender, 67% were males and 43% were females at RCH. Risk factors such as smoking, weight, job hazards and inherited risk factors often can lead to a person's chance of getting kidney cancer.

From 2004-2008, 93 patients were diagnosed and/or treated at RCH (page 3). The most common type of kidney cancer is called renal cell cancer (RCC) and it accounts for more than 9 out of 10 cases¹. At RCH, 25 patients were seen with this type of kidney tumor and 43 patients had clear cell RCC which is most common form of RCC. Another 6% had papillary RCC and another eight subtype histologies were also treated.

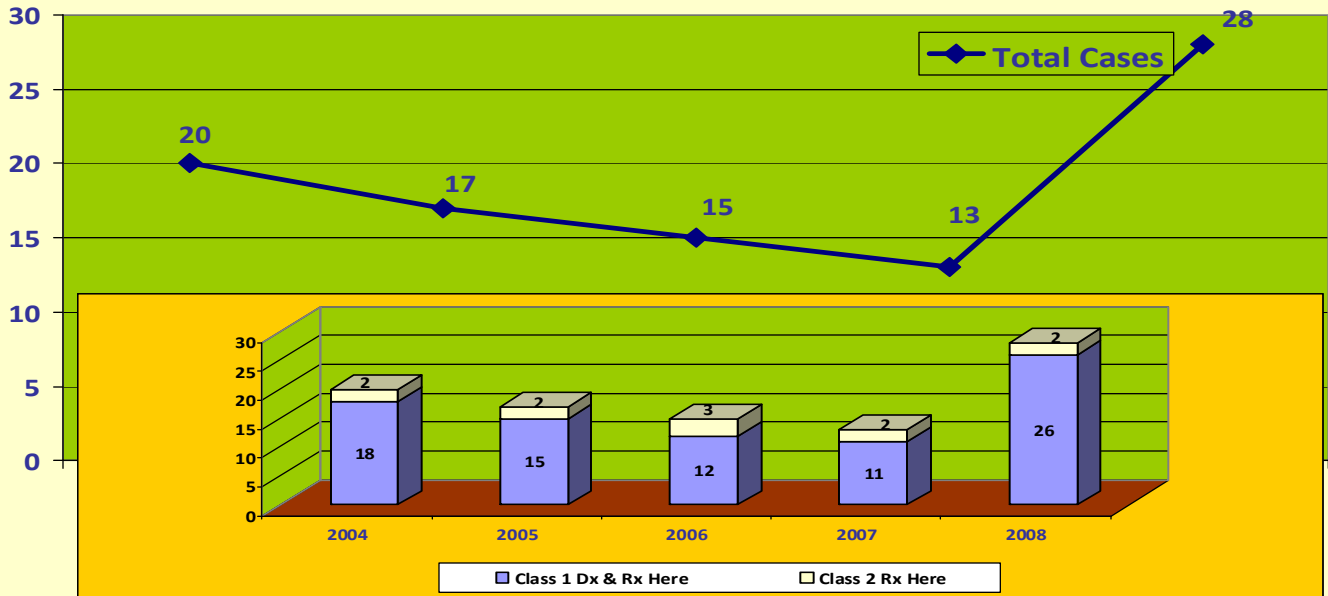
Cancer of the kidney is best treated when diagnosed at an early stage, but it is usually not found until after it has become large enough to cause some type of symptoms which most often are blood in the urine, low back pain on one side or a mass or lump found on the side or lower back. The chances of surviving cancer without having surgery is small.¹ For early stage diagnosis from 2004 to 2008, 60% of RCH patients were diagnosed with Stage 0 to II and 34% had disease that had spread beyond the kidney or had distant metastasis. When comparing Stage at Diagnosis at RCH to the Commission on Cancer National Cancer Data Base (NCDB) for 2006 cases only, RCH data supports that many cases are being caught at an earlier Stage of I and II (61%) compared to NCDB with 56%. However, RCH saw a much higher number of Stage IV cases at 38% compared to 17% nationally which may in part be due to a higher community indigent population. Newer imaging tests with MRI, pet scans and ultrasounds have played a key role in helping to capture these cases at an earlier diagnosis.

Surgery alone was the major treatment choice at RCH in 76% of the patients seen with 4% choosing a combined approach (page 4). Nineteen percent (19%) chose to have no treatment or treatment elsewhere. Dependent on the type and stage of disease, kidney cancer is often treated with radical nephrectomy in which the whole kidney and the adrenal gland are removed. A newer more standard approach to treating RCC in the United States has become laparoscopic radical nephrectomy and it has been widely accepted as a safe & efficient minimally invasive approach to treating this disease¹.

In looking at the overall observed survival of patients treated at RCH compared to the NCDB database, three year observed survival figures for RCH 2006 & 2007 data was compared to three years of NCDB survival (page 6). While the RCH survival data is limited because the database is still a relative new database with only two years of data submitted to NCDB, it allows RCH to look at some trends. It was noted that within these two data years, there were no Stage III patients; however, the two years had a very small combined number with only 26 patients overall. RCH's survival data for Stage I patients had a lower survival number compared to State & National; however, the Stage II & IV patient's survival was equal and slightly higher for Stage IV patients at 15%. Overall survival data comparison's shows that NCDB data (California - 62% and National - 64%) was slightly higher than at RCH which was at 56%; however, again there are smaller numbers of patients in the study group for adequate comparison. According to the ACS Cancer Facts and Figures for 2006, in the United States, the overall five-year relative survival rate by stage at diagnosis from 1996-2003 for all stages is at 65.5%.

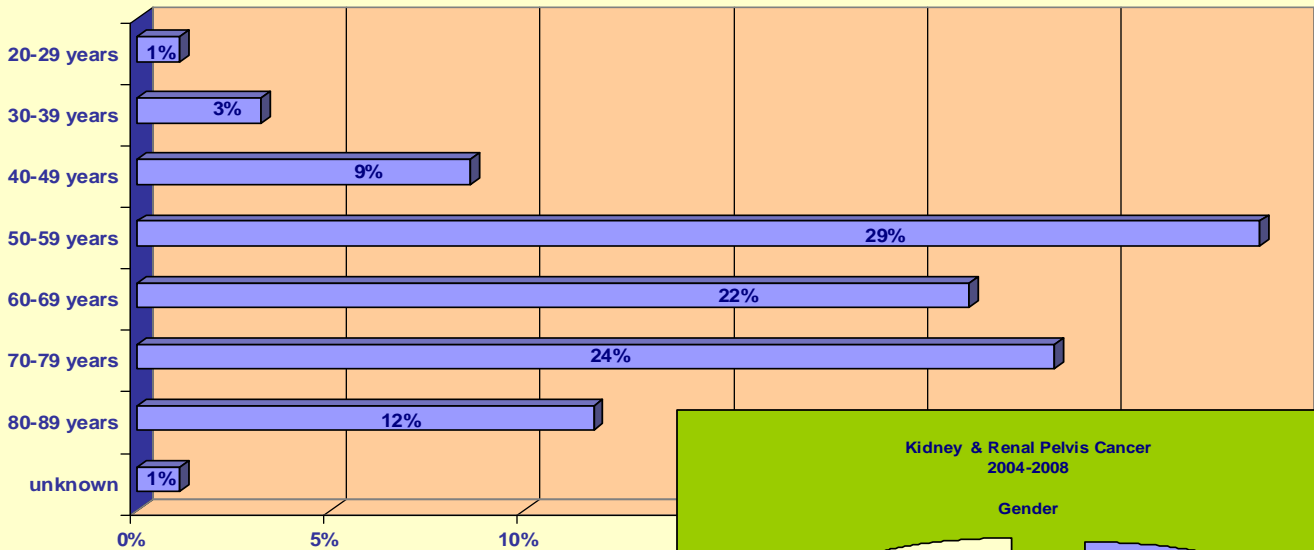
1. American Cancer Society, <http://www.cancer.org>, Kidney Cancer.

Riverside Community Hospital Kidney & Renal Pelvis Cancer 2004 - 2008



Kidney Cancer & Renal Pelvis 2004-2008

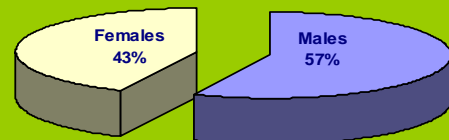
Age at Diagnosis



n = 93 Mean Age 62

Kidney & Renal Pelvis Cancer 2004-2008

Gender



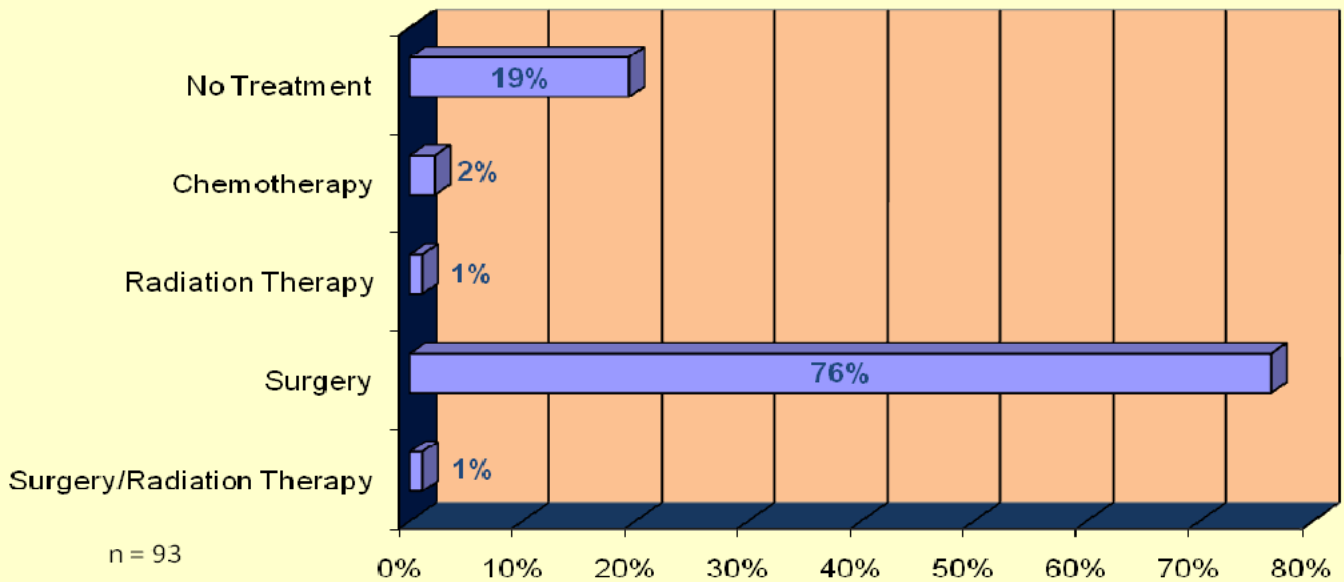
Analytic Cases: n = 93
Class 1 & 2

Riverside Community Hospital 2004 – 2008 Kidney Cancer HISTOLOGY BY YEAR

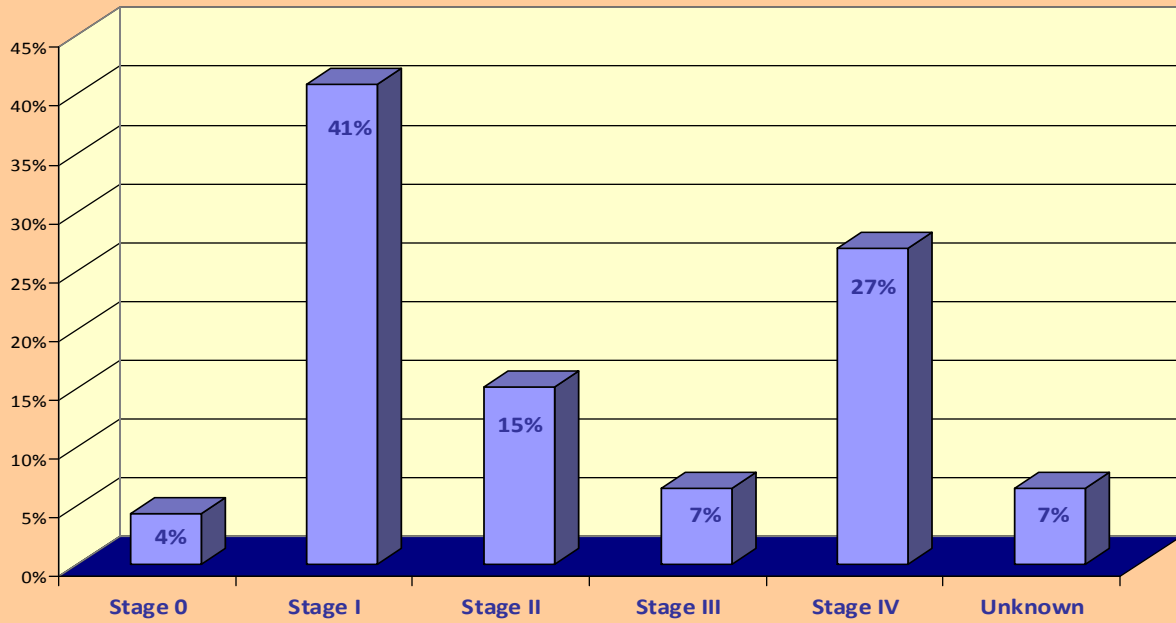
HISTOLOGY	Year First Seen (Accession Year)					TOTAL
	2004	2005	2006	2007	2008	
Malignancy nos	2	0	0	0	1	3
Papillary Carcinoma	1	2	2	0	1	6
Trans Cell Ca In Situ	1	0	3	0	1	5
Adenocarcinoma Mixed Subtypes	1	0	0	0	2	3
Acidophil Carcinoma	0	0	0	0	1	1
Clear Cell Adenocarcinoma	6	10	7	5	15	43
Renal Cell Carcinoma	7	4	3	5	6	25
Cyst Associated Renal Cell Carcinoma	0	0	0	0	1	1
Renal Cell Carcinoma Chromophobe	0	0	0	3	0	3
Renal Cell Carcinoma Sarcomatoid	1	1	0	0	0	2
Granular Cell Carcinoma	1	0	0	0	0	1
Analytic Cases TOTAL	20	17	15	13	28	93



Riverside Community Hospital 2004 - 2008 Kidney Cancer First Course Treatment Summary



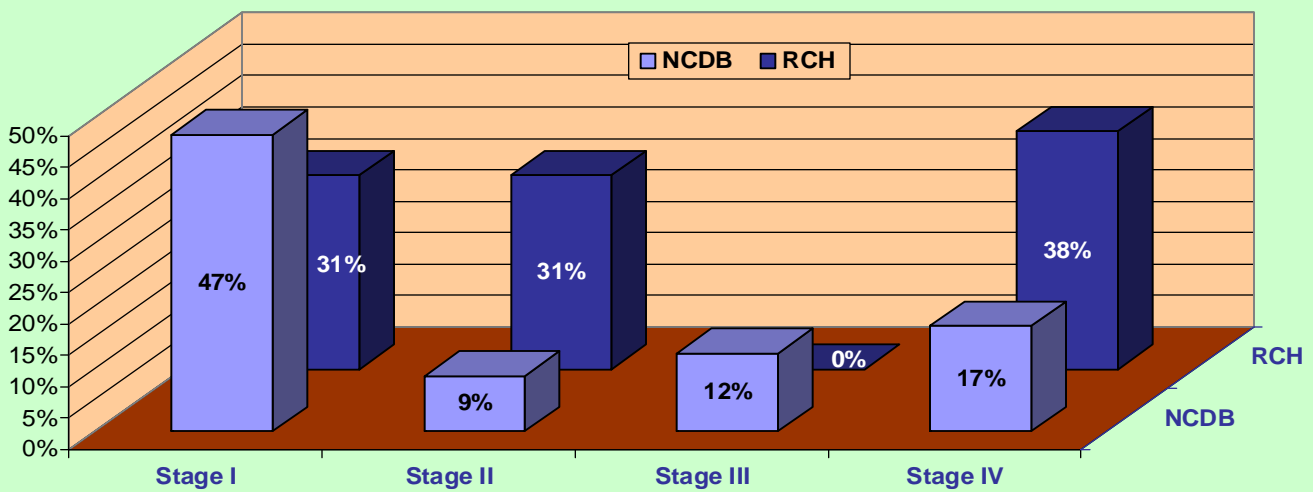
Riverside Community Hospital
 Kidney Cancer & Renal Pelvis
 2004-2008 AJCC TNM Derived Stage at Diagnosis



n = 93 Analytic Cases
 Class 1 & 2

NCDB (447 Hospitals) vs RCH - Community Hospital Cancer Programs

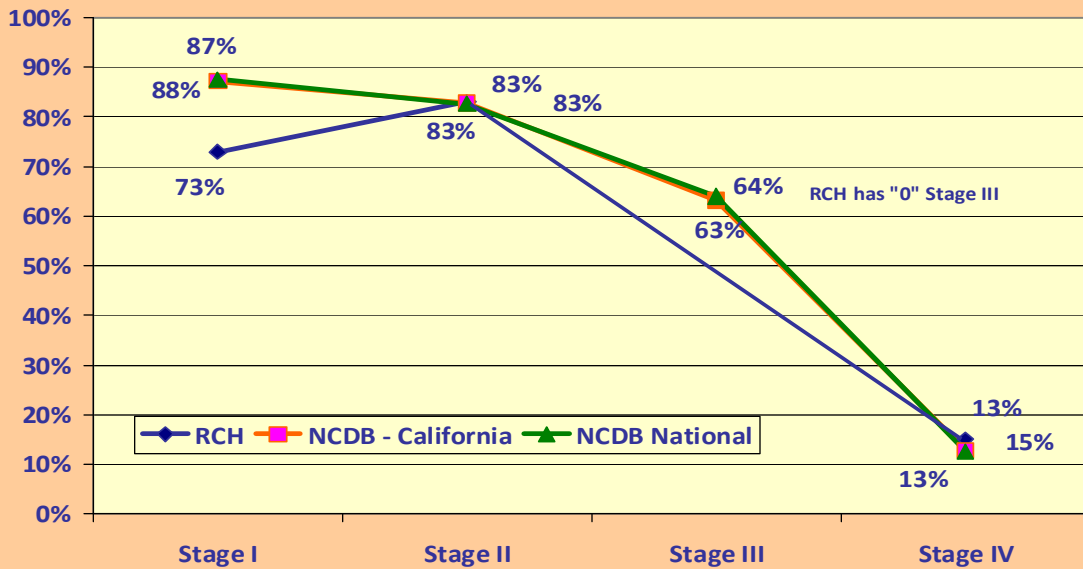
AJCC TNM Comparison
 Kidney and Renal Pelvis Cancer
 2006 Cases Only



RCH: n = 13
 NCDB: n = 3,585

Three-Year Observed Survival Table for Kidney and Renal Pelvis Cancer
Comparison of RCH (2006-2007) vs NCDB Data (2000-2006)

California and US Hospitals vs Community Hospital Cancer Program



RCH n = 26 (Excludes 1 unknown)

NCDB Data: California: n = 4,574 data from 100 hospitals

NCDB Data: National Programs: n = 64,825 data from 1332

Stage I = 13

Stage II = 6

Stage III = 0

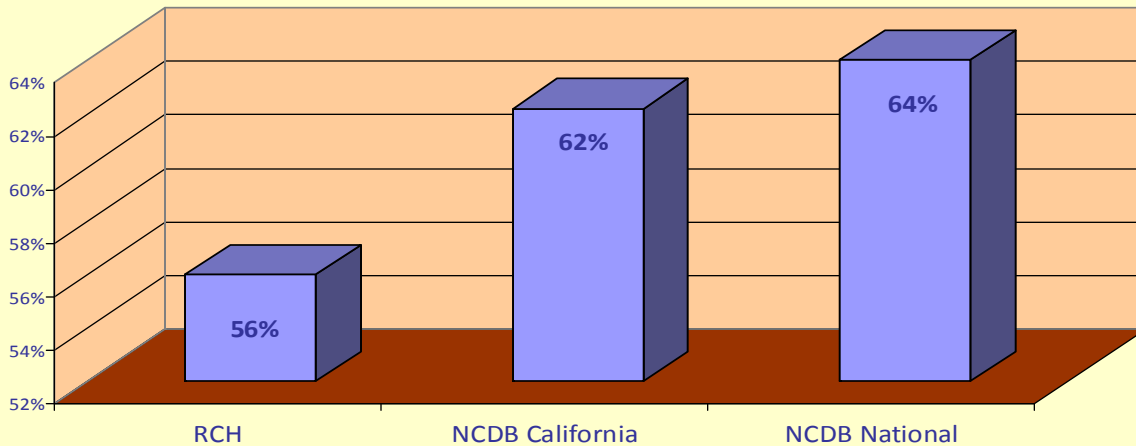
Stage IV = 6

RCH n = 26

Three-Year Observed Survival Table for Kidney and Renal Pelvis Cancer
Comparison of RCH (2006-2007) vs NCDB Data (2000-2006)

California and US Hospitals vs Community Hospital Cancer Program

Overall Survival

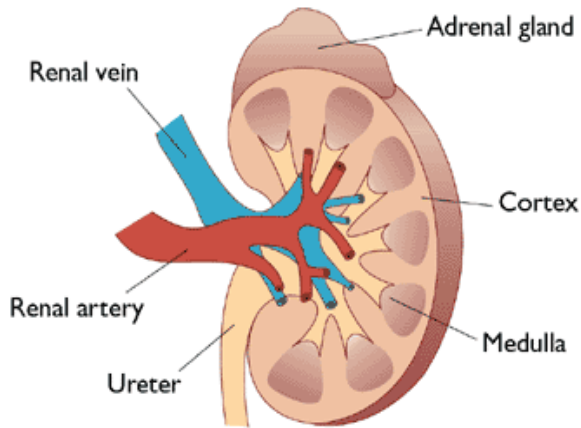


RCH n = 26 (Excludes 1 unknown)

NCDB Data: California: n = 4,574 data from 100 hospitals

NCDB Data: National Programs: n = 64,825 data from 1332

Diagram of Kidney



Stage I (5 year survival: 80.9%)

Tumor < 7cm in greatest dimension and limited to the kidney.

Stage II (5 year survival: 73.7%)

Tumor > 7cm but < or = to 10 cm in greatest dimension and limited to the kidney.

Stage III (5 year survival: 53.3%)

Tumor extends in major veins, adrenal gland, or perinephric tissue (not beyond Gerota's fascia) and/or regional lymph node involved.

Stage IV (5 year survival 8.2%)

Tumor beyond Gerota's fascia, regional lymph node involved and/or distant metastasis.

Reference:

Kidney In – Greene FL, Page DL, Fleming ID, et al, eds. *AJCC Cancer Staging Manual 6th ed.* New York, NY: Springer, 323-328.



Riverside Community Hospital – Cancer Registry Database