UMSylvester Comprehensive Cancer Center

FCDS Florida Cancer Data System
A Joint Project of the Sylvester Comprehensive Cancer Center and the Florida Department of Health

FLORIDA DEPARTMENT OF HEALTH

Register

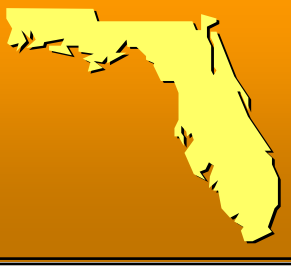
A joint project of the Sylvester Comprehensive Cancer Center and the Florida Department of Health

Division of Cancer Prevention and Control

Volume 40 – July, 2008

Kidney and Renal Pelvis Cancer in Florida

Bureau of Epidemiology



Background

Kidney and renal pelvis cancer is the twelfth most common cancer, accounting for about 2% of all new cancer cases and deaths each year in the United States[1]. It is estimated that 51,190 new cases and 12,890 deaths, will be related to kidney and renal pelvis cancer in the U.S in 2007[2]. Kidney cancer includes renal cell carcinoma, which forms in the lining of the very small tubes that filter the blood and remove waste products, and renal pelvis carcinoma, which forms in the center of the kidney where urine collects[3,4]. Kidney cancer most often affects elderly people, and is not common among people under age 45[3]. The cause of kidney cancer is unclear, but, several factors are associated with kidney cancer including smoking, obesity, exercise, certain occupations, male gender, and high blood pressure[3,4]. Kidney cancer rarely causes early signs and symptoms[5]. The symptoms that may occur during the later stages of cancer include blood in the urine, pain in the side that does not go away, a lump or mass in the side or the abdomen, weight loss, fever, feeling very tired, or having a general feeling of poor health[4]. Kidney cancer patients, when diagnosed and treated early, have a good chance for a full recovery[5].

In 2004, 49% of the Florida population, were men and 51% were women; 82% were Whites and 16% were Blacks[6]. More than half of the Florida population were under age 45 (58%), 25% were between 45 and 64 years of age, and 17% were 65+ years old[6].

(Continued on page 2)

FCDS New Edit Checks on the Address Fields

To enable accurate and timely geocoding of the addresses at diagnosis and current, FCDS instituted a number of new edits on the address fields. The edits will only test addresses within the United States. All edits are aligned with current NAACCR and FCDS standards. We welcome any feedback. If you have any questions, please contact Meg Herna.

(Continued on page 6)

Inside this issue:

(Continued from page 1: Kidney and Renal Pelvis Cancer in Florida)

Methods

Data on cancer incidence, stage, and histology were provided by the Florida Cancer Data System (FCDS). The FCDS is Florida's statewide, population-based cancer registry, and has collected cancer incidence data since 1981. Only cases diagnosed with kidney and renal pelvis cancers (ICD-O-3 C64.9, C65.9) were included in the analysis.

The mortality data, based on death certificates, were provided by the Office of Vital Statistics of the Florida Department of Health. Only deaths whose underlying cause was kidney and renal pelvis cancers (ICD-10 C64.9, C65.9) were included in the analysis.

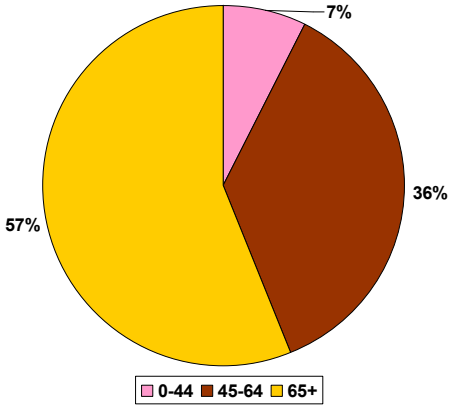
The hospital inpatient discharge data were provided by the Florida Agency for Health Care Administration (AHCA). The hospital inpatient discharge data include the number of hospitalizations and charges for inpatients whose primary diagnosis was kidney and renal pelvis cancers (ICD-9 189.0, 189.1).

Only Florida residents were included in the analyses. Both incidence and mortality rates were age-adjusted using the U.S. 2000 standard population. Age adjustment is a process used that allows comparison of incidence and death rates between populations with the effect of different age compositions removed. When the number of cases or deaths is very small, the rates calculated are not stable. Therefore, caution should be exercised in interpreting the rates for counties with small number of cases.

Incidence Rate

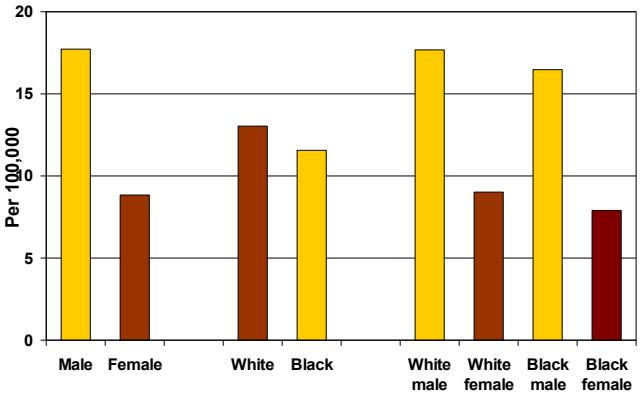
In 2004, 98,547 cancer cases were diagnosed in Florida. Of these cases, 2,853 were kidney cancers. The incidence was 13 per 100,000 population. More than half (57%) of the kidney cancers occurred among people age 65+ years, 36% occurred among people aged 45-64 years, and 7% occurred among people less than 45 years old.

Figure 1. Percent of Kidney Cancer Cases by Age Group, Florida, 2004



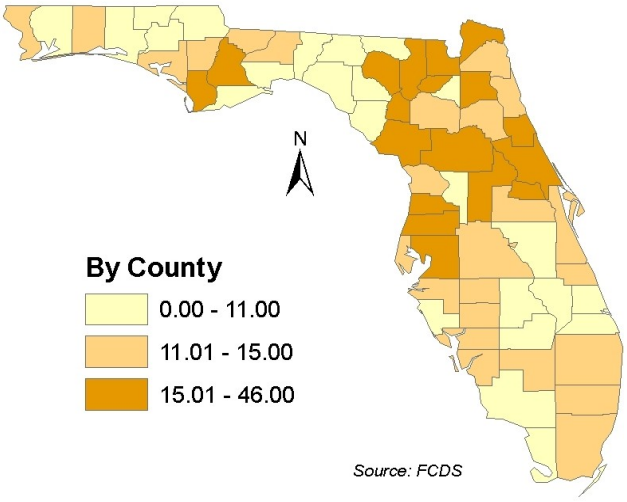
In 2004, 51,587 males and 46,912 females were diagnosed with cancers in Florida. Of these, 1,785 (3.5%) men and 1,066 (2.3 %) women were diagnosed with kidney cancer. Males had a higher incidence rate of kidney cancer (18 per 100,000 males) than females (9 per 100,000 females)[7]. The incidence rate of kidney cancer was statistically greater among the Whites (13 per 100,000 population) than Blacks (12 per 100,000 population)[7].

Figure 2. Age-adjusted Incidence Rate of Kidney Cancer, Florida, 2004



In 2004, Liberty, Union, and Gilchrist counties had incidence rates greater than 30 per 100,000 population[7]. The number of new kidney cancer cases was three in Liberty County, five in Union County, and six in Gilchrist County[7]. Franklin County, Hamilton County, and Lafayette County did not report any new kidney cancer cases.

Figure 3. Age-adjusted Incidence Rate, Florida, 2004

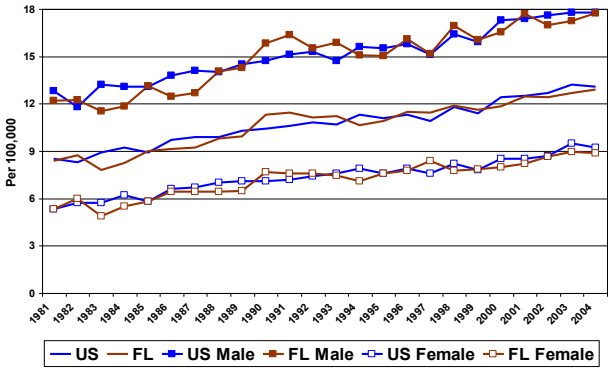


Between 1981 and 2004, the overall kidney cancer incidence rate in Florida did not differ significantly from the national rate; both the national and state incidence

(Continued from page 2: Kidney and Renal Pelvis Cancer in Florida)

rate of kidney cancer increased by more than 50%. In Florida, both males and females showed a statistically significant increase in the incidence rate in 2004 compared to the rate in 1981. Females showed a greater increase (68%) in the incidence rate than males (45%).

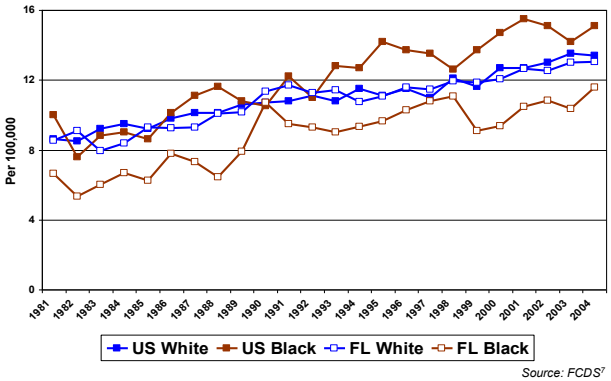
Figure 4. Age-adjusted Incidence Rate of Kidney Cancer, Florida, 1981-2004



Source: FCDS[7]; SeerSTAT[2]

Since 1981, the incidence rate among Whites in Florida did not differ significantly from the national rate in 2004. During the same time period, the incidence rate among Blacks in Florida was lower than the national rate overall. In Florida, Whites had a greater incidence rate than Blacks. However, in 2004 the rate among Blacks increased by 76% compared to the rate in 1981, an increase greater than that among Whites (53%). The increases in the incidence rate in both racial groups were statistically significant.

Figure 5. Age-adjusted Incidence Rate of Kidney Cancer, Florida, 1981-2004



Source: FCDS[7]

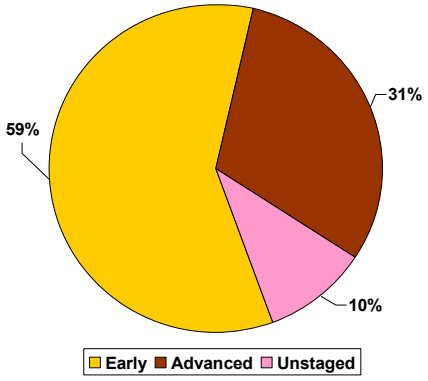
Stages of Cancer

Cancer can be diagnosed at different stages; from an early stage, where the cancer is in its original location and has no signs of invasion to other organs; to an advanced stage, where the cancer has spread to distant organs. For this analysis, regional and distant stage cancers constitute advanced stages, and cancers that have not invaded other organs constitute early stages.

According to the American Cancer Society, many kidney cancers are found at a late stage, because the tumors can become large without causing any pain or discomfort[3]. Small kidney tumors cannot be felt or seen during routine physical examinations since the kidneys are located deep inside the body. Sometimes kidney cancer can be detected at an early stage, with tests such as routine urine analysis, computer tomography (CT) scans, and Magnetic Resonance Imaging (MRI), but these tests can be misleading and are not usually completed during routine examinations as part of kidney cancer screening. These tests are often recommended for individuals who are at risk for kidney cancer. Kidney cancers can sometimes be detected at an early stage during medical tests for other illness, and when detected early, the survival rate is high.

In 2004, 59% of kidney cancers were diagnosed at an advanced stage and 31% were diagnosed at early stage.

Figure 6. Percent of Kidney Cancer by Stage, Florida, 2004



Approximately 60% of the kidney cancer cases were diagnosed at early stages among males and females, and among Whites and Blacks. People less than age 45 had the highest percentage (68%) of kidney cancer diagnosed at early stages among age groups. Almost one-third (32%) of patients of 65 years older were diagnosed at advanced stages, the highest percentage among all sub-populations by age group, sex, or race.

Patients with private insurance had a higher percentage of early stage diagnoses (65%) compared to patients with other insurance (Tricare, VA, and Public Health Services), or no insurance. Approximately 40% of patients with other insurance, Medicaid, or those who were uninsured, were diagnosed at advanced stage.

(Continued from page 3: Kidney and Renal Pelvis Cancer in Florida)

The percentage of early stage diagnoses of kidney cancer in 2004 increased by 52% compared to the percentage in1981. The percentage of diagnoses with unknown stage decreased 35% during the 24-year period.

Figure 7. Stage of Kidney Cancer by Demographic Characteristics, Florida, 2004

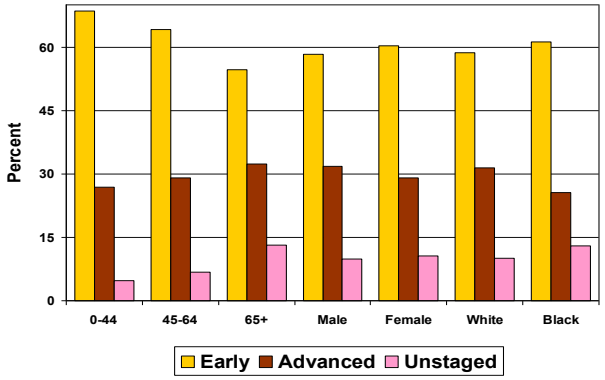


Figure 8. Stage of Kidney Cancer by Type of Insurance, Florida, 2004

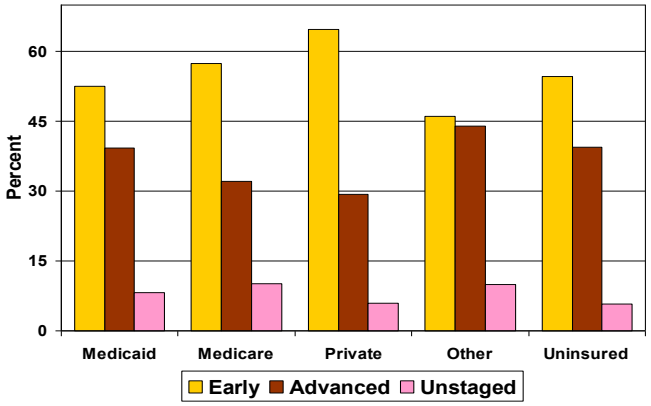
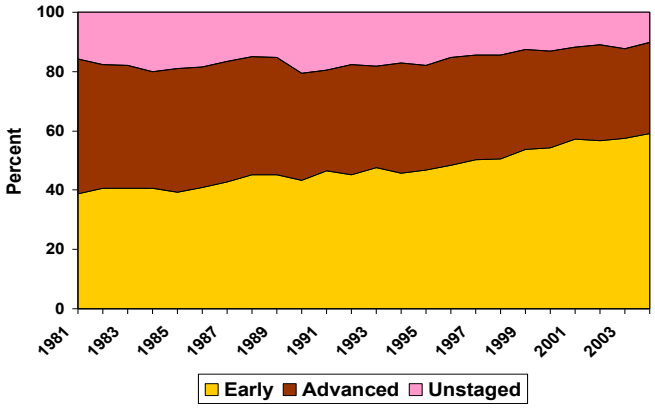


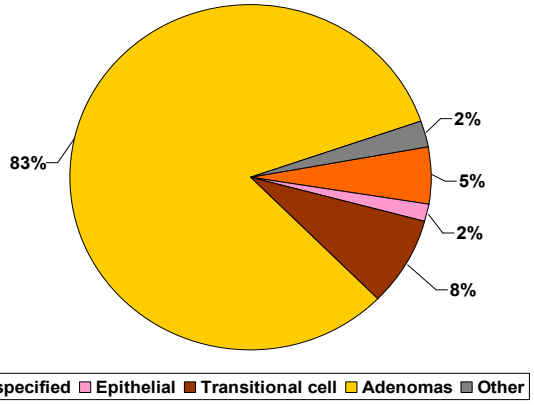
Figure 9. Kidney Cancer Staging, Florida, 1981-2004



Histology Type

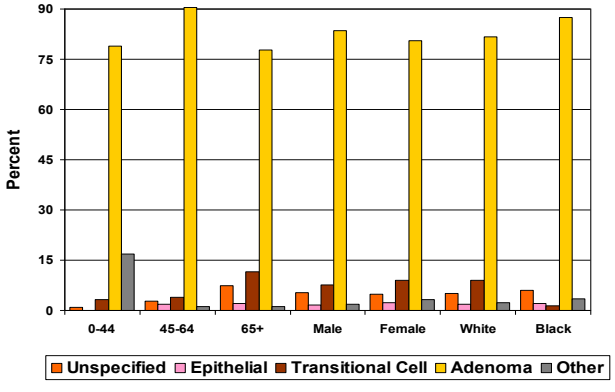
Histology is the type of cell on which the cancer forms. The first three-digits of the ICD-O-3 histology codes were used to group the histology types. For this report, histology was analyzed based on the following grouping: (1) adenoma and adenocarcinoma, (2) epithelial neoplasm, and (3) transitional cell papillomas and carcinomas.

Figure 10. Kidney Cancer by Histology Type, Florida, 2004



In 2004, these three groups accounted for 92% of all kidney cancers. Other histology type accounted for 2%, and unspecified histology for another 5%.
More than 75% of kidney cancer cases diagnosed were adenoma and adenocarcinoma among all age groups, both sexes, and in both Whites and Blacks.

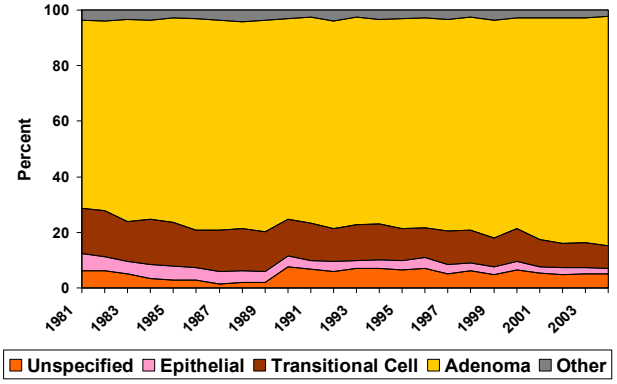
Figure 11. Histology Type of Kidney Cancer, Florida, 2004



Histology types of kidney cancer changed in Florida during 1981 to 2004. Since 1981, the percentage of adenoma and adenocarcinoma has increased by 21%. In 2004, all other histology types showed a decline since 1981. The percentage of kidney cancer with histology type of epithelial neoplasm showed a greater decline (70%) than any other histology types.

(Continued from page 4: Kidney and Renal Pelvis Cancer in Florida)

Figure 12. Histology Type of Kidney Cancer, Florida, 1981-2004



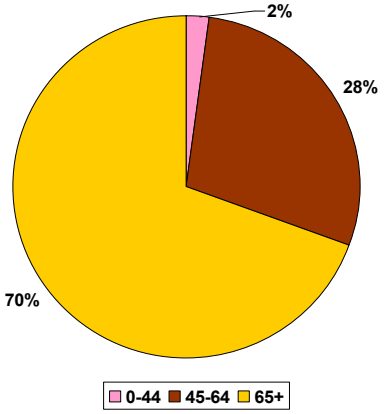
Hospital Discharges

In 2004, 2,621 hospital discharges (1,592 men and 1,029 women) for the treatment of kidney cancer in Florida. The total hospital charges for kidney cancer hospitalization in 2004 were $106 million.

Mortality Rates

In 2004, 39,591 men and women died of cancer in Florida. Of these, 762 (1.9%) deaths were related to kidney cancer with an age-adjusted mortality rate of 3.3 per 100,000 population. Seventy percent of the kidney cancer deaths were among people 65+ years old; 28% were among people between 45 and 64 years old.

Figure 13. Kidney Cancer Deaths by Age Group, Florida, 2004



In 2004, 496 men died from kidney cancer in Florida, with a mortality rate of 5 per 100,000 population. Among women, 266 deaths were due to kidney cancer, with a mortality rate of 2 per 100,000 population. The mortality rates were similar between Blacks and Whites; 3 per 100,000 population in 2004.

Figure 14. Age-adjusted Mortality Rate of Kidney Cancer, Florida, 2004

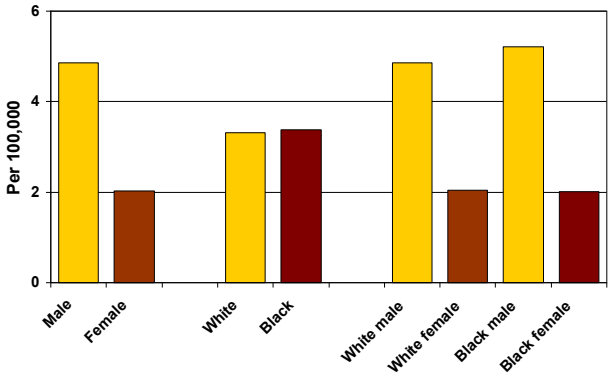
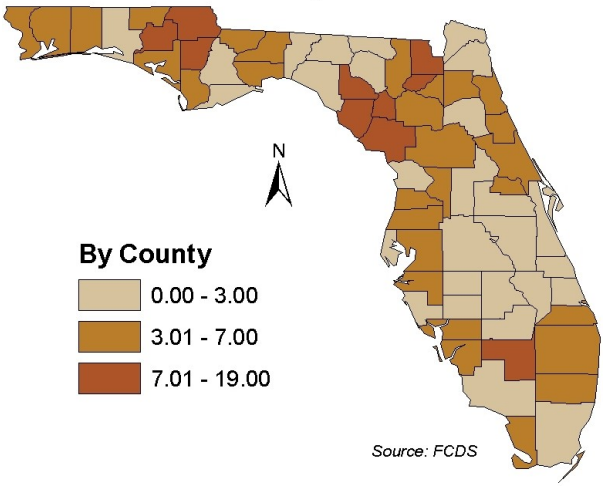
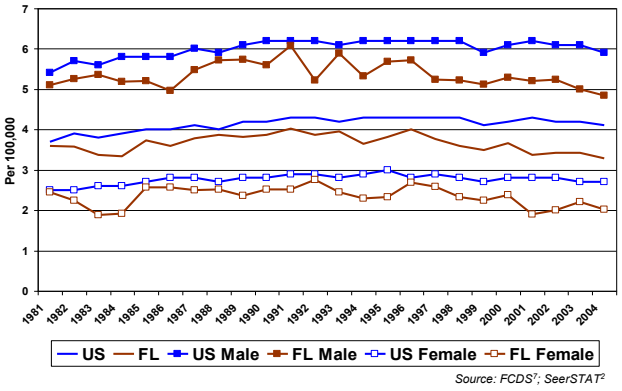


Figure 15. Age-adjusted Mortality Rate, Florida, 2004



In 2004, Union County, Jackson County, Gilchrist County, Dixie County, Washington County, Lafayette County, and Calhoun County had a mortality rate greater than 10 per 100,0000 population. In 2004, 19 kidney cancer deaths were reported in the above seven counties. Eight Florida counties did not report any kidney cancer deaths.

Figure 16. Age-adjusted Mortality Rate of Kidney Cancer, Florida, 1981-2004

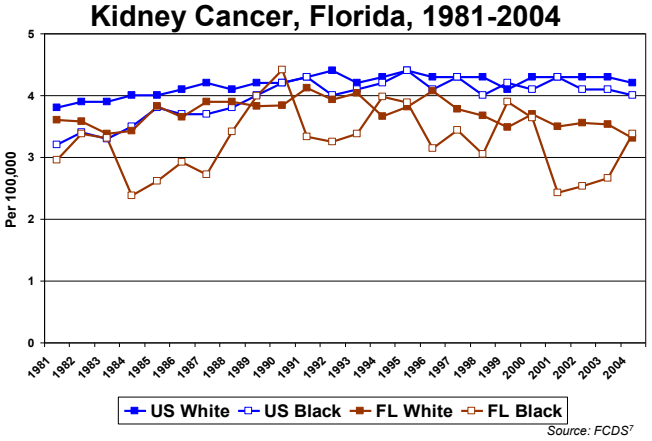


Source: FCDS[7]; SeerSTAT[2]

(Continued from page 5: Kidney and Renal Pelvis Cancer in Florida)

Since 1981, the national mortality rate of kidney cancer has increased by 11% in 2004. Mortality rates also showed an increase nationally among both sexes and both races. In Florida, the mortality rate of kidney cancer in 2004 decreased by 8% compared to the rate in 1981. Females showed a greater decline (20%) than males (4%). The decrease in the mortality rate in Florida and the decrease among females were statistically significant. During the 24 year period Whites had a higher age-adjusted mortality rate of kidney cancer in 18 years than Blacks in Florida.

Figure 17. Age-adjusted Mortality Rate of Kidney Cancer, Florida, 1981-2004



Source: FCDS[7]

References

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4. National Cancer Institute, 2007, http://www.cancer.gov/cancertopics/types/kidne.
5. Mayo Clinic, 2007, http://www.mayoclinic.com/health/kidney-cancer/DS00360/DSECTION=.
6. Florida Department of Health, 2007, http://www.floridacharts.com/charts/population.asp.
7. The Florida Cancer Data System, 2007, https://fcds.med.miami.ed.

Contact information

For further questions on this report, please contact Ms. Aruna Surendera Babu at 850.245.4444 Ext. 2418 or by email at Aruna_Surenderababu@doh.state.fl.us.

For further questions on FCDS, please contact Ms. Tara Hylton at 850.245.4444 Ext. 2441 or by email at Tara_Hylton@doh.state.fl.us.

(Continued from page 1: FCDS New Edit Checks on the Address Fields)

The edits are designed to allow only USPS valid street addresses in the address fields. They are as follows:

- FCDS Edit 467 - The format of the Address Current is not a valid USPS address.
- FCDS Edit 468 - The format of the Address at DX is not a valid USPS address.
  - "RR" is acceptable - no RURAL ROUTE, STAR ROUTE, RURAL DELIVERY
  - "HCR" is acceptable - no HC or HIGHWAY CONTRACT
  - "PO BOX" is acceptable - no POB, POST OFFICE BOX
  - "HOMELESS" is not allowed in either address field
  - "GENERAL DELIVERY" is acceptable
- FCDS Edit 469 - Address Current cannot be UNKNOWN.
- FCDS Edit 470 - Address at DX cannot be UNKNOWN if Class 0, 1, or 2.
- FCDS Edit 471 - Supplemental Address CANNOT equal the Address Current.
- FCDS Edit 472 - Supplemental Address CANNOT equal the Address at DX.
- FCDS Edit 473 - The format of the Supplemental Address is not valid.

Supplemental field is to be used to record the name of a place, not the address fields. For instance, "WEST WOOD RETIRENMENT HOME" is not acceptable in the address fields. The place name goes in supplemental and the address, "1001 MAR WALT DR," goes in the address field.

- FCDS Edit 483 - The format of the P.O. Box address in Address Current is not valid. A single letter (A-Z) or a series of number(s) must follow the P.O. Box.
- FCDS Edit 484 - The format of the P.O. Box address in Address at DX is not valid. A single letter (A-Z) or a series of number(s) must follow the P.O. Box.
- FCDS Edit 485 - The word 'AND' appears in the Address Current field. This is not a correct format for an address.
- FCDS Edit 486 - The word 'AND' appears in the Address at DX field. This is not a correct format for an address.

CALENDAR OF EVENTS

CALENDAR OF EVENTS

DEATH CLEARANCE ONLINE FOLLOW-BACK PROCESS

Date: September 3, 2008
Time: 10:00am—12:00pm (EDT)
Dial-in Number: 1-888-422-7128
Participant Code: 418943
Presentation Slide: http://fcds.med.miami.edu (under What's New)

HOSPITAL REGISTRY WEBINAR SERIES ◊ 9:00AM—1:00PM

Date: **Sep. 11th:** *Abstracting Other Digestive System Cancer Incidence and Treatment Data*
Locations: Boca Raton Community Hospital (Boca Raton, FL) ◊ Moffitt Cancer Center (Tampa, FL)
Shands University of Florida (Gainesville, FL)
Contact: Meg Herna at 305-243-2625 or mherna@med.miami.edu
To Register: http://fcds.med.miami.edu

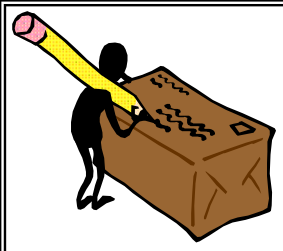
CANCER SURVEILLANCE: EPIDEMIOLOGY AND DATA UTILIZATION

3-DAY ADVANCE CANCER TRAINING

Date: October 1-3, 2008
Location: Emory University in Atlanta, GA
Website: http://www.sph.emory.edu/GCCS/training/practice/index.html

PRINCIPLES & PRACTICE OF CANCER REGISTRATION, SURVEILLANCE AND CONTROL—5-DAY BASIC TRAINING

Date: October 13-17, 2008
Location: Emory University in Atlanta, GA
Website: http://www.sph.emory.edu/GCCS/training/practice/index.html



FCDS GENERAL MAILING RECOMMENDATIONS

In order to protect and properly handle all packages, particularly those containing confidential patient information, FCDS is making the following recommendations:

1. We ask that if you are mailing a package that contains confidential patient information to FCDS to use Federal Express, UPS, Airborne Express or any other type of courier service.
   a. The FCDS street address below must be used for courier packages:
      FCDS/University of Miami Miller School of Medicine
      1550 NW 10 AVE, Fox Bldg, Room 410, Miami, FL 33136
   b. Always request a signature upon delivery.
   c. Make sure that the addressee at FCDS knows that she/he is to expect a package.
   d. Track the package to ensure that it has reached its destination. You may want to explore the e-mail tracking and notification features that the courier of choice offers.

2. If using US Postal Service, which may include Express mail, Priority mail, and Certified mail, you must use the FCDS PO Box address below:
   FCDS/University of Miami Miller School of Medicine
   PO BOX 016960 (D4-11), Miami, FL 33101

NAACCR 2008 ANNUAL CONFERENCE

"Ascending New Heights in Cancer Surveillance"

Denver, Colorado—June 10 - 12, 2008

By Jill A. MacKinnon, PhD, CTR

It is with great pride and pleasure that I share with you the highlights of the 2008 Meeting of the North American Association of Central Cancer Registries in Denver. This year the Colorado Cancer Registry hosted the NAACCR Annual Meeting June 10th through 12th in the Mile High City. Florida was well represented. Nine of our abstracts were accepted for presentations using the fantastic data our Florida Registrars work so diligently to provide us. Below are the abstracts for these presentations.

I guess being a mile closer to the sun one has to expect different effects on the earth that translate into very different effects for your body. First off, because of very low humidity, **I had four great hair days**. However, the flip side of good hair days was the fact our eyes, throat and skin were dry as the desert. We all were bathing in hand cream and had our trusty bottle of water with us. I never thought I would long for the humidity of good ole South Florida but I did.

I want to thank each and every one of you for your continued diligence in case finding and abstracting the data. We were able to present the data, but the credit is all yours.

THANK YOU.

AN ANALYSIS ON DEATH CERTIFICATE ONLY CANCER REPORTS IN FLORIDA

Y Huang, T Hylton, Florida Department of Health, FL USA

Background: Percent of Death Certificate Only cancer cases (DCO) is one of the quality indicators of cancer registry data. Understanding the pattern of DCO is a critical step of further improving the quality of FCDS data.
Purpose: To analyze the distributions and time trend of DCO, and to identify priority areas for reducing of DCO in Florida.
Methods: All FCDS data in 1990-2004 were analyzed for factors that may be associated with DCO. These factors include race, ethnicity, age, sex, county, and cancer site. Urbanicity of residential county was defined by Beale Codes.
Results: We analyzed 1,455,665 cases in 1990-2004, among whom 59,747 were DCO cases. The percent of DCO was >5% in 1990-1994, declined to 3.1% in 2000, and has maintained 2.7% or less since 2001. The percent of DCO was 1% higher among males than among females. Compared to Whites, Blacks had a higher percent of DCO, while Hispanics had a lower percent. Percent of DCO increased by age. Among 13 counties with a median percent of DCO greater than 6%, 11 were rural counties, and 2 were semi-rural counties. Liver cancer had the highest percent of DCO, followed by pancreas, brain and lung cancers. Lung cancer was the major contributor to DCO due to a large number cases, and counted for more than 28% of all DCO in all 15 years.
Conclusions: Percent of DCO were higher among males, elderly, people residing in rural counties, and patients with cancers of lung, liver, and pancreas. Efforts to reduce DCO need to focus on improving case report among these populations.

EFFECTS OF POVERTY, RACE AND TOBACCO ON ESOPHAGEAL CANCER RISK

JA MacKinnon[1], R Sherman[1], LE Fleming[1,2], LG Koniaris[3]; Y Huang[4]; RC Duncan[1]; B Wohler[1]; M Rudolph[1]; D Franceschi[3]; and DJ Lee[1,2] [1]Florida Cancer Data System, Sylvester Comprehensive Cancer Center; the [2]Department of Epidemiology & Public Health; the [3]Department of Surgery, Division of Surgical Oncology; and the [4]Florida Department of Health, Bureau of Epidemiology, University of Miami Leonard M. Miller School of Medicine, Miami, Florida

Background: To characterize and compare patients with adenocarcinoma of the esophagus or squamous cell carcinoma of the esophagus and to assess the link between socioeconomic status, tobacco use, and the sites of esophageal cancer clusters.
Methods: We used Florida incident cancer registry data (1998–2003) to identify geographical areas with a higher than expected incidence of esophageal cancer (no. patients studied, 4349). Correlates of cancer-cluster membership were examined with cancer-registry–derived individual-level data, area-based measures from the US census, and county-level smoking prevalence estimates from the Behavioral Risk Factor Surveillance System.
Results: Block groups with a higher than expected incidence of esophageal cancer were identified with

(Continued from page 8: NAACCR 2008 Annual Conference)

SaTScan software. Multivariable logistic regression analysis indicated that patients living in an area with a higher than expected incidence of squamous cell carcinoma of the esophagus were more likely to be poor and either black or Hispanic and that those living in an area with a higher than expected incidence of adenocarcinoma of the esophagus were more likely to be wealthy, white, and diagnosed at an earlier stage.
Conclusion: Integrating individual-based cancer registry data with area-based census and risk factor surveillance data is an inexpensive and powerful method for identifying communities in need of targeted prevention activities. Areas identified as high risk need preventive interventions (such as smoking cessation programs) and earlier diagnostic screening interventions.

QUALITY CONTROL ABSTRACT REVIEW PROCESS

S Manson, M Herna, M Alvarez, G Levin, Florida Cancer Data System (FCDS), University of Miami Miller School of Medicine, Miami, Florida, USA.

Overview: While the electronic edit checks are designed to detect invalid codes, blank fields and perform cross-validation between fields, the Quality Control Abstract Review is designed to facilitate visual editing of abstracted data. The QC Abstract Review allows a trained eye to detect inconsistent coding that electronic edit checks cannot identify. It is a tool to identify deficiencies in abstractors' understanding of abstracting concepts, data definitions and coding selections that may require additional training. At FCDS, approximately 165,000 incidence abstracts are processed annually. The QC Abstract Review Process is automated by selecting one of every 25th record processed, which accounts for nearly 4% of cases being visually reviewed for accuracy.

Process: Each case selected is placed in a QC file ready for visual review by a subcontractor of FCDS. The intent of using an outside source to review the records is to have an unbiased approach to the review itself and to allot more time for the QC staff to work on other projects. The subcontractor must have extensive experience in cancer registration, must have knowledge of Florida's specific data reporting requirements, and must be a Certified Tumor Registrar. The FCDS QC sub-contractor will visually review each abstract on the screen. The review constitutes comparing the documentation with the coded fields and making a visual evaluation of the data, primarily the tumor and treatment information, and the Collaborative Staging data items. This requires a thorough knowledge of the disease process, cancer sites, staging and related therapies. This comprehensive review of the clinical picture that the abstract depicts is of critical importance to assuring quality, consistent and knowledgeable coding and abstracting of cancer cases.

2007 MULTIPLE PRIMARY RULES: IMPACT ON INCIDENCE RATES

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Background: In 2007, new rules were implemented for determining the number of primary tumors for a patient. The rules were developed keeping in mind the need to minimize the impact on incidence rates. This presentation will outline the changes in incidence counts
Methods: the entire FCDS database, consisting of 3.1 million source records were processed using an automated tumor linkage software package developed by the FCDS using rules defined in the 2007 Multiple Primary Rules.
Results: Changes in overall incidence rates were minimal; certain primary sites had a change in incidence rates. The use of diagnosis date reported on non-analytic source records had an impact on rates.
Conclusion: The 2007 Multiple Primary rates do not change overall incidence rates. Final results will need to wait until analysis of incidence year 2007 can be performed so that the source records will have been created using the 2007 Multiple Primary rules. This presentation will describe the changes in detail.

SCREENING FOR INCREASED CANCER RISK NEAR TOXIC WASTE SITES

RL Sherman, D Lee, G Kearney, J Hu, G Jacquez, L Fleming, P Pinheiro, B Wohler, J MacKinnon, Florida Cancer Data System, University of Miami, Miami, FL; Florida Department of Health, Tallahassee, FL; and TerraSeer, Inc, Ann Arbor, MI

Background: Cancer registries allow for the systematic analysis of data to identify burden, trends, to generate hypotheses about cancer risk and etiology, and to target

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high-risk groups in need of appropriate interventions or further study.

Methods: Using publicly available data, we identified 39 sites currently on the Environmental Protection Agency (EPA) National Priority List (NPL) list for clean-up for Florida that are contaminated with potential carcinogens of interest for breast cancer. A cluster detection focused test, the Lawson & Waller Test Statistic in ClusterSEER, was used to detect breast cancer clustering around hazardous waste sites. The focused test evaluates the rate of cancer the closer, or further, away from a geographic location.

Results: Eighteen of the 39 NPL sites were identified as having higher rates of breast cancer around the sites; eight of which were significant even after adjusting for multiple comparisons ($p < .05$). Differences in the chemical contaminants, hazard scores, contaminated media, and breadth of contamination/clean-up were identified. The average EPA hazard score for sites with identified clustering was higher. The sites most correlated with increased rates around the site had contamination with pesticides and vinyl chloride; the sites with the lowest correlation had benzene contamination.

Implications: Breast cancer incidence has an inverse relationship with socioeconomic status, and the population living near a contaminated site tends to be living in poverty. Thus, this technique may provide a screening tool for proactively addressing potential public environmental concerns and identifying high risk communities in need of further investigation.

Hispanic Subgroup Identification in Cancer Registration

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Introduction: The study of cancer in Cuban, Puerto Rican, South & Central American and Mexican populations using registry data has been limited, because of lack of specificity of Hispanic Origin, data item code 190. The Florida Hispanic Identification Algorithm (FHIA) was developed to enhance the quality of this data field by refining the NAACCR Hispanic Identification Algorithm (NHIA-2). FHIA uses FCDS data (birthplace, recorded ethnicity and name), and mortality data. We validated this new algorithm for males and assessed its impact on Florida data from 1999-2001.

Methods: To validate FHIA, we used data from a non-registry study of psychosocial correlates of quality of life in prostate cancer which collected information on Hispanic ethnicity and Hispanic country of origin. This study's self-reported ethnicity and Hispanic subgroup were our gold standard. FHIA was then applied to the FCDS data on the same participants and the agreement between self-report and FHIA was calculated.

To assess the impact of FHIA, a comparison between the initial FCDS recorded Hispanic origin, and Hispanic origin after using FHIA and NHIA-2 respectively was carried out on the Florida data 1999-2001.

Results: The percent agreement between Hispanic Ethnicity in the 236 subjects of the gold standard study and FHIA was 95% (kappa=0.89). For Hispanic subgroup, in self-reported Hispanics, agreement was 98%. For Florida data from 1999-2001, FHIA augmented the initial data on Hispanic origin from 47% to 73% with a specific Hispanic subpopulation.

Discussion: FHIA is a valid and potent tool for allocation of Hispanic origin in males and allows for detailed study of cancer in Hispanic subgroups. The next step is to validate FHIA in females and assess its validity and potential in other databases.

Health Disparities In Cancer Screening In US Women Workers

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Purpose - Assess variability in colorectal, breast and cervical cancer screening in a nationally representative sample of US women workers to identify groups which should be targeted for cancer screening interventions.

Methods - Employed National Health Interview Survey (NHIS) participants > 50 years (representing an estimated 6,984,767 US women workers) asked if ever had a colorectal exam, > 40 years if they had ever had a mammogram (estimated 14,920,874), > 18 years (estimated 30,043,045) if they had ever had a pap smear. Prevalence rates were adjusted for the survey design.

Results - Compared to non-Hispanics, Hispanic women workers were less likely to report ever having a

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pap smear (95% vs. 85%; p<0.05), a mammogram (87% vs. 78%; p<0.05)and a colorectal exam (31% vs 23%; p<0.05). The ethnicity gap in screening for both cancers was least pronounced for white collar workers, and most pronounced for blue-collar and service workers. Hispanic women workers reported screening rates which were 7-15 percentage points lower than their non -Hispanic counterparts.

Conclusions - Hispanic blue collar and service women workers reported markedly lower lifetime use of pap smear, mammography and colorectal screening relative to non-Hispanic women workers in these important sectors of the US workforce. Effective worksite-based cancer screening programs targeting all women workers, and Hispanic women workers in particular, are urgently needed.

CANCER CLUSTER DETECTION WITH CANCER REGISTRY DATA

RL Sherman, D Lee, J MacKinnon, L Fleming, B Wohler; *Florida Cancer Data System, University of Miami, Miami, FL) and G Kearney (Florida Department of Health, Tallahassee, FL*

Background: The ease and capability of desktop geographic information systems (GIS) software permits the combination and analysis of disparate data sources, such as patient level cancer registry data with environmental and demographic data, to evaluate risk. The Florida Cancer Data System (FCDS) is developing a new cluster surveillance model to identify communities at risk that require more detailed study and/or tailored public health interventions to lower cancer burden. Quantifying cancer risk is particularly difficult due to the significant lag time (usually decades) between exposure and diagnosis, the complexity of determining individuals' historical exposures, as well as methodological issues (ie. spatial analysis of rare events and sparsely populated areas or inaccurate assignment of geographic location).

Methods/Results: Two cluster detection desktop software programs, SaTScan and ClusterSEER, to detect spatial cancer clusters without a priori decisions about areas of concern are demonstrated. The results were validated using a focused test around a known environmental point source. After substantial errors in geocoding accuracy were identified, the impact of this misclassification bias was explored.

Implications: A map showing cancer clusters is highly effective for communicating risk. However, limitations inherent in data collection, disease etiology and progression, and statistical inference hamper the valid interpretation of such data. Furthermore, the public release of geographic clusters results must also be limited due to issues of confidentiality, risk communication, and the ability to evoke successful interventions.

SPATIAL TECHNIQUES FOR TOBACCO-ASSOCIATED CANCER CLUSTER DETECTION

D Lee, J MacKinnon, RL Sherman, L Fleming, B Wohler; Florida Cancer Data System, University of Miami, Miami, FL;

Background: Identification of tobacco-associated cancer clusters can be a useful tool for targeting communities which require the attention of the public health community.

Methods: Behavioral Risk Factor Surveillance System (BRFSS) data were used to identify smoking prevalence rates in the 67 counties comprising Florida. Using state incidence data and the statistical program SaTScan, age - and gender-adjusted cancer clusters generated at the block group level were identified for lung, head & neck, and esophageal cancer. Logistic regression analyses were used to determine the association between county-level smoking prevalence rates, census-derived community characteristics, and cancer cluster membership across the state.

Results: The overall adult cigarette smoking rate in Florida was 22.2% in 2002. There was over a three-fold difference in smoking prevalence rates across the 67 counties. Satscan identified regions throughout the state with higher than expected cancer incidence rates. There were only modest correlations among the location of identified clusters, both across site-specific cancers and within cancer-specific histological sub-types (r's< 0.40). Associations between county-level smoking rates and cancer clusters were also variable.

Implications: New geographic mapping tools, in conjunction with data on county-level smoking rates, can aid in the identification of regions at greatest need for comprehensive tobacco control initiatives. ☙

"It is impossible for a man to learn what he thinks he already knows."
Epictetus

The following Floridians passed the CTR Exam in March 2008:

Amy W. Brockdorf
Stephanie S. Campbell
Suzan O. Chastain
Brigitte U. Johnson
Elizabeth D. Kirol
Lisa A. Kofron

Completeness Report—2007 Case Reporting

Month	Complete	Expected
July 2007	1%	8%
August 2007	6%	17%
September 2007	12%	25%
October 2007	18%	33%
November 2007	23%	41%
December 2007	33%	50%
January 2008	40%	58%
February 2008	46%	66%
March 2008	56%	75%
April 2008	63%	83%
May 2008	74%	91%
June 2008	**92%**	**100%**

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Register

A joint project of the Sylvester Comprehensive Cancer Center and the Florida Department of Health

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FCRA FDS TASK FORCE

The FCRA/FCDS Task Force is actively working on many issues that all registrars are facing. If you have any questions, issues or suggestions that you would like the task force to review, please email them to *taskforce@fcra.org*.

The task force meets the first Thursday of every month. We will respond back to your inquiries as quickly as possible.

FCDS Florida Cancer Data System
A Joint Project of the Sylvester Comprehensive Cancer Center and the Florida Department of Health

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