

#### Division of Cancer Prevention and Control

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# The Effect of Race/Ethnicity ξ Insurance in the Administration of Standard Therapy for Local Breast Cancer in Florida By Dr. Lydia Voti

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### Introduction:

The treatment of early stage breast cancer has changed drastically in the past 20 years after clinical trials were published indicating that breastconserving surgery with radiation therapy (BCSR) produced similar results to mastectomy with regards to long-term survival [1-4]. As a result, these 2 treatment modalities have become the standard of care for early breast cancer, and multiple medical societies have recommended that women should be given a

choice between these 2 therapies when diagnosed with local breast cancer [1,2,3,5]. More recently, in their 2003 update, the steering committee of Health Canada's Breast Cancer Initiative recommended that unless there is increased risk of local recurrence, physical disabilities, contraindication for radiotherapy or large tumor size compared to breast size, BCSR is generally recommended for patients with stage I and II breast cancer and that the choice between BCSR and mastectomy be made ac-

## cording to the patient's circumstances and personal preferences [6].

Despite the general agreement of clinical guidelines, treatment patterns have not been uniform. Non-clinical factors such as race/ethnicity, type of health insurance, type of healthcare facility (teaching versus non-teaching hospitals) and marital status have

(Continued	on	page	2)
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Inside this issue:	
The Effect of Race/Ethnicity in FL	1 — 5
NAACCR Implementation Guide	5
MP&H Coding Rules	6
Calendar of Events	7
HIPPA Security Reminders	7–8
Completeness Report	8

(Continued from page 1: The Effect of Race/Ethnicity and Insurance in the Administration of Standard Therapy for Local Breast Cancer in Florida)

been shown to affect the receipt of treatment [7-18].

Using the FCDS data and enhancing the treatment reported to FCDS through the inpatient and outpatient data reported to the Agency of Health Care Administration, we evaluated:

- The effect of race/ ethnicity in the receipt of guideline-based treatment for local stage breast cancer.
- The effect of health insurance in the receipt of guideline-based treatment for local stage breast cancer.

#### Methods

The initial study population included 26,423 primary breast cancers diagnosed at local stage (using SEER summary stage classification) in female Florida residents between July 1997 and December 2000. The FCDS collects all components of first course of treatment (including site specific surgery, radiation therapy, chemotherapy and endocrine therapy) administered in the first four to twelve months of a breast cancer diagnosis.

Various studies, however, have raised concerns regarding the completeness of the registry collected treatment data and warned for the implications on pattern of care studies [19,20,21,22]. To enhance the completeness of the Registry's treatment data, we linked the FCDS data to the Agency of Health Care Administration (AHCA) inpatient and outpatient databases and supplemented the FCDS-provided treatment information.

The data linkage was carried out at the patient level, using a probabilistic algorithm. It was based on social security number, date of birth, sex, race and county of residence at the time of diagnosis. Approximately 94% of the local breast cancer records were linked to either an inpatient or an outpatient AHCA record via this procedure. Through the AHCA data sets, we found surgery information for 362 of the 502 cases that had no surgery

according to the FCDS records; specific surgery information was retrieved for 3,488 records (13%) with uninformative surgery (non-specified surgery) and for



tion therapy information for 5.938 (35%) of the 16.900 cases that did not have radiation therapy reported, and for 194 of the 389 cases with missing radiation treatment information, according to the FCDS records. As a result, the improvement in the radiation therapy data reached 36% for all local breast cancers combined. For the cases that underwent breast conserving surgery in particular. 76% were found to have been administered radiation therapy in addition to surgery, compared to 47% according to the registry records alone.

Of the 26,423 eligible local breast cancer cases, 2,606 records had missing information in the variables used in the modeling of standard treatment, or their combinations (0.8% missing race/ ethnicity, 3.9% missing marital status, 1.7% missing age at diagnosis, 3.9% missing insurance, 0.1% missing surgery or radiation therapy). We limited our analysis to a subset of the enhanced data set containing 23,817 local breast cancer records, with informative treatment and non-missing demographic data.

#### Study variables

The AHCA enhanced surgery and radiation therapy variables were combined into a standard treatment variable for local breast cancer, defined as breast conserving surgery with radiation therapy (BCSR) or mastectomy (with or without adjuvant radiation). The age at diagnosis was used as a continuous variable in the analysis. Race and ethnicity were combined into one race/ethnicity variable containing the mutually exclusive categories: white non-Hispanic, black non-Hispanic, Hispanic, and others. Marital status was classified as: single, married, separated or divorced, and widowed. Insurance was grouped into four categories: uninsured, private, Medicare, and Medicaid. The reporting facilities were classified into American Association of Medical College training programs (i.e. teaching facilities) versus all others.

#### Results

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The vast majority of the 23,817 local breast cancers in the study population received standard treatment (87.6%) (Table 1). More specifically, breastconserving surgery alone was administered to 11.6% of the cases, and breast-conserving surgery combined with radiotherapy was administered to 48.5%. Thirty nine percent of local breast cancer cancers were treated with mastectomy (with or without radiation therapy).

There was variability in the treatment of local breast cancers diagnosed among various sub-groups. Women who received standard treatment were slightly younger, with a mean age of 64.7 years at the time of diagnosis (compared to 65.2 years). Approximately 85% of the cancers diagnosed among Hispanics were treated with standard treatment, 86.1% in the Black non-Hispanics, and 88% in the White non-Hispanics. Local breast cancers diagnosed among widows or single women were less often treated with standard treatment (83% and 85.3% respectively) compared to those diagnosed among married and separated or divorced women (89.6% and 88.8%, respectively). Type of insurance at the time of diagnosis played an important role as well, with women insured by Medicaid being the least likely to receive standard treatment (83.5%); those with Medicare and the uninsured faired equally in that respect (86-86.6%); the privately insured were the most likely to get standard treatment (88.9%). Local breast cancers diagnosed in nonteaching facilities received more often standard treatment compared to those diagnosed in teaching facilities (86.1% and 87.8% respectively).

(Continued on page 3)

of Treatment	Lumpectomy with- out Radiation No surgery N % <sup>2</sup> N % <sup>2</sup>	2,762 11.6 180 0.8	2,336 11.3 138 0.7 163 12.4 20 1.5 263 14.0 22 1.2	283 13.7 20 1.0 1,354 9.7 88 0.6 237 10.4 17 0.7 888 16.0 55 1.0	64     10.3     23     3.7       1,193     10.6     51     0.5       1,447     12.5     94     0.8       58     13.7     12     2.8	2,485 11.6 133 0.6 277 11.9 47 2.0	68.9 67.4 71.5 70.5 14-99 34-101	
ancer, by Type	Mastectomy with Radiation N % <sup>2</sup>	1,753 7.4	1,452 7.0 127 9.7 174 9.3	162 7.9 1,077 7.7 193 8.5 321 5.8	62 10.0 911 8.1 728 6.3 52 12.3	1,601 7.5 152 6.5	61.9 63.0 23-93	
with Local Breast C ecember 31, 2000	Aastectomy with- ut radiation N % <sup>2</sup>	7,576 31.8	6,443 31.2 419 31.8 714 38.0	665 32.3 4,180 30.0 699 30.8 2,032 36.6	219 35.3 3,224 28.7 3,988 34.6 145 34.2	6,910 32.2 666 28.5	66.5 69.0 22-101	
<sup>+</sup> patients diagnosed ida, July 1, 1997 - D	Lumpectomy I with Radiation c N % <sup>2</sup>	11,546 48.5	10,251 49.7 587 44.6 708 37.6	929 45.1 7,233 51.9 1,126 49.6 2,258 40.7	252 40.6 5,855 52.1 5,282 45.8 157 37.0	10,351 48.2 1,195 51.1	63.9 66.0 20-100	tion.
eristics of N= 23,817 Flori	Standard Treatment* N % <sup>2</sup>	20,875 87.6	18,146 88.0 1,133 86.1 1,596 84.8	1,756 85.3 12,490 89.6 2,018 88.8 4,611 83.0	<ul> <li>533 86.0</li> <li>9,990 88.9</li> <li>9,998 86.6</li> <li>354 83.5</li> </ul>	18,862 87.8 2,013 86.1	64.7 69.0 20-101	of the variables. with or without radia
Table 1: Characte	Total N %1	23,817	20,620 86.6 1,316 5.5 1,881 7.9	2,059 8.6 13,932 58.5 2,272 9.5 5,554 23.3	620 2.6 11,234 47.2 11,539 48.4 424 1.8	21,480 90.2 2,337 9.8	65.2 67.0 14-101	h missing values in any adiation, or mastectomy dow percent
		Total	<b>Race/Ethnicity</b> White, NH Black, NH Hispanic	Marital Status Single Married Separated/Divorced Widowed	Insurance Type Uninsured Private Medicare Medicaid	Facility Type Non-Teaching Teaching	Age at Diagnosis (years) Mean Median Range	<sup>+</sup> Excluding cases wit <sup>*</sup> Lumpectomy with r: <sup>1</sup> Column percent <sup>2</sup> F

(Continued from page 3: The Effect of Race/Ethnicity and Insurance in the Administration of Standard Therapy for Local Breast Cancer in Florida)

To further explore the findings and the joint effect of all these factors on the likelihood of receiving standard treatment, we tested various logistic regression models. The model that best fit the data included: age at diagnosis, race/ethnicity, facility type, marital status and insurance type (Table 2).

According to this model, the age at diagnosis was a significant predictor, with a 3% reduction in the likelihood of standard treatment per year of increase in age. Compared to white non-Hispanics, black non-Hispanics were 19% less likely to receive standard treatment and Hispanics were 23% less likely. Married women were the

most likely to receive standard treatment, namely, 51% more likely than single women and separated or divorced women were 37% more likely. There was a tendency for widows to get standard treatment less frequently than single women, but this finding was not statistically significant.

In non-teaching facilities, the likelihood of getting standard treatment was 21% higher than in non-teaching facilities. Medicare patients had higher likelihood of receiving standard treatment than the privately insured, whereas the uninsured and Medicaid insured women had lower likelihood. Conclusions

In Florida, for the period July, 1997 to December, 2000:

- Approximately, 88% of the local stage breast cancers received standard treatment
- Hispanic and black non-Hispanic women were less likely to receive standard treatment compared to white non-Hispanics.
- Compared to the privately insured, the uninsured and women on Medicaid were less likely to receive standard treatment for local breast cancer, whereas women in Medicare were more likely.

Table 2: Frequency of Receiving Standard Treatment and Odds Ratio Estimates
Local Breast Cancers diagnosed in Florida, July 1, 1997 through December 31, 2000
N=23,817 <sup>+</sup>

	No of Cases	% Received Standard Treatment	Odds Ratio*	95% CI
Age at Diagnosis				
Per one-year increase			0.97	(0.96, 0.97)
Race/Ethnicity				
White, NH	20,620	88.0	1	
Black,NH	1,316	86.1	0.81	(0.68, 0.97)
Hispanics	1,881	84.9	0.77	(0.66, 0.89)
Marital Status				
Single	2,059	85.28	1	
Married	13,932	89.65	1.51	(1.31, 1.75)
Sep/Divorced	2,272	88.82	1.37	(1.13, 1.66)
Widowed	5,554	83.02	1.29	(0.96, 1.33)
Facility Type				
Teaching	2,337	86.1	1	
non-Teaching	21,480	87.8	1.21	(1.05, 1.38)
Insurance Type				
Private	11,234	88.93	1.00	
Uninsured	620	85.97	0.76	(0.59, 0.96)
Medicare	11,539	86.65	1.36	(1.22, 1.51)
Medicaid	424	83.49	0.71	(0.53, 0.96)

<sup>+</sup> Excluding cases with missing values in any of the variables used in the analysis.

\* Odds ratio estimates of the likelihood of receiving standard treatment are based on a logistic regression model that includes age, race/ethnicity, facility type, marital status and insurance. (Continued on page 5) (Continued from page 4: The Effect of Race/Ethnicity and Insurance in the Administration of Standard Therapy for Local Breast Cancer in Florida)

- Married, and separated or divorced women were more likely to receive standard treatment than single women; widows did not significantly differ to single women in that respect.
- Older women with local breast cancer were less likely to receive standard treatment, compared to vounger women .

#### **Policy Implications**

There is a need for enhancement and expansion of breast cancer treatment services (education, consultation with specialists etc.) that will promote the receipt of guideline-based recommendations, tailored to the needs of primarily the Hispanics and of the black non-Hispanics. This effort should not only include patients but providers and health care systems as well.

Since this is a dynamic situation, there is a continuous need for populationbased patterns of care studies to monitor changes in the treatment of cancer, identify populations in need, design programs to address these needs, and when the programs mature, quantify their impact. Cancer registry data combined with administrative data offer a unique opportunity for these types of studies, which can eventually tie the process of care to the improvement of the healthcare system. 🇞

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The 2007 Multiple Primary and Histology Coding Rules present the first site-specific multiple primary and histology rules developed to promote consistent and standardized coding by cancer registrars. This project was sponsored by the National Cancer Institute's SEER Program. In January 2003, the Multiple Primary and Histology Coding Committee (Histology Committee) was formed to tackle problems identified in existing rules. The Histology Committee was a diverse group with membership from all but two SEER regions, the American College of Surgeons (ACoS) Commission on Cancer (CoC), the American Joint Committee on Cancer (AJCC), the Centers for Disease Control and Prevention (CDC) National Program of Cancer Registries (NPCR), the National Cancer Registrars Association (NCRA), North American Association of Central Cancer Registries (NAACCR), 15 central registry representatives, and Statistics Canada. Physician guidance by specialty pathologists and clinicians was integral to the review and revision process. Regular consultation with the editors of ICD-O-3 clarified ICD-O-3 codes and ensured that the new rules accurately reflect the ICD-O-3 intent and purpose.

The 2007 Multiple Primary and Histology Coding Rules contain site-specific rules for lung, breast, colon, melanoma of the skin, head and neck, kidney, renal pelvis/ureter/bladder, and malignant brain. A separate set of rules addresses the specific and general rules for all other sites. The multiple primary rules guide and standardize the process of determining the number of primaries. The histology rules contain detailed histology coding instructions. For example, grouping histologic terms, differentiating between general (NOS) terms and specific histologic types and subtypes, and identifying mixed and combination codes are covered. The Histology Committee also developed three new data items that complement these rules.

The rules will be available in three formats: flowchart, matrix and text. The different formats were developed to meet the needs of different learning styles. The rules are identical in each of the three formats. Using all three formats is not recommended. It is best to choose one format. Do not combine old rules with the new.

Web-based cancer registrar education will be available on the <u>SEER training website</u>. Multiple primary and histology issues are covered in several modules, and continuing education units can be requested from the <u>National Cancer Registrars Association</u>. Recorded training webcasts will be available for viewing and provide another option for mass training of registrars who cannot attend an in-person workshop. The rules will be available in a standalone manual and also in the 2007 SEER Coding and Staging Manual. Source: <u>http://seer.cancer.gov</u>



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HSA20050201: EMAIL SAFETY Electronic Mail (Email) is rapidly becoming the preferred method of business communication because it is fast, inexpensive, and relatively simple to use. This innovation however is not flawless: Email is one of leading conduits of malware across computer networks through infected messages and/ or their attachments. Email is often used to spread "hoaxes" causing undue concern and insensitivity to real future threats. Email typically makes numerous stops at computers along the route to its final destination. At each stop, it

REMINDERS

To minimize exposure to infected email and/or attachments, be sure you have up-to-date anti-virus software installed on your computer. Be cautious when opening attachments with file extensions such as .exe, .bat, .com, .vbs, .scr, etc. as they may be malicious. For information on what file extensions are and how to display them please visit http://www.seniornet.org/ howto/fileext/fileextensionswhy.html. Only open an attachment if you are expecting one and if you know the sender. If you receive a suspicious email with or without an attachment do not open it, save it, view it or store it. Always employ some form of encryption if you must use email to communicate any confidential or highly sensitive data, especially personal, financial or health information. Contact your email administrator if you need further assistance. For additional Email safety tips please visit http:// safety.surferbeware.com/internetsafety-tips-email.htm.

Source: https://www.med.miami.edu/hipaa/public

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## HIPAA SECURITY AWARNESS REMINDERS

### HSA20050818: UNIQUE USER IDENTIFICATION

User Login
Please enter your FCDS IDEA user id and password and press the login button:
Userid: Password:
Login

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The **HIPAA Security Rule** requires Covered Entities to implement a "Unique User Identification" standard for systems holding electronic protected health information (EPHI). Unique User Identification is a "required" specification under the Access Control standard and should be

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employed for all EPHI systems.

As the name implies, unique user identification refers to the use of a unique name or number to identify and track specific individuals using EPHI systems, frequently referred to as "Logon name" or "User ID". Use of this unique name or number provides a means to verify the identity of the person using the system. An effective unique user identification practice ensures that system activity can be traced to a specific individual. Never share your user ID on any system as you would not like to be held responsible for some one else's actions.

System Administrators should perform ongoing maintenance of user identification data. User identifications that are not associated with active workforce members (such as those of former employees) present an increased risk for abuse. User identifications provided to consultants and vendors should also be removed or disabled as soon as no longer needed. System Administrators may wish to temporarily disable accounts for workforce members leaving for extended periods with no need to access the system, such as medical/family leave or vacations.

Source: https://www.med.miami.edu/hipaa/public

UMSylvester Competences Cancer Cancer	THE CONTRACT CONTRACT CONTRACT	HEALTH			
<b>Register</b> A joint project of the Sylvester Comprehensive Cancer Center and the Alorida Department of Scalth					
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I Ed	Principle Investigator Edward J. Trapido, ScD				
Project Director Lora Fleming, MD, PhD					
Deputy Project Director Jill A. MacKinnon, PhD, CTR					
A	Administrative Director Gary M. Levin				
	<i>Editorial Staff</i> FCDS Staff				
Contributors Lydia Voti, DSc; Betty Fernandez;					
Gary M. Lev	vin; Megsys C. He	erna, BA, CTR			
Bleu Thompson					
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Completeness Report					
2005 Case Reporting					
Month	Complete	Expected			
Nov. 2005	23%	41%			
Dec. 2005	31%	50%			
Jan. 2006	39%	58%			
Feb. 2006	45%	66%			
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Florida Cancer Data System Sylvester Comprehensive Cancer Center Miller School of Medicine University of Miami PO Box 016960 (D4-11) Miami, FL 33101

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