

SOUTHEAST CANCER CENTER



SOUTHEAST ALABAMA
MEDICAL CENTER

Treatment of Non-Melanoma Skin Cancer with Primary or Postoperative Adjuvant Radiation.

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Medical Director Dr. Steve Stokes (left) and Dr. Mark Dosmann lead SAMC's Southeast Cancer Center.

INTRODUCTION: The goal of primary treatment of squamous and basal cell skin cancer is cure of the tumor with the maximal preservation of function and cosmesis. All treatment decisions are customized to account for the particular factors present in the individual case including consideration of the patient's preference. Surgical approaches often offer the most effective and efficient means for accomplishing cure but consideration as to function, cosmesis and patient preference may lead to choosing radiation as a primary treatment or in an adjuvant setting following attempted resection.

All patients with non-melanoma skin cancer treated from 2000 through 2007 were reviewed to determine local control within the treated area. Ninety sites were treated with nine of these being excluded as there was less than two years minimum follow-up. Patients were

followed from two to seven years to determine local control. This resulted in 81 sites available for review, 56 squamous cell and 25 basal cell histologies.

PATIENT CRITERIA: General principal of treatment is appropriate resection by a Mohs procedure or resection with assessment of the margins. Patients that were not felt to be candidates for surgery due to co-morbid medical conditions, in general those on Plavix for cardiac disease, or lesions on the lower pre-tibia extremities and were felt to be at risk for postoperative morbidity were referred for primary radiation. Utilizing the National Comprehensive Cancer Network (NCCN) guidelines, patients that had substantial risk for regional recurrence were referred for adjuvant radiation. For basal cell cancers these included those with positive margins, multiple recurrences despite previous surgery, patients on immunosuppressive therapy or with perineural involvement. Patients with squamous cell cancer were considered at high risk for postoperative recurrence if the patient was an organ transplant recipient on immunosuppressive therapy, other settings of immunosuppression such as lymphoma, large poorly differentiated tumors, positive surgical margins or perineural involvement.

The techniques of radiation were in line with the NCCN guidelines. Typically 6 or 9 MeV electrons were utilized depending upon the thickness of tissue requiring treatment. Treatment was fractionated which is associated with improved cosmetic results. The goal was optimal cosmesis while minimizing the inconvenience of protracted treatment for patients

many of whom were elderly. Fractionation schemes utilized were as short as 4500 in 15 fractions over three weeks at 300 cGy per day for early small areas of treatment typically less than 3 cm. in diameter. Larger more advanced cancers required higher doses with the largest lesion treated to 7400 cGy in 37 fractions at 200 cGy per day.

RESULTS: Of 81 sites treated, 56 squamous cell and 25 basal cell, the control rate for the basal cell cancers was 100% with two to seven years of follow-up. Local control rate for the squamous cell carcinomas was 88%. There were three in-field recurrences. One patient was a previous kidney transplant and was on immunosuppressive therapy. The second patient had myeloma and was on immunosuppressive therapy with Thalidomide. The third patient had multifocal squamous cell cancers covering much of the face, facial areas and experienced multiple recurrences despite aggressive surgery and radiation. This patient remains alive with active tumor undergoing Cisplatin chemotherapy and palliative radiation.

Cosmesis was satisfactory. Higher daily dose fractions do result in increased long-term skin atrophy and hypopigmentation. However, patients felt this was a reasonable tradeoff for the convenience and a shortened treatment schedule.

SUMMARY: This study confirms that adequate selection of patients with surgery as a primary modality of therapy, reserving radiation as adjuvant treatment for those at high risk of local regional recurrence or with co-morbid

conditions precluding surgery, results in high likelihood of tumor eradication while preserving cosmesis and patient satisfaction.

CANCER COMMITTEE REPORT

The Southeast Alabama Medical Center Cancer Program is accredited by the American College of Surgeons (ACOS) Commission on Cancer, designated as a Community Hospital Comprehensive Program (COMP) and is under the leadership of the Cancer Committee.

The Cancer Committee at Southeast Alabama Medical Center is a standing committee meeting quarterly. The Committee is comprised of physicians of varied disciplines, as well as other ancillary departments involved in the treatment and care of cancer patients. Goals are set annually to monitor and improve cancer patient care. Some of the goals set by the Committee include the following:

Participate in Clinical Trials: As a COMP, the goal of the Cancer Committee is to ensure that patients are provided information about the availability of cancer-related clinical trials and that two percent of the total analytic caseload is enrolled into clinical trials. To help meet this goal, three project leaders have been selected to work on:

- Clinical trial affiliation with UAB
- Patient navigation
- Health information sharing

Offer genetic testing: Southeast Cancer Center is offering genetic testing services for individuals at risk for hereditary breast and ovarian

cancer (BRCA I and II), hereditary melanoma, and familial colorectal cancer.

Increase cancer awareness and community outreach: The Cancer Committee keeps abreast and assists in programs to educate the community about cancer with emphasis on cancer prevention, early detection and screening. Programs offered to the community in partnership with the ACS are *I Can Cope*, *Look Good-Feel Better*, *Reach to Recovery*, *Smoking Cessation* and cancer support groups.

Various health fairs sponsored by the Medical Center are offered throughout the year at different locations. These functions offer free screening such as Prostatic Specific Antigen (PSA) test for prostate cancer.

Provide patient and family support: A multi-disciplinary team approach is available to cancer patients at the Medical Center. Patients have access to support services either in-house or by referral through discharge planning to include: counseling,

hospice, rehabilitation services, support groups, nutritional care, pastoral services, patient education and pain management.

Quality Patient Care: Quality improvement issues regarding compliance with the American College of Surgeons Commission on Cancer standards are discussed regularly and treatment standards are kept current, maintaining high standard of care for cancer patients in this area. Cancer Registry data is utilized in reviewing quality of care and performance improvement studies. A study on the treatment of skin cancer is presented in this report.

Provide multidisciplinary approach to the management of cancer care: Tumor Conferences provide patients with consultative, diagnostic, and treatment planning by a team of highly trained and experienced physicians of different specialties and by allied healthcare professionals. One hour of continuing education is granted for each conference. Physicians can contact the Cancer Conference Coordinator at extension 4466 or 8893 to schedule a case for presentation.

Prevention and Early Detection: To improve screening in this area the Southeast Regional Cancer Screening Program was established to provide underserved residents in the area an opportunity to receive screenings. Services include screening mammograms, fecal occult blood testing, PSA (prostate specific antigen) tests, as well as genetic testing for cancer based on specific criteria. The 40-foot mobile unit travels to senior citizen centers, churches, health fairs and other community events.

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CANCER REGISTRY ACTIVITY AND 2008 DATA ANALYSIS

The goal of the Cancer Registry is to ensure accurate and timely collection of cancer data on patients diagnosed and/or treated at Southeast Alabama Medical Center. The Registry began collecting data in 1988. Figure 1 shows a steady increase in cases since 2005. A total of 1,232 cases were added to the database in 2008, which included 715 males and 517 females with 1,109 of these newly diagnosed or analytic cases.

The top primary site treated in 2008 was prostate cancer which consisted of 22.8% of total cases. This was higher than state and national estimates (*2008 Cancer Facts and Figures* published by the American Cancer Society). Breast and lung cases were second with both sites consisting of 16.6% of the cases. For the last 3 years, prostate and breast cancer have exceeded lung cases treated at SAMC (Fig. 2). Colorectal for SAMC, as well as state and national, represented a little over 10% of total cases (Fig. 5). The geographic distribution of patients treated during 2008 showed that nearly 25% were from Georgia and Florida (Fig. 4). Figure 3 illustrates that over half of patients treated in 2008 were between the ages of 60 and 79. Patients under the age of 30 and over the age of 89 were also included in the age distribution.

The focus of the Registry is to provide quality information to the National Cancer Database, Alabama Statewide Cancer Registry and to healthcare professionals, physicians, and hospital administration. Registry data is also utilized on a local level in patient care and performance improvement studies such as the recent study on Skin Cancer Treated with Irradiation documented in this report.

Lifetime follow-up is provided on all analytic cases since the re-established reference date of 2002. The Registry currently maintains a 96% follow-up rate, exceeding the American College of Surgeons standard of 90%.

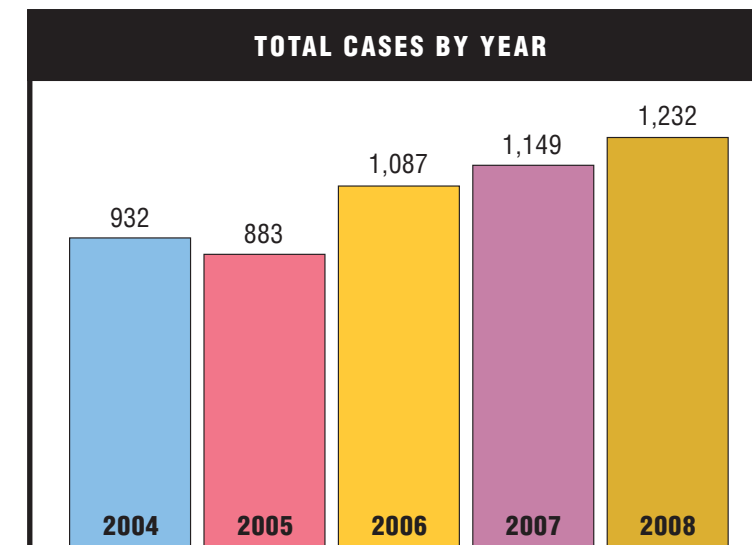


Figure 1

Site	2004	2005	2006	2007	2008	TOTAL
Breast	174	179	218	227	200	998
Prostate	118	126	197	233	282	956
Lung	137	134	159	184	198	812
Colorectal	106	83	107	112	123	531
Lymphoma	51	49	37	39	33	209
Bladder	38	34	37	37	33	179
Head/Neck	25	25	30	32	48	160
Melanoma	23	31	28	31	35	148
Kidney	24	23	25	29	27	128
Thyroid	33	26	34	19	11	123

Figure 2

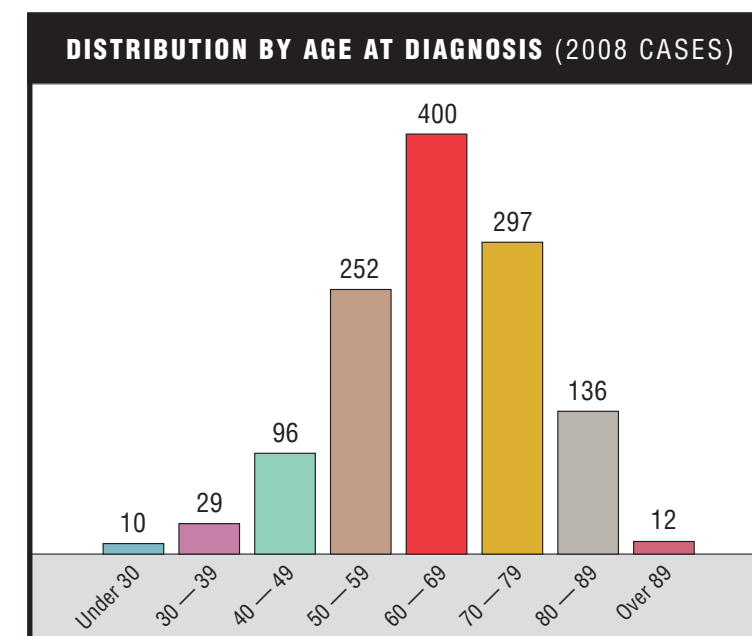


Figure 3

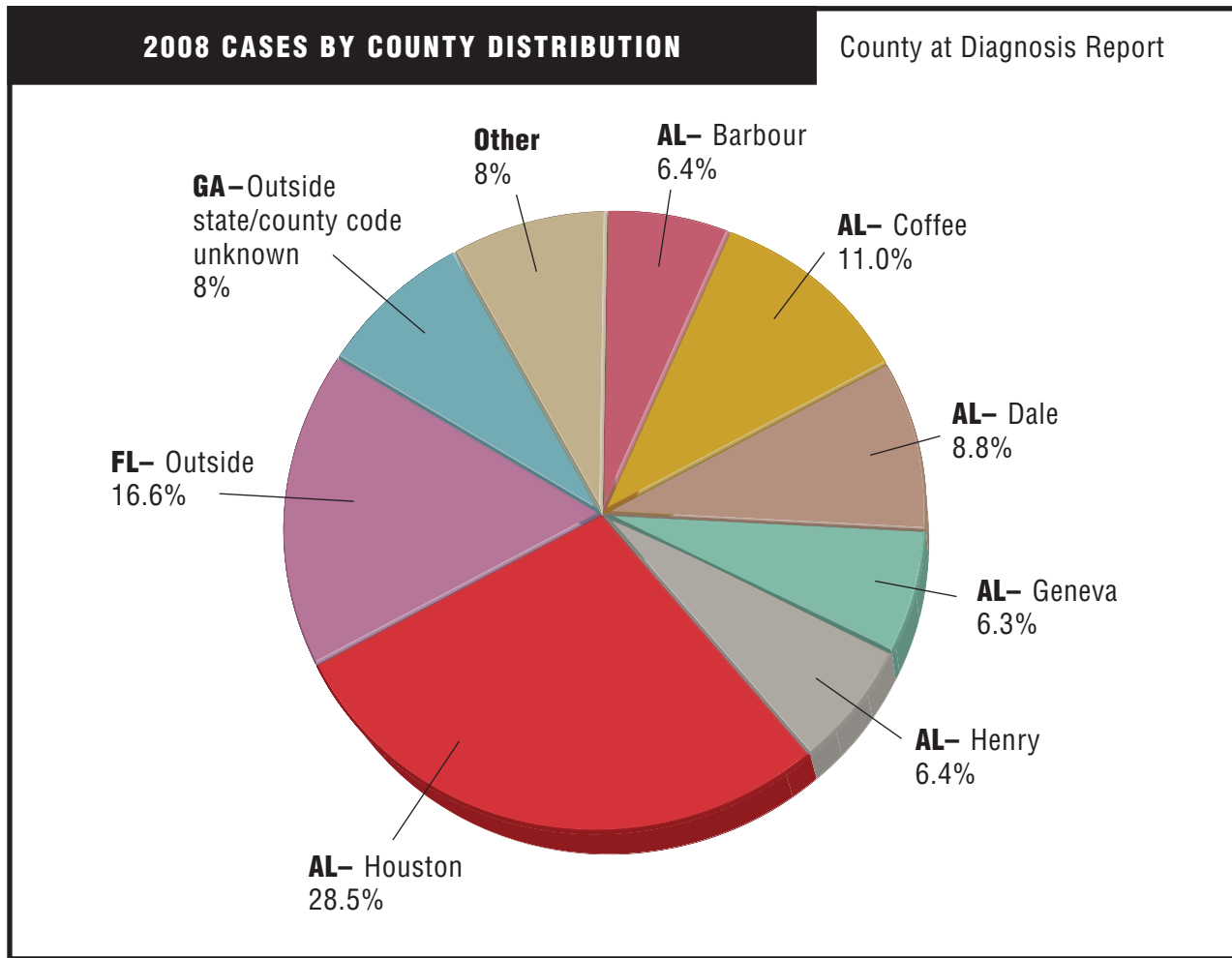


Figure 4

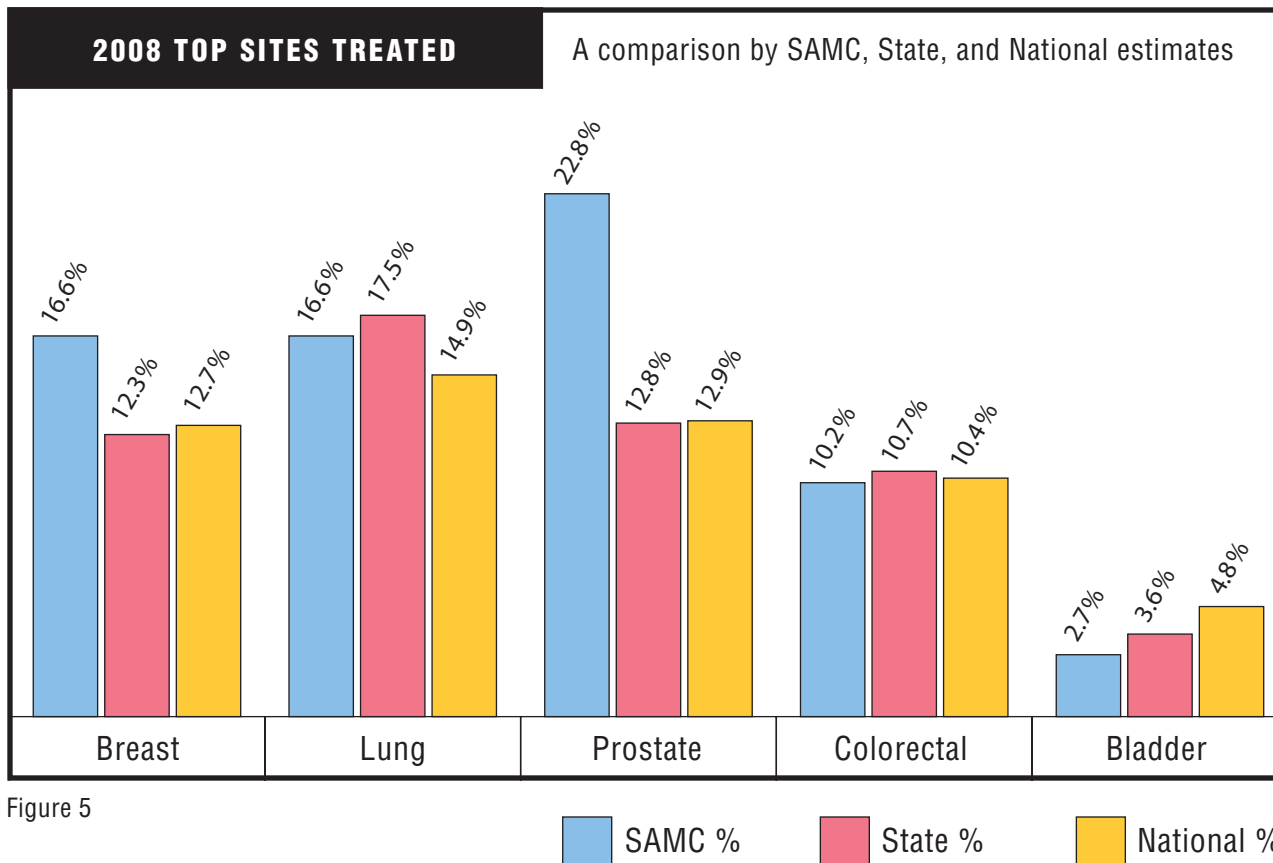


Figure 5

■ SAMC %
 ■ State %
 ■ National %

	2007			2008		
	MALE	FEMALE	TOTAL 2007	TOTAL 2008	MALE	FEMALE
ALL SITES COMBINED	578	485	1,063	1,109	647	462
ORAL CAVITY/PHARYNX	24	6	30	45	35	10
Tongue	8	1	9	12	11	1
Floor of Mouth	4	0	4	2	1	1
Other Parts of Mouth	1	2	3	4	2	2
Salivary Glands	2	1	3	5	4	1
Tonsil	2	0	2	10	9	1
Nasopharynx	1	2	3	2	1	1
Oropharynx	0	0	0	3	2	1
Hypopharynx	5	0	5	3	1	2
Other lip and oral cavity	1	0	1	4	4	0
DIGESTIVE SYSTEM	84	79	163	191	102	89
Esophagus	7	2	9	9	8	1
Stomach	3	8	11	11	6	5
Small intestine	1	2	3	1	0	1
Colon	37	37	74	88	47	41
Rectosigmoid	3	3	6	5	4	1
Rectum	16	8	24	20	10	10
Anus/Anal canal	1	4	5	7	3	4
Liver/Intrahepatic Bile Duct	5	1	6	9	7	2
Gallbladder	0	3	3	7	0	7
Other biliary	0	0	0	5	3	2
Pancreas	10	11	21	28	13	15
Other digestive system	1	0	1	1	1	0
RESPIRATORY SYSTEM	120	67	187	202	136	66
Larynx	9	7	16	15	14	1
Nasal cavity	0	0	0	2	1	1
Bronchus/Lung	111	60	171	185	121	64
BONE/JOINTS/CARTILAGE	0	1	1	0	0	0
SOFT TISSUE	1	2	3	7	5	2
HEMATOPOIETIC	6	7	13	27	17	10
SKIN*	23	8	31	32	23	9
BREAST	3	218	221	184	1	183
GENITOURINARY	258	53	311	349	297	52
Vulva	0	3	3	0	0	0
Vagina	0	3	3	2	0	2
Cervix Uteri**	0	9	9	13	0	13
Corpus Uteri	0	13	13	15	0	15
Ovary	0	5	5	4	0	4
Other female organs	0	2	2	0	0	0
Penis	1	0	1	3	3	0
Prostate	217	0	217	253	253	0
Testis	2	0	2	4	4	0
Kidney/Renal Pelvis	14	11	25	23	15	8
Bladder	23	5	28	30	21	9
Ureter	1	2	3	2	1	1
EYE	0	0	0	1	0	1
BRAIN/CNS	8	8	16	14	6	8
THYROID GLAND	8	11	19	8	2	6
LYMPHOMA	20	16	36	25	10	15
MESOTHELIOMA	1	1	2	1	1	0
UNKNOWN PRIMARY	22	8	30	23	12	11



Southeast Alabama Medical Center is a 420 bed regional referral center for the Southeast. With a medical staff of 300; 2,600 employees, and 200 volunteers, virtually every facet of medical care is available. The Southeast Cancer Center is an integral part of total patient care at SAMC. The Cancer Center provides a full spectrum of cancer care to a total service population of over 785,000, including all or part of 13 counties in southeast Alabama, six counties in the Florida panhandle and seven counties in southwest Georgia.



For more information please call:
Southeast Alabama Medical Center
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