



Gadsden Regional Medical Center

2011 Cancer Program Annual Report

Cancer Committee Chairman:

G. Lowndes Harrison, M.D.

Melanoma Site Analyst:

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Glossary of Terms:

Analytic-Diagnosed and/or first course of treatment at
GRMC

Non-analytic-Diagnosed elsewhere and first course of
treatment at GRMC

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G. Lowndes Harrison, M.D., FACRO
Radiation Oncologist
Cancer Committee Chairman
Gadsden Regional Medical Center

Chairman's Report

Gadsden Regional Medical Center's Cancer Program of GRMC is the premiere program for Etowah and the surrounding Alabama counties. Our numbers continue to reflect our success. As our population matures, GRMC will be ready to accommodate our community's needs.

Our registry program has continued to report our data to the state and national cancer data bases in a timely fashion. We continue to exceed the requirements put forth by the American College of Surgeon's Commission on Cancer. Our cancer reporting has been consistent and accurate since becoming accredited by the American College of Surgeon's Commission on Cancer.

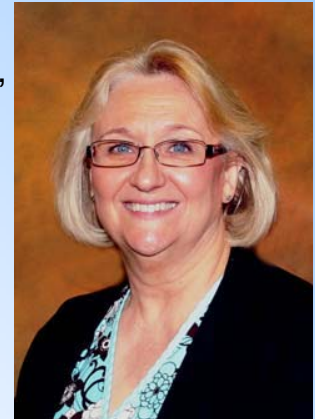
This year we had two areas of focused study: nutrition and melanoma. I am appreciative for our nurse Jerria Carter and Dr. Rumley for gathering the data for these studies respectively.

The nutrition study focused on the nutritional needs of our patients who received radiation to the head and neck or thoracic areas. Weight loss and interventions were monitored and the results are outlined in this edition's summary report. Observations made from this study have allowed us to develop protocols to lessen the degree of malnutrition in this subset of patients.

Dr. Rumley has compared our melanoma patients' presenting factors and survival data with national data and his report is presented in our annual report. This focus study provides in-depth information regarding the diagnosis, staging and treatment of all melanoma. It is extremely informative and detailed.

The Etowah County Cancer Foundation and the American Cancer Society have continued to support our program enthusiastically. It is with their gracious support that our patients in need, receive assistance. As always we thank them for their good work.

We are excited to announce that our Cancer Center nurse, Jerria Carter, again received much deserved recognition. Her accolades this year include the Patient Choice Award from GRMC. Each year the patients and staff nominate a representative they feel goes above and beyond the call of their job. This year, Jerria Carter was selected from the many well-qualified nominees as GRMC's Patient Choice recipient.



Jerria went on to received additional recognition this year: first as Employee of the Month and then Employee of the Year for Gadsden Regional Medical Center. Her achievements were recognized at the corporate level when her award was presented at The Gaylord Opryland Hotel this past year by representatives of Community Health Systems.

GRMC is excited to announce the opening of our digital mammogram program. Early detection of breast cancer remains our best hope for eradicating the disease and with this new technology, GRMC is now on the forefront of breast cancer detection.

Later this year we expect our new MRI scanner to be online. Our new Siemens Espree 1.5 Tesla magnet is faster and more powerful. This will yield better quality images in general. In addition, the new Espree has a larger bore which makes the exam easier for our larger patients and those needing assistance getting on and off the scanner.

This new MRI is also more forgiving of patient motion which can be vital when we need to obtain information in an emergency situation. With our new MRI unit, we can now provide breast MRI, the image of choice for certain high risk breast cancer patients.

Our program continues to expand and additional services and upgrades are planned for the coming year. We are optimistic about the advances made each year in our field and we are excited about the future of the cancer program at Gadsden Regional.

New Technology at Gadsden Regional Medical Center



SPECIAL TO THE TIMES

Leanna Warren (left) and Linda Rule (right) pose with GRMC's new digital mammography machine in the 400 Building on the GRMC campus. Leanna's hand rests on the MammoPad®, which makes having a mammogram more comfortable for patients.

GRMC Now Offers Digital Mammography

SPECIAL TO THE TIMES Gadsden Regional Medical Center upgraded its technology to help detect breast cancer recently, to give physicians the best possible images, to give women who need follow-up procedures a less invasive option, and to give all mammogram patients a bit more comfort during their routine exams.

GRMC offers digital mammography, which uses the same process as standard mammography to capture digital images rather than images on film. The digital images allow a radiologist to view the image on a computer monitor, zoom in on areas that need closer examination and to adjust brightness and contrast to enhance the image.

“We are pleased to be able to offer the latest technology to our patients,” Chris Boatfield, director of diagnostic imaging, said. “In addition to digital mammography, we’ve added stereotactic breast biopsy equipment to be used with digital mammography. This system allows physicians to use digital images to guide a hollow needle into a suspicious area and collect small samples of tissue for biopsy.

“In some cases the use of stereotactic biopsy can spare a patient a surgical biopsy and still provide a follow-up after a mammogram,” Boatfield explained.

According to a patient who has undergone a surgical biopsy and a stereotactic breast biopsy in recent years, the benefits of the stereotactic procedure are: Less scarring, less healing time and less of an impact on a person’s life.

“When I had a surgical biopsy, a large lump was removed. I have a two-to-three inch scar and had to go through surgery with general anesthesia. With the stereotactic procedure, I had a very small scar where the needle was inserted,” the patient said. “Local anesthetic was used so it was not painful, and I didn’t have to tell my little girl ‘Mom’s having surgery.’ It was less of a disruption in terms of time and emotion.

“The biopsy found no cancer, and I felt fortunate to have been able to get that peace of mind without the need for surgery,” this patient said. Boatfield said he’s also pleased that GRMC’s digital mammography will bring comfort, literally, to every patient examined.

The mammography machine uses MammoPad® — a warm soft pad that fits on the plate of the machine to make an exam more comfortable for the patient. This cushion helps the technologist to get more of the patient’s chest wall in the image, and its surface is designed to hold the breast tissue in place to ensure optimal positioning and even compression.

One patient who had a digital mammogram at GRMC said it was the most comfortable mammogram she’d ever had.

While the pad makes the exam more comfortable, it does not compromise the quality of the images obtained or require an increased dose of radiation.

“Our goal is to provide the best imaging possible to help our physicians diagnose any potential problems, and to give women options in following up on a suspicious mammogram,” Boatfield said.

“We want our patients to have the comfort that comes from having the latest technology for their exams and we want to make them as comfortable as possible while we use that technology.”

Cancer Registry

The Cancer Registry at Gadsden Regional Medical Center (GRMC) collects information on patients who are diagnosed and/or received their first course of treatment at GRMC. Cancer Registries play a vital role in improving the means of detection, prevention and treatment of cancer. The registry's primary role is the collection of data, both clinical and demographic, beginning with the time of diagnosis and continuing throughout the lifetime of the patient.

The Cancer Program at Gadsden Regional Medical Center includes active participation by the medical staff as well as various departments from the hospital to provide a multi-disciplinary approach to quality patient care. Our program is approved by the American College of Surgeons as a Community Hospital Cancer Program. Accreditation is only granted to those facilities that have voluntarily committed to providing the best in cancer diagnosis and treatment and are able to comply with established Commission on Cancer Standards and undergo rigorous evaluation and review of its performance and compliance.

One approach is the Tumor Board meetings. They are held bi-monthly at Gadsden Regional Medical Center. During these conferences radiographic studies and pathologic slides are reviewed. There is an open forum for discussion of TNM staging and treatment for each individual case presented. In 2010, nineteen conferences were held with 95 cases presented for optimal treatment evaluation.

The Cancer Registry staff strives to attain the highest level of integrity in the registry database by ensuring the uniformity of data collection, ongoing quality reviews, software edit checks, and accurate and timely entry of follow up information on our patients. Our ultimate goal is to contribute to the prevention and cure of cancer.

Registry data has many uses, including:

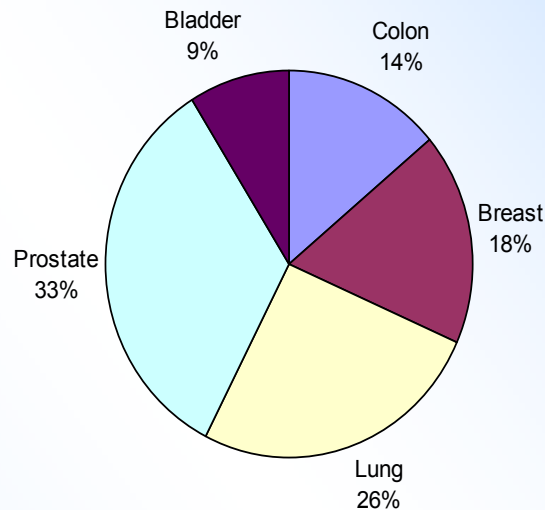
- Diagnostic and treatment research
- Calculation and comparison of survival and quality of life
- Submission to state and national databases for comparison
- Developing staff, patient and public educational programs
- Evaluating the effectiveness of current treatment modalities
- Presenting data for treatment planning at Tumor Board

In 2010, the Cancer Registry staff accessioned 543 cases. Of those cases, 498 were analytic and 45 were non-analytic. Since our 1993 reference year, the Cancer Registry has accessioned a total of 10,345 cases and completed follow up for 8,100 patients. Our follow-up rate is 91% for patients diagnosed within the last five years.

SITE DISTRIBUTION FOR 2010 ANALYTIC CASES			
ORAL CAVITY & PHARYNX	16	SKIN EXCLUDING BASAL & SQUAMO	17
Lip	2	Melanoma -- Skin	16
Salivary Glands	5	Other Non-Epithelial Skin	1
Gum & Other Mouth	2	BASAL & SQUAMOUS SKIN	2
Tonsil	5	Basal/Squamous cell carcinomas of Skin	2
Oropharynx	1	BREAST	61
Hypopharynx	1	Breast	61
DIGESTIVE SYSTEM	76	FEMALE GENITAL SYSTEM	22
Esophagus	4	Cervix Uteri	5
Stomach	3	Corpus & Uterus, NOS	10
Small Intestine	2	Ovary	6
Colon Excluding Rectum	26	Vulva	1
Cecum	2	MALE GENITAL SYSTEM	103
Appendix	3	Prostate	100
Ascending Colon	3	Testis	1
Hepatic Flexure	3	Penis	2
Transverse Colon	2	URINARY SYSTEM	53
Sigmoid Colon	12	Urinary Bladder	29
Large Intestine, NOS	1	Kidney & Renal Pelvis	18
Rectum & Rectosigmoid	21	Ureter	5
Rectosigmoid Junction	7	Other Urinary Organs	1
Rectum	14	BRAIN & OTHER NERVOUS SYSTEM	6
Anus, Anal Canal & Anorectum	6	Brain	5
Liver & Intrahepatic Bile Duct	2	Cranial Nerves Other Nervous System	1
Other Biliary	1	ENDOCRINE SYSTEM	10
Pancreas	9	Thyroid	10
Retroperitoneum	1	LYMPHOMA	14
Other Digestive Organs	1	MYELOMA	9
RESPIRATORY SYSTEM	100	LEUKEMIA	6
Nose, Nasal Cavity & Middle Ea	1	Lymphocytic Leukemia	2
Larynx	7	Myeloid & Monocytic Leukemia	4
Lung & Bronchus	92	MESOTHELIOMA	1
SOFT TISSUE	1	MISCELLANEOUS	1
Soft Tissue (including Heart)	1	Total	498

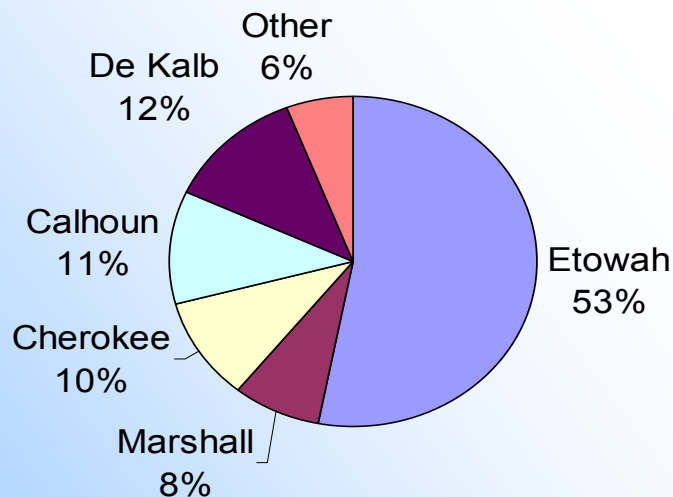
The following charts demonstrate data aggregated by Cancer Registry professionals. One graph shows the county in which patients lived at the time of diagnosis and the other shows the top five cancer sites for GRMC. These charts show where the majority of our patients are located and what is our most common cancer treated/diagnosed at GRMC.

GRMC 2010 Top Five Sites



Our In-depth Study utilizes the registry data to compile statistics pertaining to Melanoma. By collecting cancer data, GRMC is able to show data comparisons of types of melanoma, anatomical sites, age, race and gender risk factors in our county and state.

GRMC County at Diagnosis All Cancer Sites 2010





Thomas O. Rumley, M.D. FACS

Melanoma report

Most people in North America are familiar with the word “Melanoma”. They also have a general idea that it is a “skin cancer” and if they are told they have one it is very serious and they may die from it. In general, the population at large seems to have as strong or stronger emotional response from the word “melanoma” as they may of pancreatic, prostate, breast or even lung cancer. To a certain extent, this response to melanoma is correct: it is mostly a disease arising from skin, it needs to be taken serious and it can kill patients. Most skin cancer is not melanoma. Approximately, two and a half million people were treated for basal cell and squamous cell skin cancer in 2010. By far these two cancers of the skin are the most common cancer in humans. All other cancers from all sites combined in 2010 were only slightly over one and half million.

Melanoma is the seventh most common cancer (approximately 68,000 new cases) in the U.S. when basal and squamous cell are excluded. While it does kill patients a lot more commonly than other skin cancers, the survival is still around 90% for all stages combined. This is considerably better than many other cancers that are more or less common. Lung cancer accounts for about three and a half more cases per year (approximately 240,000 in 2010) and has less than 20%, 5-year survival for all stages. Pancreatic cancer is less common than melanoma having about 40% fewer cases per year (approximately 43,000 in 2010 but less than a 10%, 5-year survival for all stages).

Melanoma arises in cells called the Melanocyte. These cells can be found in different sites of the body including the eyes and neural tissue, mouth and vagina. By far, however, the majority of these cells are in the epidermis of skin. These cells contain a brown pigment called melanin. This gives skin its brown color and protects the deeper layers of the skin from a portion of the damaging effects of the sun. However, this sun damaging effect (ultraviolet radiation) can alter the DNA of these pigment cells to cause melanoma.

The more of these protective pigment cells a person has, the less they are likely to develop melanoma. Melanoma is more than 10 times more common in Caucasian than African Americans. Overall, the lifetime risk of getting a melanoma is about 1 in 50 for Caucasians, 1 in 200 for Hispanics and 1 in 1000 for African Americans. In general, melanoma is more common in men than women (1.3 to 1.5 men to every 1 woman).

While the rate of melanoma increases with age, it is not uncommon among people younger than thirty. The rates are higher among those in their 80's but are also one of the more common cancers for young adults.

Causes and Risk Factors

What are the causes and/or risk factors? As mentioned earlier, sun exposure with its associated ultraviolet radiation is a leading cause for damage to Melanocyte DNA thus leading to melanoma. Not only the sun but also tanning beds deliver harmful UVA and UVB rays to our skin. Melanoma developing in areas of the body not constantly exposed to sunlight when we are adults may be linked to frequent exposure and sunburns in earlier childhood. These areas include chest, back, arms and legs. Melanoma in these areas may be different from those developing on the face and neck. Sun exposure can not explain all melanoma since some do develop on areas receiving very little or no sun exposure such as the palms of the hand or the soles of the feet. People with fair skin, freckles, red or blonde hair and blue or green eyes have an even higher melanoma risk than other Caucasians. This may be related to a further lack of protective pigment cells than compared to other white or some other genetic predisposition also expressed in skin types.

Genetics may also play a role in melanoma development. About 10% of all people with melanoma have a family history of this disease. This trend may be a genetic defect for the disease. It also may just be related to a shared cultural tendency to have increased sun exposure.

Most moles do not become melanoma and most melanomas do not come from long existing moles. A person with many moles particularly if some are dysplastic, may have a chance to develop melanoma but still even most dysplastic ones never become cancerous.

Since melanomas and dysplastic moles can often look similar, dysplastic moles need to be followed closely and often completely removed so delays in diagnosis can be prevented. Very large pigmented moles (> 2 to 3cm) present from birth may be an exception to the low risks of melanoma arising from moles. The risks with these "giant congenital nevi" developing melanoma even at an early age maybe as high as 10% depending on size and location. They do need to be closely followed and/or surgically removed.

People who have already had melanoma have 5% to 10% risks of developing other melanomas. Also, people with rare inherited condition known as Xeroderma Pigmentosum have a defect in the mechanism that normally replaces DNA damaged from sun light and other causes. These people do have a higher risk to develop melanoma even at a younger age. People who have suppression of their immune system may have an increased risk of melanoma.

Prevention and Diagnosis

What can be done to prevent melanoma? The single best way to reduce melanoma is to limit exposure to UV radiation. This would be mostly from the sun but also tanning beds.

- Protective clothing and hats are helpful.
- Sunscreen and lip balm, SPF > 30 even on hazy and cloudy days.
- Sunglasses with at least 99% UV absorption

All these protective measures are as important or even more important for small children and teenagers as they are for adults.

If you have a skin type more prone to develop melanoma such as very fair skin and red or blonde hair these steps to avoid UV exposure are even more important. Also, if you have a strong family history for melanoma avoiding UV radiation is especially important.

All melanomas cannot be avoided so it is very important to do regular self exams and have a physician check ones that seem to be new, different or changing. In general the “**ABCD**” rule is helpful in picking up possible problem moles.

A is for Asymmetry: a portion of the mole looks different from the other portions.

B is for Borders: the edges are irregular, ragged or blurred.

C is for Color: the color may not be the same all over and may include several different shades of brown or black. Sometimes melanoma can be pink, red or even white.

D is for Diameter: if the spot is larger than others (>5 or 6mm) and/or seems to be enlarging quickly over a short period of time.

Other suspicious signs may be bleeding, ulceration or scaliness. Any of these findings are much more worrisome if they seem to be developing fairly rapidly over a short period of time such as several months.

If melanoma is suspected or is a possibility, then at least a punch biopsy through all layers of skin should be obtained. If melanoma is a strong possibility then full thickness incisional or excisional biopsy should be done.

A shave biopsy removing only a partial thickness is very commonly done for skin lesions. While this is helpful for many types of lesions it is basically contraindicated if melanoma is truly suspected.

One of the most important things to know about a melanoma if found is the thickness or depth the cancer extends downward into the skin. The significance of this depth may vary a bit depending on the location of the melanoma and other factors. However, the depths generally predict the likelihood for regional metastasis, need for more aggressive treatment and/or work up and even survival. A melanoma 1mm or less in thickness has about the same survival as a similar patient without a melanoma. On the other hand a much thicker depth tends to have much greater chance for regional or distant disease reducing 5-year survival to approximately 60% and 15% respectively.

If the depth is thicker than about 1.25 mm (this may vary for different reasons) then consideration is more given to sentinel lymph node biopsy removing only the most likely nodes to be involved from any particular melanoma. This method using nuclear medicine techniques to locate the sentinel node has largely replaced the older random surgical lymph node dissection. Fine needle aspiration (FNA) of an enlarged node may also be helpful.

Other tests such as chest x-ray, CT, MRI, PET and bone scans are useful if a patient has advanced or recurrent disease. They are not usually necessary if early (tumor not deep) and sentinel lymph nodes are negative for tumor.

As mentioned earlier, most lab tests are related to examination of the melanoma itself. The thickness has been stressed. The mitotic rate has also been found to correlate with prognosis and is included in the TNM staging.

Future genetic testing of biopsy samples may soon be more available and employed. Some newer drugs have recently been released for advanced melanoma that takes advantage of certain genetic characteristics found in some (but not all) melanoma.

Staging

How is melanoma staged? First, it should be noted that there are numerous general, clinical and pathologic descriptions of melanoma including nodular, superficial spreading, ulcerated, lentigo malignant, dysplastic, melanoma in-situ and others. While these terms are helpful, descriptive and useful they are really secondary to the TNM staging system.

The TNM group staging for melanoma strongly considers depth of invasion, mitotic rate, degree of lymph node involvement, local surrounding skin involvement and presence or absence of distant disease. The staging system helps determine more aggressive or adjuvant treatments and is very predictive of long term survival.

“Melanoma TNM Group Staging”

Stage O

TIS, NO, MO

Melanoma in-situ, tumor present only in epidermis and not spread into dermis

Stage IA

T1a, NO, MO

Melanoma <1.0mm thickness, no ulceration and mitotic rate < 1/mm², no lymph node or distal disease

Stage IB

T1b or T2a, NO, MO

Cancer <1.0mm thickness and is ulcerated or has mitotic rate ≥ 1/mm²; OR cancer is > 1 and < 2mm thick and is not ulcerated, no lymph node or distal involvement

Stage IIA

T2b or T3a, NO, MO

Melanoma is between 1.01mm and 2.0 mm thick and is ulcerated, OR between 2.01 and 4.0mm thick and is not ulcerated. No disease in lymph node or distal sites

Stage IIB

T3b or T4a, NO, MO

Melanoma between 2.01mm and 4.0 mm thick and is ulcerated, OR it is > 4.0 mm and is not ulcerated. No disease in lymph nodes or distal sites

Stage IIC

T4b, NO, MO

Melanoma thicker than 4.0 mm and is ulcerated. No disease in lymph nodes or distal sites

Stage IIIA

T1a to T4a, N1a or N2a, MO

Melanoma of any thickness but not ulcerated. Microscopic tumor found in 1 to 3 regional lymph nodes that clinically seem normal. No distal disease

Stage IIIB

T1b to T4b, N1a or N2a, MO

One of the following groupings:

Any thickness and is ulcerated. One to three lymph nodes positive but only microscopically. No distant spread

or T1a to T4a, N1b or N2b, MO

Any thickness but is not ulcerated. One to three nodes positive and enlarged. No distant spread.

or T1a to T4a, N2c, MO

Any thickness but is not ulcerated. Spread to small areas of nearby skin or lymphatic channels around tumor but nodes do not contain tumor. No distant spread.

Stage IIIC One of the following groupings: T1b to T4b, N1b or N2b, MO Any thickness and is ulcerated.

One to three lymph nodes are enlarged due to tumor. No distant spread. or T1b to T4b, N2c, MO Any

thickness and is ulcerated. Spread to small areas of nearby skin or lymph channels but no tumor in lymph

nodes. No distant spread. or any T, N3, MO Any thickness and may or may not be ulcerated. Spread to 4 or

more lymph nodes, OR to lymph nodes that are clumped together **OR** spread to nearby skin or lymph channels and to enlarged lymph nodes. No distant spread.

Stage IV Any T, Any N, M1 (a, b, c) Melanoma has spread to distant sites such as organs, distant areas of skin or distant lymph nodes. Any thickness and nearby lymph node status is included in this stage.

Treatment

Surgery plays the greatest role in treatment for most melanoma but chemotherapy, radiation and immunotherapy may also be useful in some cases. Simple excision of the melanoma with “appropriate” margins will likely be curative in most cases.

Surgical re-excision usually follows a preliminary biopsy or simple excision (with close margins). Modern thinking today suggests much smaller margins than those recommended 20 to 30 years ago. Earlier suggested margins were at least 5cm around the tumor and to include the deep fascia. More recent suggestions are in the table below (*Table 1).

Table 1
Recommended Surgical Margins

Tumor Thickness	Recommended Margins
In Situ	0.5 cm
Less than 1mm	1cm
1 to 2mm	1 to 2cm
2 to 4mm	2cm
Over 4mm	At least 2cm

Smaller margin may be considered for the face. For melanoma on a finger or toe, a partial or complete digit amputation may be required.

Depending on the thickness and location of the melanoma, a lymph node biopsy may be considered. For lesions 1mm or less in thickness a lymph node biopsy is usually not needed. For those over about 1.25mm, some examination of the local lymph nodes may be helpful. If the nodes are enlarged, a fine needle aspiration (FNA) may be considered. If nodes are not enlarged then a sentinel lymph node biopsy is often done.

If tumor is found in a node on biopsy then complete removal of all nodes in that region is often considered. However, it needs to be emphasized that no data is available at the present time confirming whether complete node removal can cure melanoma if it has already gone to the nodes. This is under study.

Likewise, surgery for metastatic melanoma is rarely done except for very isolated lesions or for palliation.

Radiation therapy is not used in localized melanoma. It may be considered as an adjuvant to surgery in an area where lymph nodes were removed and were extensively positive for tumor. More commonly it is used to treat either recurrent disease or as palliation to distant metastasis like brain or bone. Chemotherapy and immunotherapy are mostly used in cases of advanced disease.

Survival

In general, like many tumors, the chances for survival after developing melanoma are related to conditions (stage group) of initial presentation. In other words, the tumor thickness and presence or absence of positive lymph nodes or distant metastasis is all very predictive of how a patient may do clinically.

Other factors such as general health or immune status may affect survival. Older people generally have shorter survival times, stage for stage. Blacks may have a reduced survival time compared to whites. Melanomas of the palm, foot or nail bed have also been found to have reduced survival in some studies.

In 2010, the American Cancer Society estimated about 8, 200 deaths in the U.S. from melanoma. It also reported that the death rates seemed to be declining for whites younger than 50 years of age. A decrease of 2.9% per year for younger men since 1990 and decrease of 2.2% per year for females. In contrast, men over 50 years of age have had an increased death rate of approximately 1% per year since 1990. Death rates from melanoma have remained stable for women over 50 years old since 1989.

One could speculate particularly for women, that we as a culture have become more aware of our skin because of aging and are more likely to visit a plastic surgeon or dermatologist. This has the secondary benefit that more questionable lesions are removed earlier than before and consequently melanoma are found and treated at a much earlier (and curable) stage.

The ACS reported in 2010 that 84% of melanoma was diagnosed at a local stage helping to account for an overall 5 year survival rate of 91% (*Table 2).

Table 2
5-year Relative Survival Rate by Stage of Diagnosis 1995-2005

	All stages	Local	Regional	Distant disease
Melanoma	91%	98%	62%	15%
Prostate	100%	100%	100%	31%
Breast	89%	98%	84%	23%
Lung	16%	53%	24%	4%
Pancreas	6%	22%	9%	2%

Melanoma Cases seen at GRMC in 2010

There were seventeen (17) cases of melanoma of the skin reported and staged at GRMC in 2010. During this same period there were 543 overall cases of cancer staged. Melanoma tied with cancer of the oral cavity and pharynx at seventh place in new cases (*Table 3). Melanoma in the U.S. also ranks about seventh compared to overall cancers with about 68,180 melanoma out of 1,529,560 total cancers in 2010. Oral cancer is lower at 10th for the U.S. with only 36,540 oral cancers. Melanoma placed about fifth in Alabama for 2010 with 1,210 melanomas out of 26,640 total cancers reported for our state.

Table 3
All Staged Cancers Reported at GRMC in 2010

1	Prostate	122 (22.5%)
2	Lung and Bronchus	94 (17.3%)
3	Digestive System:	81 (14.9%)
	Colon	28 (5.2%)
	Rectum	22 (4.1%)
	Pancreas	9 (1.7%)
	Esophagus	5 (0.9%)
	Stomach	4 (0.7%)
	Other GI	13
4	Breast	64 (11.8%)
5	Urinary System:	56 (10.3%)
	Bladder	32 (5.9%)
	Kidney	18 (3.3%)
	Other	6
6	Female Genital	24 (4.4%)
7 tie	Melanoma	17 (3.1%)
7 tie	Oral Cavity and Pharynx	17 (3.1%)
9	Lymphoma	16 (2.9%)
10 tie	Endocrine	11 (2.0%)
10 tie	Myeloma	11 (2.0%)
11	Leukemia	7 (1.3%)
12	Brain and Nervous System	6 (1.1%)
	Misc.	17 (3.1%)
	Total	543 (100%)

**Numbers include analytic and non-analytic cases

Most demographics of our 2010 GRMC patients with melanoma are similar to that seen in the general experience of the United States (*Table 4, 5, 6 and Figure3).

The average age of our GRMC melanoma patients was about 68 years of age. The range was 35 to 87 years of age with over 70% in their 70's and 80's. There was a smaller but significant 30% group in their 30's, 40's or 50's. This age distribution is very similar to the overall U.S. experience.

All melanoma patients at GRMC were white. Similarly over 90% or more of melanoma patients are white in this country. There were 7 males (41%) and 10 females (59%) with melanoma at GRMC in 2010. This varies significantly from what is seen across Alabama and the U.S. where males have a rate almost double (approximately 1.7 times) what is seen in females.

Table 4
GRMC Melanoma patients 2010- Demographics

Total Number	17
Males	7 (41%)
Females	10 (59%)
Average Age	68 years of age
Range	35 years to 87 years
Older Patients	70% in 70's and 80's
Younger Patients	30% in 30's, 40's and 50's
Race	17 (100%) White

Most melanoma found at GRMC was at as early stage (*Figure 2). Eighty two percent (82%) were either Stage O (6) or Stage I (8). This early detection is exactly what is seen nationally (*Table 7 and 8).

There were two Stage III patients. The only patient with Stage IV melanoma was also the only death from the disease. Two other patients also had evidence of disease still present after initial treatment. One of these patients was 71 years old with Stage III melanoma on the face. The other patient was 74 years with Stage IB disease on the nose. All others were alive (16) and free of known disease (14) through 2010 (*Table 7 and 8).

Table 5
GRMC 2010 Melanoma Cases by Histology

Melanoma In Situ	6 (35.3%)
Nodular Melanoma	1 (5.9%)
Lentigo Maligna	1 (5.9%)
Superficial Spreading	1 (5.9%)
Malignant Melanoma, NOS	8 (47%)

Table 6

GRMC 2001 to 2010 Melanoma Patients Alive or Dead

ALIVE:	65
No Evidence of Melanoma	22
Evidence of Disease	4
Unknown Presence of disease	39
Follow up in last 15 minutes	16
Lost to Follow Up	35
DEAD:	31
No Evidence of Melanoma	1
Evidence of Melanoma	10
Unknown Presence of Disease	20
TOTAL:	96

Table 7

GRMC Melanoma Patients 2010-Treatment and Outcome (Detail)

		<u>Stage 0</u>					
Age	Location	Surgery	Radiation	Chemo	Evidence of Disease	Status	
84	Eyelid	Yes	No	No	None	Alive	
57	Back	Yes	No	No	None	Alive	
85	Hand	Yes	No	No	None	Alive	
40	Arm	Yes	No	No	None	Alive	
87	Cheek	Yes	No	No	None	Alive	
78	Forehead	Yes	No	No	None	Alive	

Stage I

74	Nose (IB)	Yes	No	No	Yes	Alive
73	Neck (I)	Yes	No	No	None	Alive
48	Back (IA)	Yes	No	No	None	Alive
72	Back (IB)	Yes	No	No	None	Alive
35	Back (I)	Yes	No	No	None	Alive
38	Leg (I)	Yes	No	No	None	Alive
73	? (IA)	Yes	No	No	None	Alive
81	Back (IIB)	Yes	No	No	None	Alive

Stage III

71	Face (III)	Yes	No	No	Yes	Alive
81	Temple (3B)	Yes	Yes	No	None	Alive

Stage IV

75	Scalp (IV)	Yes	Yes	Yes	Yes	Dead
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Table 8

GRMC Melanoma Patients Treatment and Outcome Summary

Stage O	6
Stage I	8
Stage III	2
Stage IV	1
No Evidence of Disease	14
Evidence of Disease	3 (Stage I, Stage III, Stage IV)
Alive	16
Dead	1
Surgery Only	15
Surgery Plus Radiation	1
Surgery Plus Chemo	0
Surgery, Chemo and Radiation	1

Eleven of these patients seen at GRMC (2010) came from Etowah County (73.3%). Two came from DeKalb County (13.3%) and one came from Calhoun County (6.67%) and Marshall County (6.67%) each. The county of origin is not noted in two of these patients (*Figure 4).

It may be more meaningful to look at all reported melanomas from counties surrounding Etowah as well as our county. During the period of 2005 through 2009 there were 65 in- situ melanoma (10.4/100,000 population) and 118 malignant (20.2/100,000) tumors reported for Etowah County. During the same period, 359 in-situ tumors (14.9/100,000) and 482 (20.2/100,000) true malignancies were reported for surrounding counties. This included Blount, Calhoun, Cherokee, DeKalb, Marshall and St. Clair.

These county figures can be compared to all of Alabama with 3,923 (15.6/100,000) in situ and 4,922 (19.8/100,000) malignant melanoma. It is interesting that the rate (cases/100,000 people) is just about the same whether looking at the state as a whole, our surrounding counties or our own county of Etowah. All these have approximately a rate of 20 cases per 100,000 populations for this time period (2005-2009) (*Table 9).

Table 9

2005-2009 Rate and counts of Melanoma; Local, Regional and State

	In situ rate per 100K	In situ count	Malignant rate per 100k	Malignant count
Etowah	10.4	65	20.2	118
Surrounding Counties	14.9	359	20.2	482
Alabama	15.6	3,923	19.8	4,922

It should be pointed out that a lot of statistics reporting melanoma data (rates, counts, etc.) include only malignant tumors and exclude any melanoma in-situ cases. This needs to be considered when comparing data from different reports.

Melanoma in the State of Alabama and the U.S.A.

Looking at the top #1 cancer in Alabama for all males it would certainly be Prostate according to Alabama Statewide Cancer Registry (ASCR). In 2008, they reported 2,500 cases, a rate of 131/100,000 white males. They found 1,020 cases and a rate of 230/100,000 black males.

Breast cancer would be number one for all females. ASCR reported 2,556 cases and a rate of 119/100,000 white females and they reported 780 cases and a rate of 123/100,000 black females.

Melanoma was not in the top 10 for black females or males. For white men it was fifth most common with 599 cases (rate of 33/100,000) and for white females it ranked fourth with 382 cases (19/100,000). This would be about a three to two male to female ratio which is also what is seen nationally. In our own GRMC patients we actually had a reversed ratio with more females (10) than males (7) (*Table 4).

In 2010, ASCR estimated 1,210 new cases of Melanoma in Alabama with a total of 23,640 new cancers from all sites.

People in Alabama expected to die from new and existing cancer in 2009 from all sites was 10,150. The majority of these deaths would be from lung cancer (3190, 31%). Colon (950) and breast (690) would be number two and three respectively. Prostate (600) would be number four. Brain (210) would be number ten. Melanoma was not even in the top ten. Between 2004 and 2008 in Alabama the incidence of melanoma rose from 24.8/100,000 to 37.5/100,000. This was about a 51% increase or 9.2% per year. The mortality over the same period only increased 0.7% per year from 2.2/100,000 in 2004 to 2.7/100,000 in 2008 (*Figure 5). However, it needs to be stated that the number of dermatology clinics reporting to ASCR has more than tripled since 2004 likely leading to the marked increased in reported new cases.

The Alabama mortality for melanoma for the 10 year period from 1999 to 2008 was 1,301 (2.7/100,000) for all races and sexes. This, compared to total deaths from all cancers and all sites during the same period, was 97,883 (204/100,000). This, 2.7 rate for Alabama is exactly what the U.S. Mortality (2.7) was for this time period.

In the U.S., the estimated number of all cancers is 1,529,560 for 2010. The estimate for U.S. cases of melanoma is 68, 130 during this time. It is estimated that 569,490 U.S. deaths will be from cancer but only 8,700 will be from melanoma. The 5 year survival rate for melanoma by stage during the period 1999 to 2005 has already been mentioned but is repeated in the table below (*Table 10).

Table 10
5-year Survival in the U.S. for Melanoma by extent of Disease- Summary

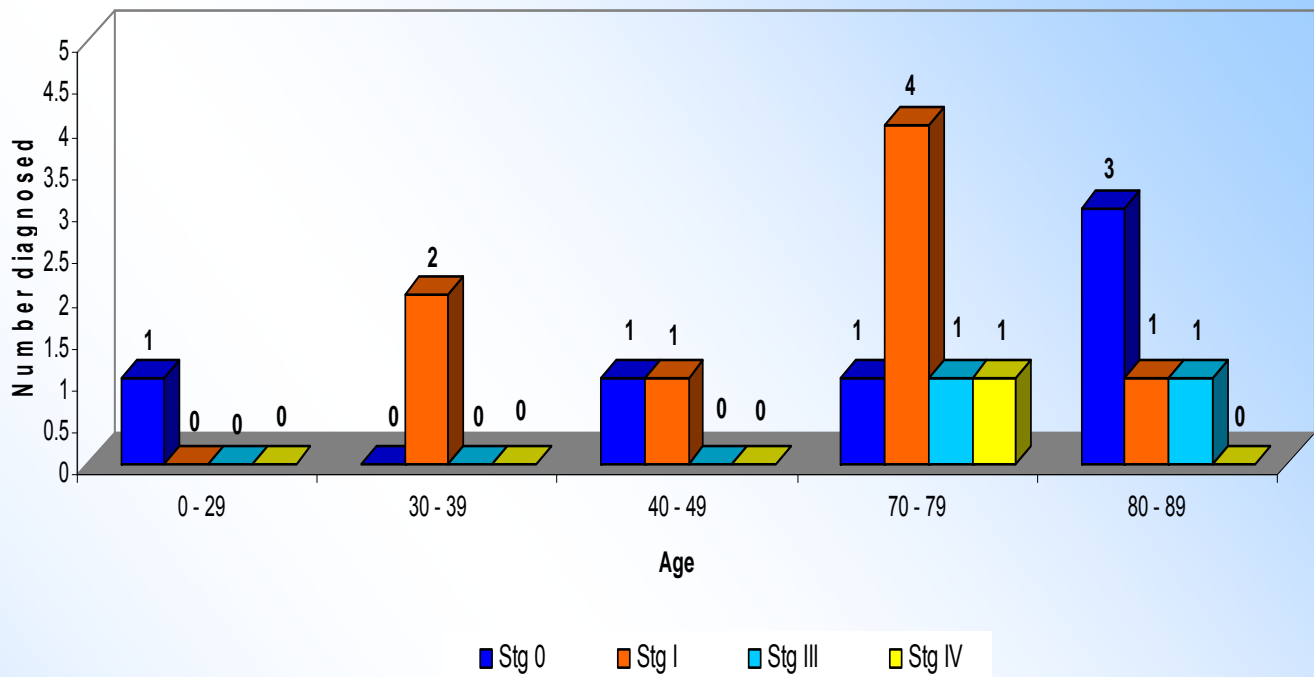
All Stages	91%
Local Disease	98%
Regional Disease	62%
Distant Disease	15%

The U.S. death rates seem to be declining for whites younger than 50 years old. A 2.9% decrease per year since 1990 has been seen for white men. A decrease of 2.2% per year since 1985 has been seen for white females. In contrast, for those over 50 years, death rates have been increasing 1% per year since 1990 for U.S. men. The death rate has been stable for U.S. females since 1989.

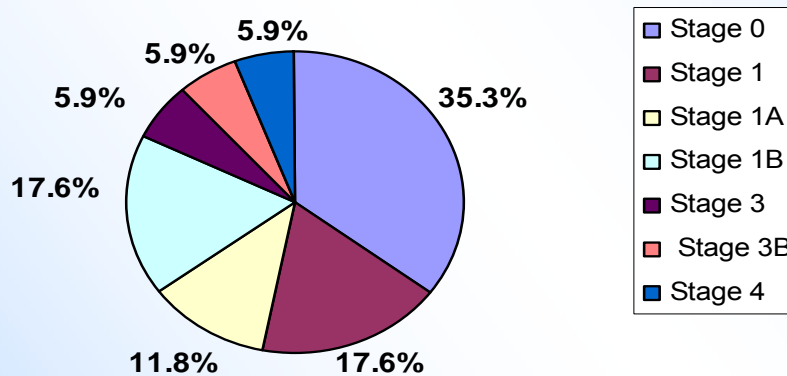
Thomas O. Rumley, M.D.
September 16, 2011

GRMC 2010 Melanoma Data

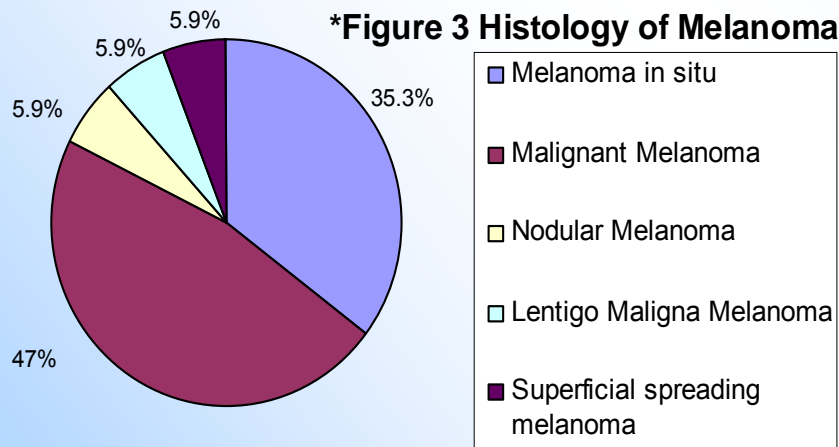
*Figure 1 Age at Diagnosis by Stage



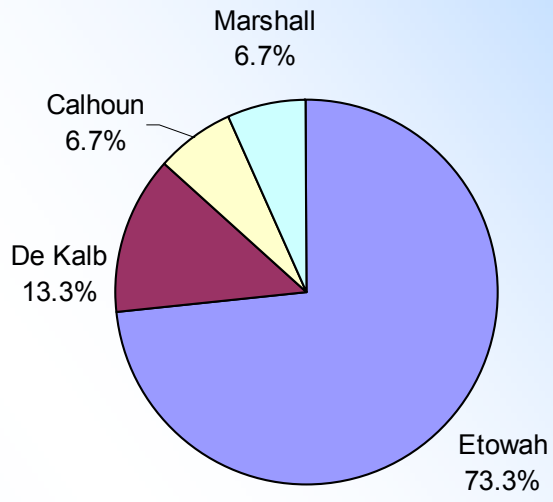
*Figure 2 Best Collaborative Stage/AJCC Stage for Melanoma



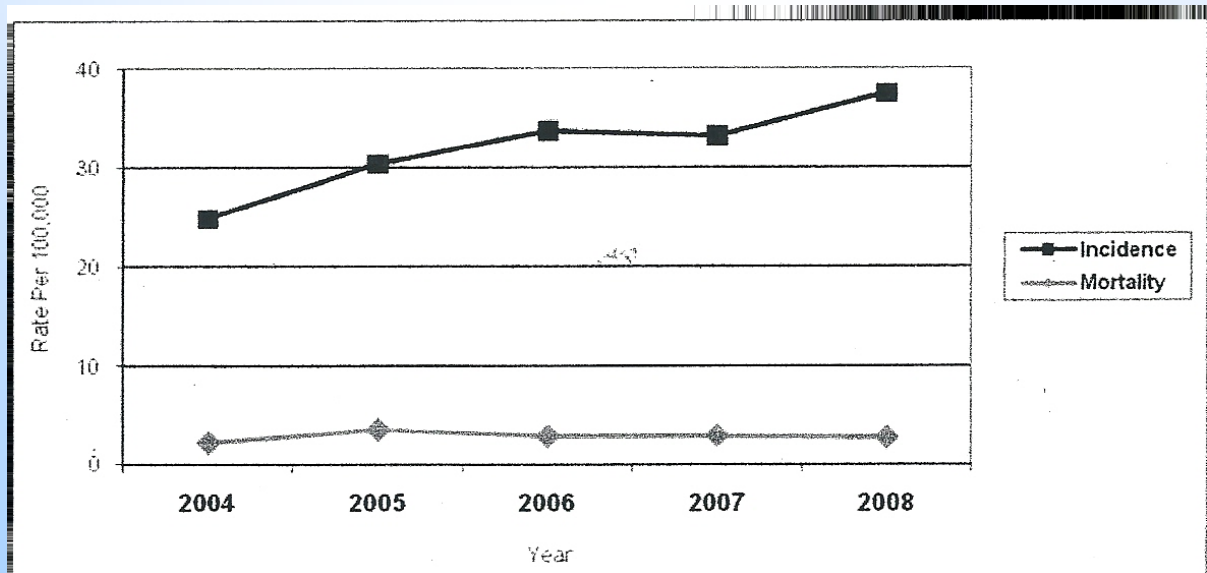
*Figure 3 Histology of Melanoma



***Figure 4 Melanoma-County At Diagnosis**

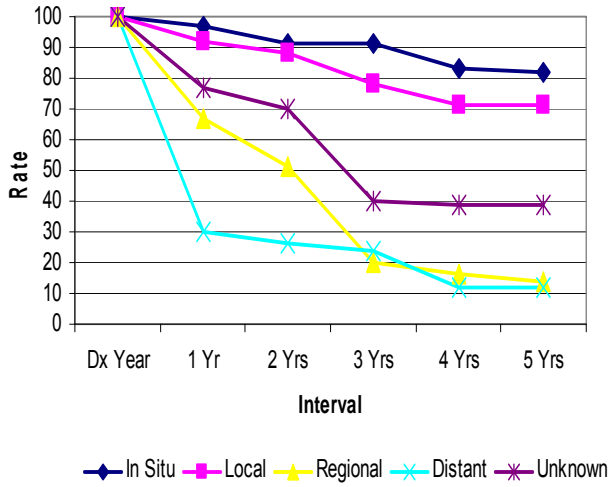


***Figure 5**
Trends in Melanoma Incidence and Mortality Rates *, Males and Females, Alabama
2004-2008

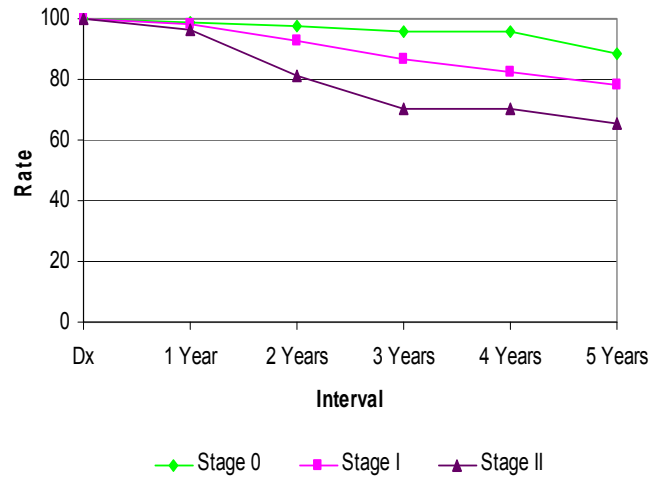


*Per 100,000, age-adjusted to the 2000 U.S. standard population. Source: Alabama Statewide Cancer Registry (ASCR), 2010

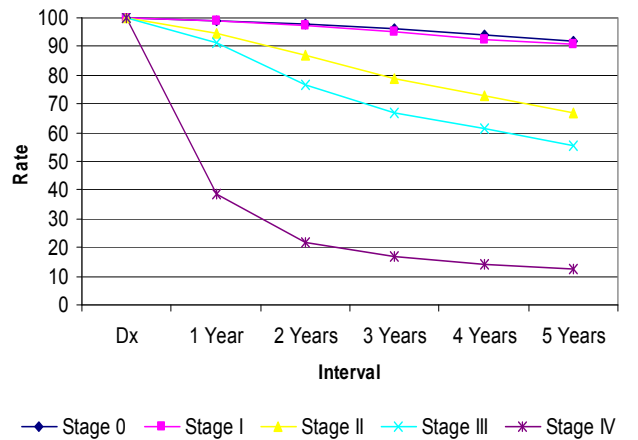
GRMC 5-Year Survival for Melanoma Cases Diagnosed from 2001-2005



Alabama 5-Year Survival for Melanoma Cases Diagnosed in 2003



NCDB 5-year Survival for Melanoma Cases Diagnosed in 2003



Conclusion:

Gadsden Regional Medical Center and Cancer Center are dedicated to it's community and it's patients. With the dedication and experience of our physicians and staff, GRMC strives to improve the diagnosis, treatment and cancer management, allowing for optimal survival and quality of life for our patients.