Excela Health ANNUAL CANCER REPORT 2011

(based on 2010 data)

We have Excellence in health care.
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BREAST CENTER REPORT

Excela Health Breast Imaging Services 2010

23,918	*Screening mammograms*
4,968	*Diagnostic mammograms*
2,480	*Breast ultrasounds*
145	*Breast MRI's*
196	*Stereotactic breast biopsies*
434	*Ultrasound guided breast cyst aspirations/biopsies*
4	*MRI guided breast biopsies*

2011

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Ericca Tufano, CTR
Cancer Registry

CHAIRMAN'S REPORT

The last few years at Excela Health have given rise to many advances in cancer care throughout the system. These include both technological and clinical advances. One of these advances was the deployment of Digital Mammography throughout the entire Excela Health system. In addition, the adaptation of Robotic Surgery for Urologic, Gynecologic, and Colorectal Cancers has progressed dramatically. We have compared ourselves to the national standards in many areas, including the accuracy of MRI guided breast biopsies, and the adequacy of lymph node retrieval in colorectal cancers with results all superior to the national standards.

The technological advances are the most visible changes in our cancer program. Excela Health has converted all mammography from traditional film screen mammography to digital mammography. Still, the question was if this was actually an advance in patient care or merely a technological advance. A recent nationwide study involving more than 40,000 patients has laid rest to this question. When all patients were evaluated for any difference in detection between film screen and digital mammography, there was no statistical difference in the detection rates for breast cancer. But digital mammography was found to be as good as film screen. However, when the subgroups of patients were evaluated, there were some significant differences noted. In patients under the age of 50, patients with very dense breasts, or patients who were immediately premenopausal or perimenopausal, digital mammography was statistically superior. Considering that the incidence of breast cancer in these subgroups is on the rise, this is a very promising development in our ability to detect breast cancers.

A governmental group also raised the question recently if mammograms in women under the age of 50 made any difference in survival. Unfortunately, the data used for their recommendations was outdated and there are several newer studies showing a statistically significant improvement in survival in women between the ages of 40 and 50 with early detection with mammography. Now, we have an even better tool to detect cancers in this group of patients as well. We hope that this new technology will translate into even more lives saved.

The use of genetic testing for the “breast cancer gene” is also now offered within the system for those at risk and is being routinely paid for by insurance companies. This genetic test also has ramifications for colorectal, ovarian, and other related cancers and can dramatically reduce a patient’s risk for development of those cancers, with the appropriate interventions.

Robotic surgery has become a commonplace event at Excela Health as well. Excela Health was the FIRST hospital outside the city of Pittsburgh to have this technology. In fact, we were the third hospital to acquire it, after Shadyside Hospital and Allegheny General Hospital, and before Magee Women’s Hospital. In the last quarter of this year, our robotic volume was the second highest for any daVinci Surgical Robot in Western PA. Nationwide, the top volume for robotic surgery is Urologic surgery for Prostate Cancer. Excela Health is no different. We were fortunate to recruit Dr. Bassem Eldaif from Cleveland Clinic, Florida. He is very experienced in the daVinci Robotic Surgery for Prostate and Kidney cancers and helped establish these surgeries at Excela. However, we were already fortunate to have several talented, Minimally Invasive Urologic surgeons. They were already performing minimally invasive kidney surgery and it did not take long for these surgeons to become adept at robotic prostate surgery. This is becoming the standard of care for prostatic surgery across the country and Excela Health is leading the way in Western PA.

However, the adaptation of robotic surgery for gynecological cancers is fast on the heels of prostate cancer. Excela Health now has four gynecological surgeons who are trained in the minimally invasive robotic surgeries for gynecological procedures. In addition, recent studies are beginning to show a superior outcome for rectal cancers with the robotic technique, even when compared to the minimally invasive laparoscopic approach. Unfortunately, across the country, less that 20% of all colorectal

surgeries are even done with the minimally invasive approach, much less the robotic approach. This is despite the proven advantages of minimally invasive surgery in the amount of postoperative pain, length of hospital stay, and return to normal activities. Fortunately, Excela Health is well above this national percentile. In 2010, 46 percent of our colorectal cancers were resected with the laparoscopic, or minimally invasive, technique. This was up from 36 percent the year prior. Now, we have two surgeons who are also incorporating the robotic technique for these procedures.

We also have a nationally recognized cancer program at Excela Health. The American College of Surgeons Commission on Cancer has very rigorous criteria for this certification. In 2008, we received a three-year accreditation, the longest certification given. Not only did we achieve this, but we were also given a Certification with Commendation. This is given to only the top programs in the country. We underwent our three-year evaluation recently and we are hoping for the same result this time around. There are many standards that must be maintained to keep this accreditation and we are required to continually set new goals and review quality measures compared to national standards.

One of these new standards is evaluating the number of lymph nodes obtained with colorectal cancer surgeries. This was instituted a few years ago. Yet, less than 10 percent of hospitals across the country are in compliance with this standard. This is despite the fact that to meet this standard you only have to be in compliance 75 percent of the time. Most of the 10 percent that achieve this are large cancer centers. I am proud to say that we are well above this rate and we are included in this elite company for our colorectal cancer surgery. In addition, we were well above this standard before it was even implemented or monitored nationwide. We continue to monitor this annually and strive to improve in our already exemplary results. With the advent of Breast MRI at Excela a few years ago, we also added MRI guided breast biopsies to our stereotactic and ultrasound guided minimally invasive breast biopsy options. We monitored our success rate with these MRI guided biopsies in diagnosing breast cancer and found we are well above the accepted national guidelines once again.

This is only a sampling of our efforts to advance cancer care in Westmoreland County. We are constantly striving to improve upon our outstanding results. We have an excellent relationship with the American Cancer Society as well. They have a vast array of supportive services for the cancer patient and all you have to do is ask. You can rest assured that the cancer care you receive at Excela Health is among the best in the nation and the top certification available in the country agrees with us.

Dan Clark, MD, FACS, Cancer Committee, Co-Chairman
National Cancer Liaison, American College of Surgeons, Committee on Cancer

CANCER REGISTRY REPORT

The Cancer Registry is an information system designed to collect, manage and analyze data on patients with a diagnosis of malignant or neoplastic disease. The intent of the registry is to encourage lifetime medical follow-up of cancer patients and to provide a database for epidemiological, clinical, research and cancer program management. Information is abstracted from the medical record. Data collected includes demographic and historical data, tumor characteristics, therapies received, diagnostic procedures, responses to treatment, duration of disease, and length and quality of survival.

The Cancer Registries at Frick Hospital, Latrobe Hospital, and Westmoreland Hospital are under the Quality Division at Excela Health. The reference date for the registry is 1985 for Westmoreland Hospital, 1987 for Latrobe Hospital, and 1990 for Frick Hospital. The registry at Latrobe was first accredited by the American College of Surgeons in January 1974 and has maintained accreditation since that time. Confidentiality of patient data is strictly maintained and information is only provided to those individuals with a legitimate need for the information.

The registry staff consists of three full-time registrars that utilize METRIQ registry software. Pending final reconciliation of 2010 cases, there were 1,086 analytic patients, or those who were diagnosed and/or treated at Excela Health, accessioned into the registries and 188 patients added that were seen for recurrent or progressive disease. These numbers are projected to be even higher once state reconciliation is completed. In addition to collecting data for the cancer database, the registry staff also completes the Pennsylvania state data collection abstract mandated by Act 224, the Pennsylvania Cancer Control, Prevention and Research Act. This provides epidemiological data for analysis by the Pennsylvania Department of Health. Cancer registry staff also provides the clerical support for the weekly Cancer Conferences and the quarterly Cancer Committee, coordinates the publication of the annual report and assists with internal registry auditing processes.

The registry staff has continued to meet the changing regulations and requirements of the American College of Surgeons, the Pennsylvania Cancer Program, and the software vendor, ELEKTA IMPAC. To maintain current information and skills, the registrars attended the Pennsylvania Association of Cancer Registrars (PACR) Annual Conference and Pennsylvania Cancer Registry (PCR) seminar on 2010 changes, completed the online Hematopoietic and Lymphoid Neoplasms Project Training offered by SEER, and participated in multiple on-line seminars offered by the Commission on Cancer and software vendor

Excela Health Cancer Registry staff:
Beth Janoski, MS-HSL, RHIA, CTR
Ericca Tufano, CTR
Diane Bartels, BS, CTR

CANCER CONFERENCES

The cancer conferences at Excela Health offer a multidisciplinary patient-oriented forum with the goal being to exchange information among participating physicians to guide ongoing patient therapy. This is done in order to improve the care of cancer patients, to identify treatment options, make recommendations for patient care and to educate treating physicians. Often, at these informal and interactive conferences, nearly every specialty is represented. This allows the local specialists to share their expertise, based on their own experience, as well as, knowledge of current literature. The primary care physicians are invited to attend and can take advantage of the opportunity to discuss a case prospectively with their colleagues. At the conference, computerized audio-visual equipment is used, which allows all participants to view high quality radiological images and laboratory slides. The images and slides are presented, and a radiologist and/or pathologist discuss the findings. In addition to the treating physicians and specialists, family practice residents, medical students and allied health care professionals attend the conferences. This further facilitates consistent and comprehensive care of cancer patients.

In 2010, 139 cases were presented at Latrobe Hospital, representing 29 percent of the total number of new analytic cancer patients for 2010 and 99 (22 percent) were presented at Westmoreland Hospital. Lectures included:

Dr. James Moser, UPMC
"Updates in the Treatment of Pancreatic Cancer"
FH and LH

Dr. Lana Schumacher, Excela Health
"Surgical Treatment Options for Esophageal Cancer from Early Stage to End Stage"
FH, LH and WH

Dr. Herbert Zeh, UPMC
"Updates in the Treatment of Pancreatic Cancer"
WH

Physicians wishing to present or suggest cases or topics for discussion may contact the Cancer Registry at:

Frick Hospital	(724) 547-1072
Latrobe Hospital	(724) 537-1286
Westmoreland Hospital	(724) 832-4064

Conference schedule:

Frick Hospital	Every Thursday via videoconference with Latrobe Hospital *Board Room, Noon*
Latrobe Hospital	Every Thursday *Alex G. McKenna Community Education Center, Auditorium B, Noon*
Westmoreland Hospital	Every Tuesday *Memorial Conference Center, Noon*

Conferences are also videoconferenced with the Arnold Palmer Pavilion.

CLINICAL TRIALS REPORT

Clinical trials are the foundation on which current methods used to treat various types of diseases is based. The goals of clinical trials are to lengthen survival and improve quality of life. Treatment regimens that are in use today were developed and proven effective through clinical trials, enabling patients to receive cutting edge therapy before it becomes standard of care.

The patients of Excela Health have access to Phase II and III trials through the partnership with the Arnold Palmer Pavilion, a member of the UPMC Cancer Centers. Disease specific trials targeting chemotherapy, radiation or a combination of both are available. Phase II trials typically involve fewer than 100 participants and serve to evaluate if the newer treatment has a positive effect on a particular type of cancer. Generally if 20 percent of the patients respond to the treatment, the new therapy will undergo further evaluation. Phase III trials compare the new treatment to the best existing treatment for a particular cancer. Patients are usually randomized to the new treatment or the best existing treatment. These trials can involve adding a new drug to an already-proven combination of drugs to see if it is more effective.

The research staff at "The Palmer" includes a Clinical Research Coordinator (CRC) and a Research Associate (RA) with additional support provided as needed by a Clinical Research Supervisor. The CRC is a RN. This RN is responsible for coordinating the aspects of care while the patient is enrolled in the trial with direct oversight provided by the Medical or Radiation Oncologist. The RA is responsible for data collection and submission for the duration of the trial.

In 2010, 22 patients were enrolled onto clinical trials at "the Palmer" and over 200 patients continue to be followed for survival. This puts trial enrollment at 7 percent, slightly higher than the national average of less than 5 percent.

Cancer clinical trials have brought enormous advances in the areas of cancer prevention, treatment and diagnosis. With broader enrollment, the effort to find new and better ways to treat and prevent cancer may improve.

Donna L. Haney, RN, BSN, OCN
Clinical Research Supervisor
Arnold Palmer Pavilion

COMMUNITY OUTREACH

Fiscal 2011 (July 1, 2010 through June 30, 2011)

Support Groups

Breast Cancer Education and Support Group
Cancer Education and Support Group
Stay Smart Tobacco Cessation Support Group
Look Good Feel Good Support Group
Us Too Prostate Cancer Support Group

Community Screenings, Health Fairs and Speaking Engagements

7/3	West Newton Community Picnic (Skin Cancer Awareness)
7/11	Irwin Concerts In the Park (Skin Cancer Awareness)
7/17	Parent Wise Blast (Skin Cancer Awareness)
7/23	Dick's Health Fair (Tobacco Cessation)
7/24	Elliott Company Anniversary Celebration (Skin Cancer Awareness)
7/27	Allegheny Energy Health Fair (Tobacco Cessation/Skin Cancer Awareness)
7/29	Jeannette Community Days (Skin Cancer Awareness)
8/14	Murrysville Community Days (Skin Cancer Awareness)
8/26	State James Casorio/Baldock Health Fair (Breast Cancer, Skin Cancer Awareness)
9/11	Blairsville Quota Club Wellness Check (PSA Screen)
9/17	Penn Trafford Fall Festival (Skin Cancer and Breast Cancer Awareness)
9/24	Mount Pleasant Glass Festival (Skin Cancer and Breast Cancer Awareness)
9/25	Derry Railroad Days (Skin Cancer Awareness)
9/25	Greensburg Rotary Wellness Check (PSA Screen)
9/28	Prostate Treatment Options – North Huntingdon
9/29	Abnormal Bleeding – Blairsville
10/2	Skin Cancer Screening – Westmoreland Hospital
10/2	Greensburg Fireman Wellness Check (PSA Screen)
10/2	Westmoreland Walks (Breast Cancer Awareness)
10/2	Second Chance Walk (Skin Cancer Awareness)
10/9	Belle Vernon Wellness Check (PSA Screen)
10/16	Scottdale Kiwanis Club Wellness Check (PSA Screen)
10/19	Cancer Stages, Surgical Options – Drs. Dan and Margaret Clark @ Latrobe Hospital
10/21	Mike Reese Senior Expo (Skin Cancer Awareness)
10/23	Mt. View Rotary Wellness Check (PSA Screen)
10/27	Area Agency on Aging Senior Expo (Breast Cancer Awareness)
10/30	Ligonier Fireman Wellness Check (PSA Screen)
11/6	Latrobe Rotary Wellness Check (PSA Screen)
11/13	Mount Pleasant Rotary Wellness Check (PSA Screen)
1/7	Greensburg Salem Senior High Presentation (Tobacco Cessation)
1/12	Eastern Westmoreland Central Technology Center (Tobacco Cessation)
1/28	Penn Middle School Health Series (Skin Cancer Awareness)
2/2	Norwin Chamber of Commerce (Skin Cancer Awareness)
2/18	Latrobe High School Health Fair (Skin Cancer Awareness)
2/23	daVinci Presentation Indiana Mall (Dr. Dan Clark)
2/24	Yough Middle School 6th Annual Science Fair (Prostate Awareness)
3/1	Greensburg Women's (Breast Cancer Awareness)
3/7	Westmoreland Areas Nurses (Breast Cancer Awareness)
3/9	Scottdale Food Pantry (Breast Cancer Awareness)
3/12	Scottdale Kiwanis Wellness Check (PSA Screen)

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COMMUNITY OUTREACH *Continued ...*

3/16 Latrobe Area Hospital Aid Society Women's Series (Breast Cancer Awareness)
3/17 American Cancer Society Daffodil Days @ Excela Health sites
3/18 American Cancer Society Gift of Hope Recognition
3/24 EMS Annual Convention (Tobacco Cessation)
3/26 Blairsville Rotary Wellness Check (PSA Screen)
4/2 Blackburn Center Walk In Her Shoes (Breast Cancer Awareness)
4/7 Laurel Highlands Chamber of Commerce (Breast/Skin Cancer Awareness)
4/9 Greensburg Rotary Wellness Check (PSA Screen)
4/16 Derry Township Fair (Skin Cancer Awareness)
4/16 Ligonier Volunteer Fireman Wellness Check (PSA Screen)
4/20 Derry Food Pantry (Breast Cancer Awareness)
4/21 Laurel Valley Elementary Fair (Robotics Surgery)
4/27 Murrysville Senior Center Open House (Skin/Breast Cancer Awareness)
4/28 Latrobe Senior Lifestyle Senior Show (Breast Cancer/PSA Awareness)
4/30 Women's Expo (Breast Cancer Awareness)
4/30 Latrobe Rotary Wellness Check (PSA Screen)
5/7 Latrobe Rotary Wellness Check (PSA Screen)
5/11 Latrobe Chamber of Commerce Chamber Fest
(Tobacco Cessation Breast/PSA/Skin Awareness)
5/14 Latrobe Rotary Wellness Check (PSA Screen)
5/21 Mount Pleasant Wellness Check (PSA Screen)
5/23 Woman to Woman Series (Breast Cancer)
6/2 Weatherwood Manor Health Fair (Breast/Skin Awareness)
6/4 Murrysville Rotary Wellness Check (PSA Screen)
6/18 JB's Bright Health Fair (Skin Cancer Awareness)
6/24 Smoke Free Air Affair @ Idlewild Park (Tobacco Cessation)
6/26 Irwin Concerts in the Park (Skin Cancer Screen)

HOSPICE AND PALLIATIVE CARE

The program continues to serve patients throughout the entire county of Westmoreland, parts of Indiana, Fayette and a small piece of Allegheny counties as well. The Hospice program provides a holistic approach encompassing physical, emotional and spiritual care including not only the patient but their entire support system as well. The focus on being true community providers is what drives our care.

The program includes all four levels of Hospice Care (Routine, Continuous, Inpatient and Respite). This past year we transitioned away from a dedicated inpatient Hospice unit, while continuing service with contracted Skilled Nursing Facilities and in our three hospitals. The Hospice team is comprised of an interdisciplinary group which includes: Physicians, Nurses, Masters of/Licensed Social Workers, Bereavement Counselors, Spiritual Care Providers, Hospice and Home Health Aides, Therapists, Volunteer Coordinator and currently 85 volunteers.

Dr. Rachel Shipley serves as the Medical Director and we have hired this past year a physician extender, Maryann Dowling, CRNP.

Care is available 24 hours a day, 7 days a week. This past fiscal year we served a total of 850 Hospice patients. The average length of stay was 40.93 days. Of the Hospice patients, 395 were comprised of patients with a cancer diagnosis. We also served a total of 686 Palliative Care patients who had an

average length of stay of 56.32 days. Of the Palliative Care patients, 418 were comprised of patients with a cancer diagnosis.

Education is a large priority and we provide many in-services that include not only our own staff but the community, skilled nursing facilities, personal care homes and assisted living facilities, acute care settings, physician and resident education, funeral directors and staff across the entire health system. We aspire to have all of the staff certified in end-of-life care and currently have nine nurses certified and have an education plan that occurs quarterly to certify more staff.

Our bereavement program follows the families and caregivers for 13 months after the Hospice patient's death. In addition we hold an annual Memorial Service which was attended by more than 300 people on October 23rd (current fiscal year). We held a program for the Parade of Trees on November 29th (current fiscal year) and decorated trees with ornaments made by patients loved ones in memory of those who have passed this past year. Close to 250 ornaments were sent in and nearly 90 people were in attendance. Throughout the year there are multiple opportunities to assist in coping with loss that run for 6 weeks at a time. There are additional specialized support groups that include: Adult Child Loss, Widows/Widowers, Loss of Parents, Holiday Support Group, Grief Book Clubs, Cooking for One, Help to Heal Teen Loss Program and many community in-services offered to local schools, churches, colleges, seminary students, and Cancer Survivors. There is Music Therapy and Art Therapy utilized to help with the healing process as well. We offer lovely photos done in black and white of hands being held with the patient and are presented to the family in a frame for remembrance. In addition, we offer to sew Bears with the external material being that of their loved one for remembrance sake and something tangible to hold. We have a group of Volunteers who are our Hospice Singers and they sing at all of our facilities as well as for the oncology patients receiving chemotherapy at the Arnold Palmer Pavilion. This is all to support our program.

Our Palliative Care program is offered to patients who have chronic illnesses such as cancer who continue to seek active treatment. Many times these patients transition into Hospice Care. We have been doing aggressive education to explain to many entities the difference between Hospice and Palliative care. With the education, the hope is to have better utilization of services and in a more timely fashion. Many people do not get to reap the full benefit of our programs because of when they are entering our program. We continue to plant seeds of education with each contact we make in our day to day activities.

We are also contracted with Highmark currently which has an Advanced Illness Services Program specifically intended to reach out to patients who are in the true Palliative stage of their illnesses and offers support and counseling during this time to help guide and educate them about their illness path.

Kerrie Shojaie, RN, BSN, OCN
Hospice and Palliative Care Manager

MERKEL CELL REPORT

CUTANEOUS NEUROENDOCRINE (MERKEL CELL) CARCINOMA

Merkel cell carcinoma is defined herein as primary neuroendocrine carcinoma of the skin and/or subcutis.

MERKEL CELL CARCINOMA—CLINICAL FACTS

Patient Group

- Mean age at presentation is 61 years
- Immunosuppressed patients
    - 14-Fold increased risk in HIV-positive patients
    - 10-Fold increased risk after organ transplantation

Site of Involvement

- Head and neck region
- Extremities

Clinical Findings

- Papule or "cystlike" dermal/subcutaneous nodule

Prognosis

- Prognosis depends on stage (status of sentinel node) and histologic features
    - Favorable for small circumscribed tumors confined to the dermis
    - High recurrence risk for large tumors with lymphatic tumor emboli

Treatment

- Surgical excision
- Radiation for nodal or locally recurrent disease
- Chemotherapy for distant metastatic disease

Clinical Findings

Merkel cell carcinoma (MCC) is uncommon. Its annual age-adjusted incidence in the United States was 0.44/100,000 in 2001. Merkel cell carcinoma typically occurs on chronically sun-damaged skin of elderly whites, but can also occur in younger patients and on sun-protected sites. Mean age at presentation is 61 years. Most tumors present on the extremities or the head and neck region. The buttocks are also not infrequently involved. Truncal tumors are rare. Approximately 10 percent of patients present with metastatic disease with no known primary tumor. There is an increased incidence of MCC in immunosuppressed patients (14-fold increased risk among HIV patients, 10-fold increased risk after solid organ transplantation). Recently a polyomavirus (Merkel cell polyoma virus) has been found to be closely associated with the majority of Merkel cell tumors.

The clinical features of MCC are indistinctive in its early stage. Merkel cell carcinoma may present as erythematous or violaceous papule, nodule (Figure 1), or plaque, or as deep-seated nodule or cystlike structure (Figure 2). Merkel cell carcinoma is rarely recognized as such.

Clinically biopsies are usually submitted as rule out basal cell carcinoma, adnexal tumor, squamous cell carcinoma, cyst, lipoma, or others.

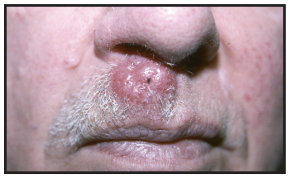


FIGURE 1
Nodule of MCC above lip

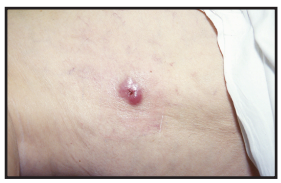
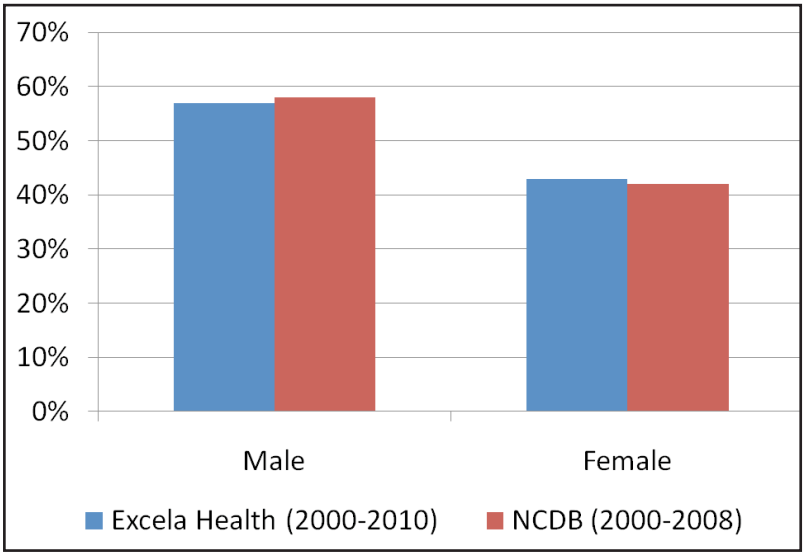
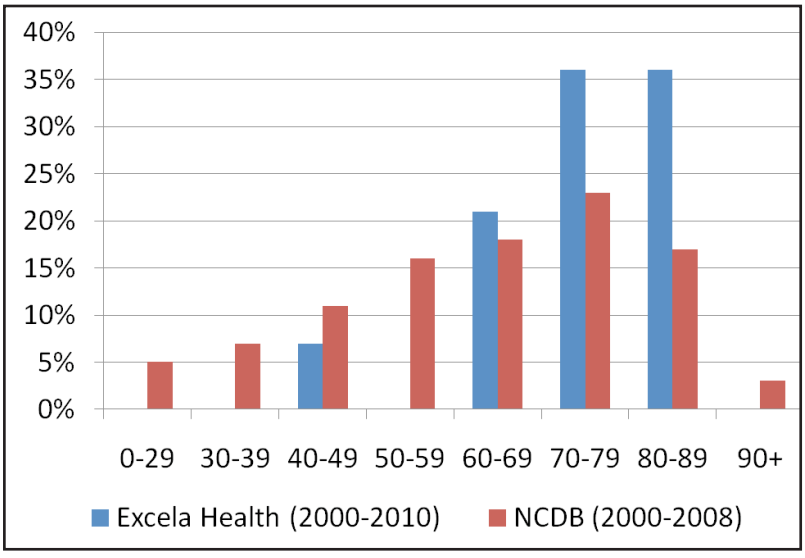


FIGURE 2
Nodule of MCC clinically thought to be a cyst

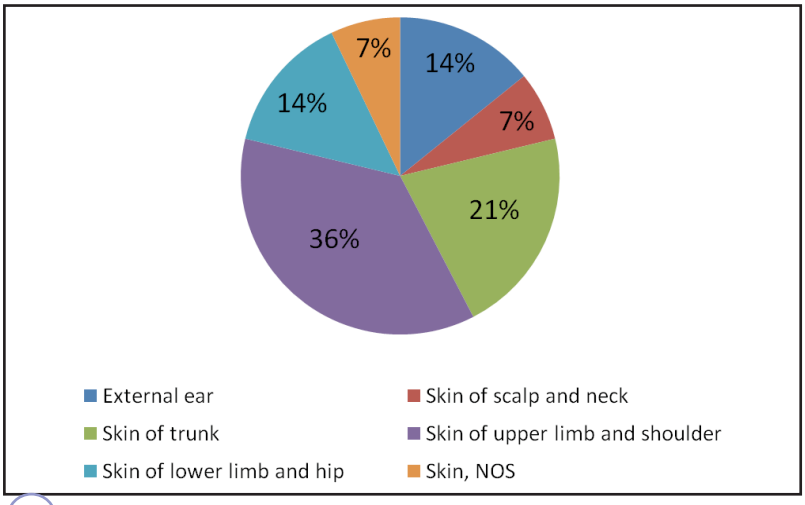
Merkel Cell of Skin by Gender



Merkel Cell of Skin by Age Group



Merkel Cell of Skin by Subsite *(Excela Health 2000-2010)*



Histologic Features

Merkel cell carcinoma typically presents under the microscope as a "blue" nodule in the dermis and/or subcutis. It may be fairly circumscribed, but more often shows an infiltrative growth pattern at its periphery (Figure 3). The blue appearance relates to the composition of the tumor nodules of cells with minimal cytoplasm. A spectrum from small to intermediate and large cells has been described based on the nuclear size; the intermediate cell type being most common (Figures 4 to 6). The cytology of the tumor cells is characterized by nuclei with a finely granular (salt and pepper) chromatin pattern. Dense hyperchromatic cells may be present, but the nuclei are often pale ("see-through" nuclei). Nuclear molding is not uncommon. On rare occasion one may see rosettes. An Azzopardi phenomenon (crushed nuclei) also may be found. Mitotic figures and apoptotic bodies tend to be numerous. Lymphatic tumor emboli are commonly identified at the periphery of many tumors. There may or may not be an associated lymphocytic inflammatory cell infiltrate of variable density.

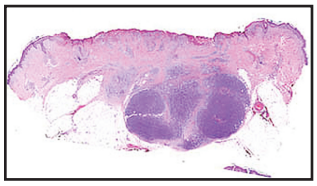


FIGURE 3
Nodular growth pattern of MCC.

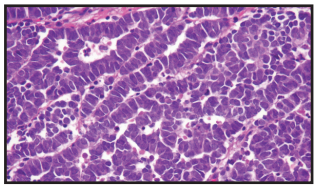


FIGURE 4
Merkel cell carcinoma with large cell features.

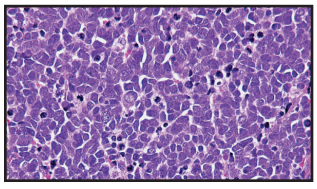


FIGURE 5
Merkel cell carcinoma with intermediate cell features

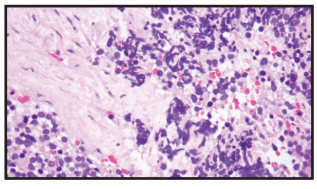


FIGURE 6
Merkel cell carcinoma with small cell features

A trabecular "organoid" growth pattern may be present (see Figure 4), but most often the tumor cells are dispersed as sheets lacking a distinct architectural arrangement. Cellular dyscohesion may be marked and give rise to a diffusely infiltrative lymphoma-like appearance.

Although most MCCs are entirely dermal or subcutaneous, some of them have an intraepidermal component (epidermotropic MCC) others tend to surround adnexal structures. The majority of MCCs develop de novo. A subset of MCCs, however, is found in association with other non-neuroendocrine carcinomas, most often squamous cell carcinomas, rarely basal cell carcinoma, or other adnexal tumors. Although collision lesions may occur, the intimate admixture of conventional squamous cell carcinomas and Merkel cell carcinoma and presence of transition areas indicate that at least a subset of MCCs represent biphenotypic (combined) carcinomas Some may indeed arise from squamous cell carcinomas, when the formation of neuroendocrine carcinoma is preceded by squamous cell carcinoma at the same anatomic site and transition areas are still found once MCC is detected.

Pathology

Histologic Features

- Majority of tumors are de novo
    - Dermal and/or subcutaneous nodule
- Minority of tumors (less than 10%) have a combined phenotype (the second component is most often a squamous cell carcinoma)
- Admixture of neuroendocrine and large epithelial cells
- Growth patterns
    - Nodular circumscribed
    - Nodular infiltrative (most common)
    - Diffusely infiltrative
- Cytology
    - Nuclei with fine salt and pepper chromatin pattern
    - Nuclear size variable: small, intermediate (most common), and large
    - Cytoplasm: scant
    - Mitotic and apoptotic figures common

Ancillary Studies

- Immunohistochemistry
    - Positive for epithelial markers (cytokeratins, in particular CK20 and Cam5.2), often (but not exclusively) in a paranuclear dot-like pattern
    - Positive for neuroendocrine markers (chromogranin and synaptophysin)
    - Positive with CM2B4
    - Negative for TTF-1
    - Ultrastructural studies (no longer necessary)
    - Electron dense granules
    - Paranuclear deposits of intermediate filaments

Molecular Studies

- Positive for MCV

Differential Diagnosis

- Primary versus metastatic MCC
- Metastatic extracutaneous (e.g., pulmonary) small cell carcinoma (MCC is positive for CK20 and negative for TTF-1; extracutaneous tumors are often positive for TTF-1 and tend to be negative [not always] for CK20; clinical correlation essential)
- Basal cell carcinoma (different nuclear features: no salt and pepper chromatin, palisading arrangement of nuclei, fewer mitoses)
- Cutaneous Ewing's sarcoma (positive for EWS-associated translocation and Fli-1)

Ancillary Studies

Immunohistochemistry

The tumor cells express epithelial markers (cytokeratins, such as Cam5.2, AE1:AE3, CK20, 34BE12, and EMA) and neuroendocrine markers (chromogranin, synaptophysin, CD56). Antibodies to CK20 have been found to be particularly useful for diagnosis. The majority of MCCs (75 percent to 90 percent of cases) are at least focally positive for CK20, typically (i.e., not always) in a paranuclear dot–like pattern (Merkel cell carcinoma may also be positive for CD99 or CD117. In contrast with the majority of pulmonary and a subset of extrapulmonary (noncutaneous) neuroendocrine carcinomas, MCCs are usually negative for TTF-1. A monoclonal antibody (CM2B4) can document the presence of Merkel cell polyomavirus in the majority of tumors.

Electron Microscopy

Merkel cell carcinoma is characterized by the presence of membrane bound, 80-120 nm, dense core granules located in the cytoplasm at the periphery of the cells (Figure 7). Round groups of intermediate filaments may be observed adjacent to the nucleus. Although EM has been useful historically, it is nowadays no longer necessary for diagnosis.

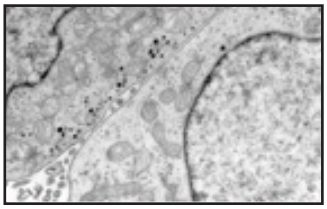


FIGURE 7
Ultrastructure of MCC. Electron-dense neurosecretory granules are characteristic

Molecular Studies

The presence of Merkel cell virus can be demonstrated by PCR studies in the majority (approximately 80%) of tumors.

Differential Diagnosis

Merkel cell carcinoma may be confused with other primary cutaneous tumors, such as carcinomas with basaloid or small cell features (BCC, small cell/basaloid variant of sweat gland carcinoma, pilomatrix carcinoma), small cell variant of melanoma, cutaneous Ewing's sarcoma, and lymphoma. The distinction may on occasion be difficult on a small biopsy sample, but attention to the presence or absence of the characteristic nuclear features associated with MCC and the use of immunohistochemical markers should lead to the correct diagnosis (Table 1).

Marker	MCC	BCC	Lymphoma	Melanoma
CK20	+	−	−	−
Berep4	±	+	−	−
LYM	−	−	+	−
MDA	−	−	−	+

TABLE 1
Immunostains Useful for the Distinction of MCC from Histologic Stimulants

(LYM, lymphoma markers: LCA, CD20, CD3 and/or others; MDA, melanocyte differentiation antigens (tyrosinase, gp100, Mart-1/Melan-A).

The distinction of cutaneous Ewing's sarcoma from MCC can be particularly difficult, because both tumors may express cytokeratins, neuroendocrine markers, and CD99. Molecular studies (fluorescence in situ hybridization for Ewing's translocation or polymerase chain reaction studies for EWS-Fli-1 fusion product) can be decisive for this problem.

Merkel cell carcinoma may also be confused with neuroendocrine carcinomas metastatic to the skin, especially metastatic small cell carcinoma. If there is no known history of an extracutaneous neuroendocrine carcinoma, and the tumor presents in the superficial dermis of sun-damaged skin with the characteristic light microscopic finding of intermediate-sized pale (see-through) nuclei with fine salt and pepper chromatin pattern, the diagnosis of MCC is almost certain, because other neuroendocrine carcinomas with the exception of those of salivary gland origin rarely show this feature. However, if a tumor shows cytologic features similar to small cell carcinomas of the lung, a definitive diagnosis requires immunohistochemical studies. Typically, pulmonary small cell carcinomas are positive for CK7 and TTF-1, whereas MCCs are usually positive for CK20 and negative for TTF-1.

However, exceptions exist. Some pulmonary and extrapulmonary noncutaneous small cell carcinomas may also be positive for CK20, and some MCCs may be positive for both CK7 and CK20.

Furthermore, not all lung tumors stain for TTF-1, and TTF-1 expression is not restricted to lung tumors, but can also be seen in extrapulmonary neuroendocrine carcinomas. It also needs to be emphasized that not all MCCs are CK20-positive. Approximately 10 percent of them fail to stain for CK20. One can accept a CK20-negative tumor as MCC, if the histology and marker studies (positive staining for other keratins and neuroendocrine markers) support a neuroendocrine carcinoma and the clinical setting is consistent with a primary cutaneous origin. Thus, a diagnosis of the most likely origin of a neuroendocrine carcinoma should not be based on immunohistochemical results alone. Correlation with histologic and clinical findings is paramount.

On occasion primary MCC should be distinguished from metastatic MCC to the skin. Clinical history is essential here. There are a few histologic features that can help, such as the presence of an associated squamous cell carcinoma or a dense lymphocytic infiltrate, both of which favor a primary tumor.

Prognosis and Treatment

Merkel cell carcinoma is generally referred to as an "aggressive" tumor. However, it is not uniformly lethal. Overall survival rates in the literature range from 30 percent to 75 percent. In a recent study from Memorial Sloan-Kettering Cancer Center (MSKCC), the 5-year disease-specific survival was 64 percent. The most important prognostic parameter is stage. Multiple different staging systems have been proposed as basic modifications of whether or not the disease is restricted to the primary skin site, involves regional nodes, or has spread beyond the regional nodal basin—see recently proposed staging system (Table 2).

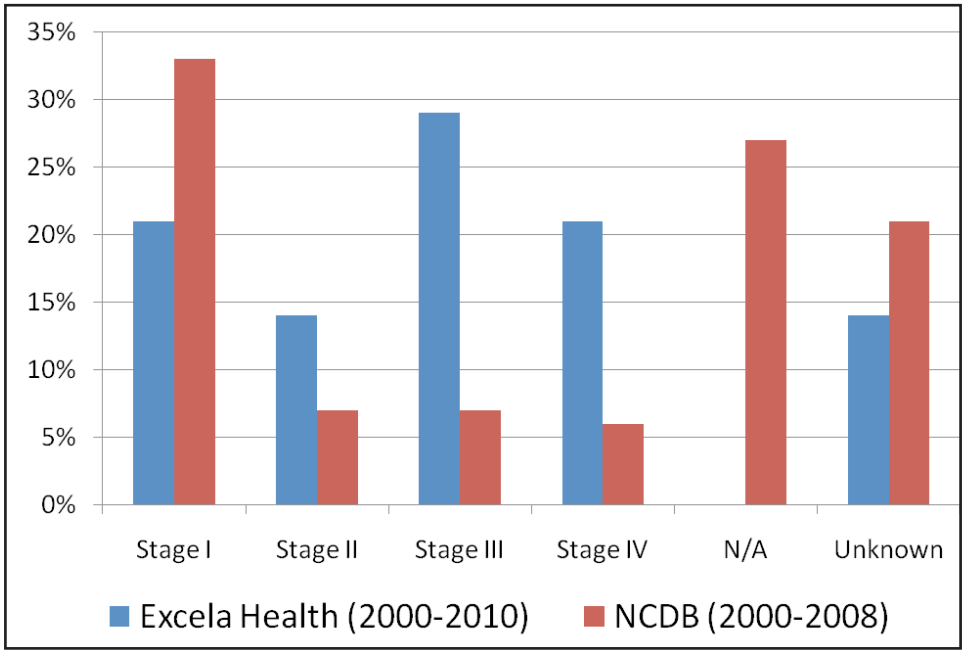
TABLE 2 - Staging System for Merkel Cell Carcinoma

Tumor	Node	Metastasis
T1: Primary tumor, <2 cm	N0: Negative regional lymph nodes	M0: No evidence of distant metastatic disease
T2: Primary tumor, & geq; 2 cm	N1: Positive regional lymph nodes	M1: Distant metastatic disease present
Stage II: T2, N0, M0		
Stage III: Any T, N1, M0		
Stage IV: Any T, Any N, M1		

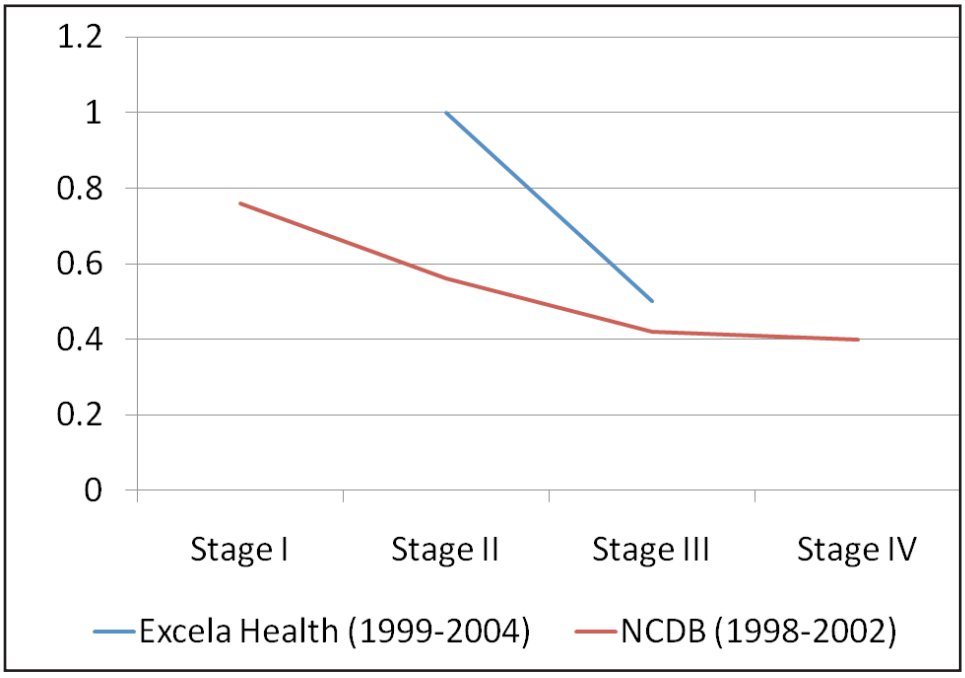
Ann Surg 1999; 229-98

Whichever staging system is used, it is clear that the status of regional lymph nodes is a powerful predictor for future recurrences. Approximately 20 percent to 30 percent of patients with MCC have lymph node involvement at the time of initial diagnosis. An additional 30 percent to 50 percent of patients recur with nodal disease at some point. The prognostic significance of the nodal status is the reason why sentinel lymph node mapping and biopsy have been adopted at many cancer centers to stage patients with MCC. If no obvious tumor is found on the initial levels of a bisected sentinel lymph node, additional levels and immunostains for CK20 or Cam5.2 can help identify small metastatic deposits.

Merkel Cell of Skin by Stage

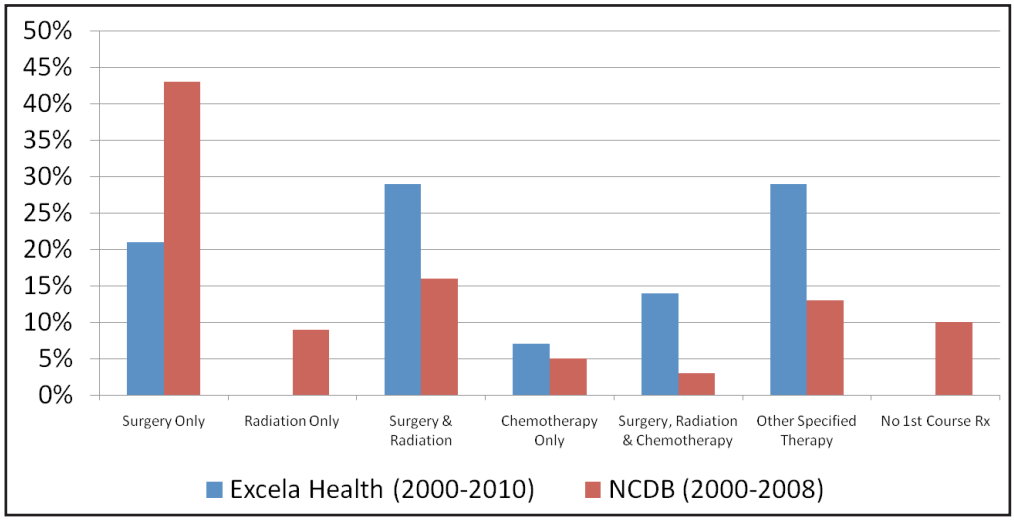


Observed 5-year Survival Merkel Cell of the Skin



Although surgical excision is the mainstay of treatment for patients with MCC, it is also known that the tumor is radiosensitive. There is general consensus that radiation therapy is of benefit for unresectable tumors or recurrent tumors. Whether there should be a more general role for radiation therapy is controversial. Chemotherapy is an option of patients with stage IV disease.

Merkel Cell of Skin by Treatment



Elias Memari, MD
Pathology

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PRIMARY MELANOMA

The number of people who develop melanoma continues to increase. The reported incidence in the Caucasian population has more than tripled over the past 20 years. Approximately 69,000 new cases of invasive melanoma are expected in the United States during the year 2009. There is emerging evidence for multiple different pathways that can result in melanoma, with both genetic as well as environmental factors.

MELANOMA–CLINICAL FACTS

Incidence

- Approximately 110,000 new cases expected in the United States for 2008
    - 60,000 invasive melanoma
    - 50,000 in situ melanoma
- Fifth most common cancer in women, sixth most common in men (North America)
- Most common cancer in Caucasian women ages 25 to 29

Risk Factors

- Family history of melanoma
- Numerous melanocytic nevi
- Fair skin
- UV exposure
- Age greater than 50
- Genodermatoses: xeroderma pigmentosum or familial atypical mole syndrome

***Clinical Warning Signs for Melanoma:* ABCDE rule**

- **A**symmetry
- **B**order irregularity
- **C**olor variegation
- **D**iameter (greater than 6 mm)
- **E**volving (change of a pigmented lesion)

The risk for developing a melanoma is increased if there is a family history of melanoma or a clinical phenotype of numerous nevi, especially numerous atypical nevi. Melanomas are more common in fair-skinned individuals with sun sensitivity and a history of excessive sun exposure. The risk for melanoma increases with age. Other risk factors include DNA repair defects (xeroderma pigmentosum), a prior history of melanoma, and immunosuppression.

Clinical Findings

Melanoma is clinically suspected if a preexisting mole is changing or a new pigmented lesion appears that shows worrisome features, such as large size, variability in colors, surface texture, irregular peripheral borders (Figure 1), or is symptomatic (itch, pain, tenderness, bleeding). Although the clinical impression is a good guide for the diagnosis, especially in well-developed lesions, there are many exceptions, and the accuracy of the clinical diagnosis is less than perfect (approximately 60 percent). Histologically unequivocal melanoma may clinically be confused with a benign or atypical nevus or even a keratosis. If no pigment is visible clinically (amelanotic melanoma), other tumors, such as basal cell carcinoma, may be suspected instead of melanoma. Likewise a clinically complex pigmented lesion suspected to be melanoma may be histologically banal (e.g., a macular pigmented seborrheic keratosis or solar lentigines).

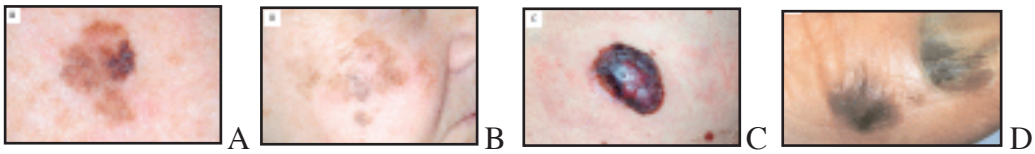
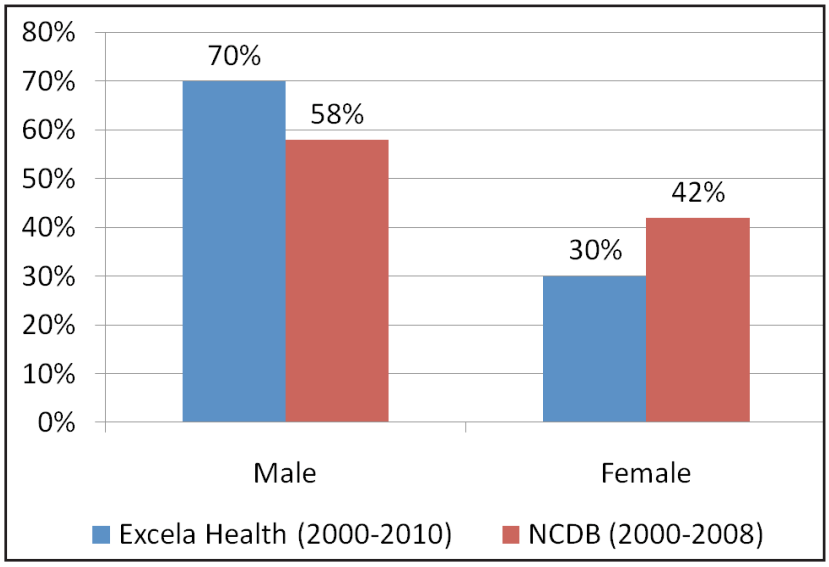
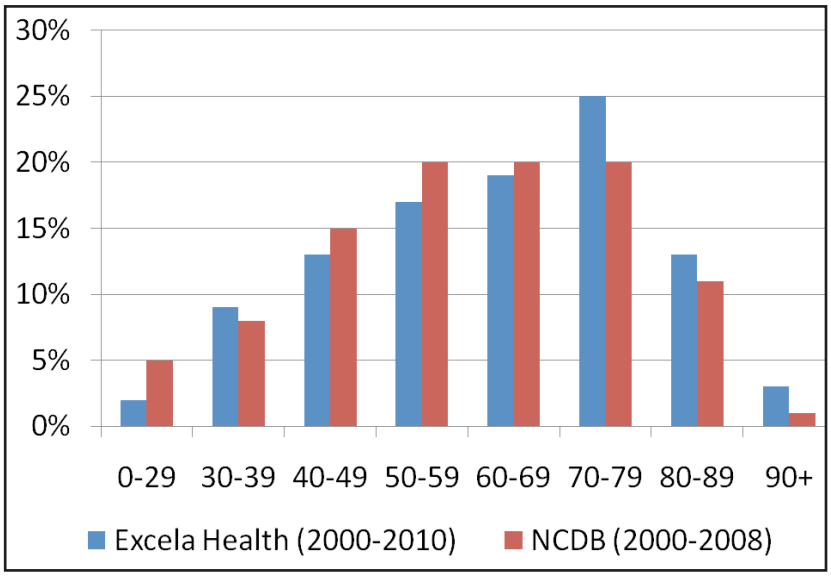


FIGURE 1 Clinical appearance of conventional melanoma types. **(A)** Asymmetric complex silhouette of a melanoma from the trunk (superficial spreading melanoma). **(B)** Asymmetric complex macular pigmented lesion on the face (lentigo maligna). **(C)** Nodular melanoma. **(D)** Acral melanoma.

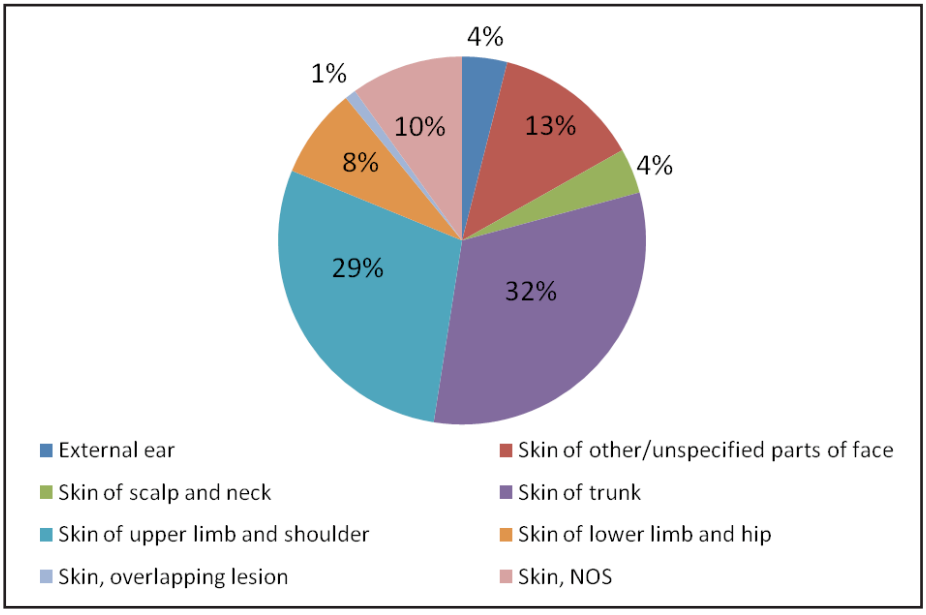
Melanoma of Skin by Gender



Melanoma of Skin by Age Group



Melanoma of Skin by Subsite *(Excela Health 2000-2010)*



Histologic Parameters Relevant for Prognosis

A number of histologic features have been identified that statistically correlate with patient outcome. Although it is impossible to precisely predict the clinical outcome for an individual person, prognostic parameters are relevant for clinical trials to stratify patients into risk groups to better identify potential effects from surgical or medical treatment modalities (versus the natural history of the disease). Risk assessment is also relevant for decisions on the extent of clinical workup and follow-up. For the care for an individual patient, it is important to realize that statistical data are probability scenarios for patient populations with certain characteristics. They do not predict a particular individual's fate. There is always hope for survival against the odds. Likewise there is no guarantee for a good outcome in spite of favorable statistical data.

Tumor thickness has been established as the most powerful predictor in many multivariate analyses of large cohorts. Other parameters of prognostic significance include ulceration, Clark levels, lymphovascular and/or perineural invasion, tumor mitotic rate, and the presence or absence of satellite metastases. In the most recently revised melanoma staging system of the AJCC (2002), only tumor thickness, ulceration, and Clark level are used as parameters for the T– classification. Tumor mitotic rate will likely be included into the next staging system. Although lymphovascular, intraneural or perineural invasion are not part of the staging system, their reporting is encouraged. The presence of lymphovascular invasion clearly correlates with metastatic disease. Nerve involvement is associated with increased local recurrence. The presence of satellites affects the N-classification.

Tumor Thickness

Tumor thickness is measured with an ocular micrometer according to Breslow as the greatest vertical distance (expressed in millimeters) between the deepest invasive melanoma cells and the granular cell layer of the overlying epidermis. If the overlying epidermis is ulcerated, the base of the ulcer is taken as reference point. When there is an associated melanocytic nevus or in situ melanoma within an adnexal structure, the measurement should not include the nevus or in situ melanoma, but be limited to what can be recognized unequivocally as invasive melanoma.

Ulceration
Microanatomic (Clark) Level

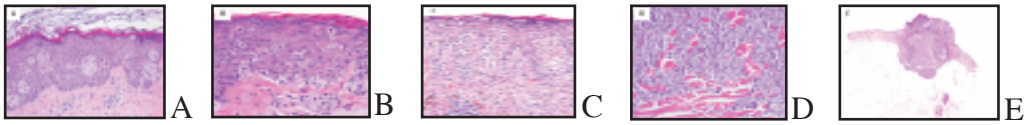


FIGURE 2 Microanatomic (Clark) levels. **(A)** Clark level I: Melanoma is confined to within the epidermis**. (B)** Clark level II: Melanoma is present in the epidermis and papillary dermis without filling the papillary dermis**. (C)** Clark level III: Melanoma fills and expands the papillary dermis**. (D)** Clark level IV: Melanoma extends into the reticular dermis. Coarse reticular dermal collagen bundles surround melanoma cells. **(E)** Clark level V: Melanoma extends into subcutaneous adipose tissue.

Tumor Mitotic Rate
Lymphatic or Blood Vessel Invasion

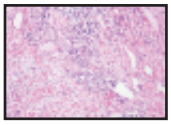


FIGURE 3 Lymphatic invasion. Clusters of melanoma cells are channel. present in a lymphatic

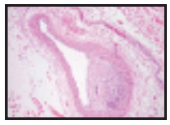


FIGURE 4 Blood vessel invasion. Tumor cells are present in the wall of a blood vessel.

Nerve Involvement

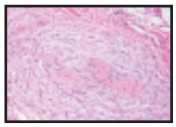


FIGURE 5 Nerve involvement. A peripheral nerve is invaded and surrounded by fusiform melanoma cells

Satellites/Locoregional Cutaneous Metastases

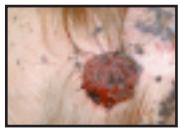


FIGURE 6 Melanoma with satellites, clinical. A primary melanoma nodule of the scalp is surrounded by many small satellite nodules.

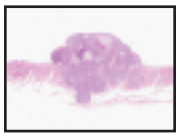


FIGURE 7 Melanoma with satellites, histology. A primary melanoma is seen as well as melanoma nodules in the dermis separate from the main tumor mass.

Tumor-Infiltrating Lymphocytes

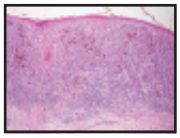


FIGURE 8 Tumor-infiltrating lymphocytes. The invasive front of the melanoma is surrounded and infiltrated by lymphocytes.

Regression

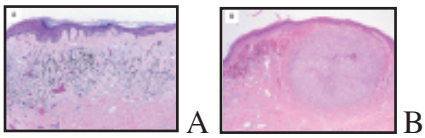


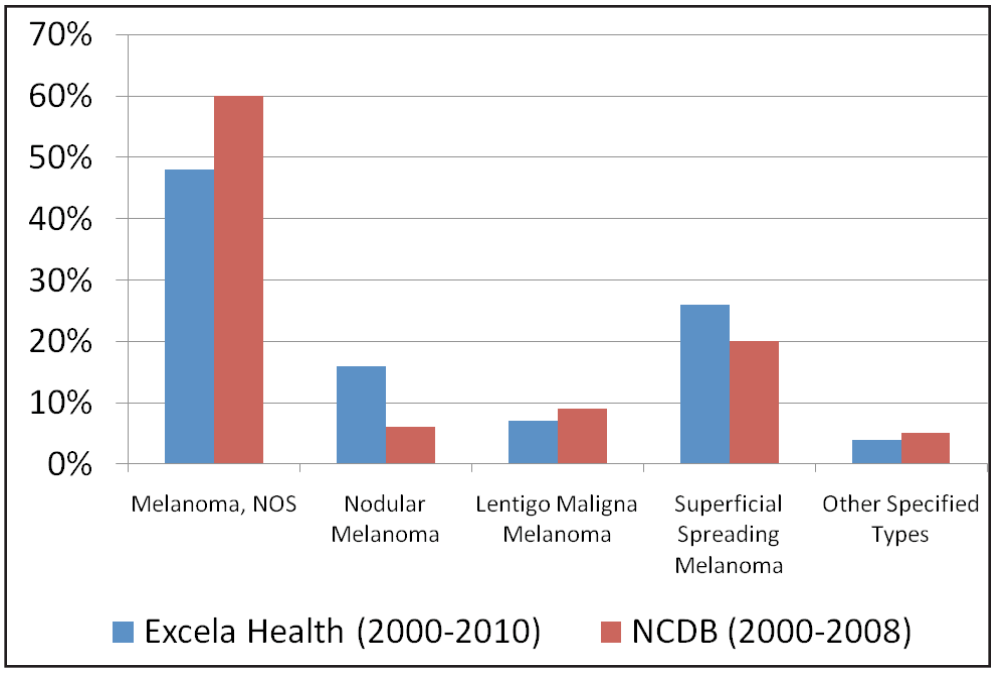
FIGURE 9 Melanoma with regression. **(A)** Features of regression include an altered stroma (edema, hypervascularity, inflammation) and loss of melanocytes. **(B)** Primary nodular melanoma with adjacent features of regression.

COMMON (CONVENTIONAL) VARIANTS OF MELANOMA

Cutaneous melanomas have historically been classified into four major types: superficial spreading, lentigo maligna, acral lentiginous, and nodular. The first three types are classified by the growth pattern of the intraepidermal (in situ) melanoma component. Superficial spreading melanoma is characterized by prominent intraepidermal pagetoid spread of melanoma cells (pagetoid in situ melanoma) and/or presence of many well-formed junctional melanocyte nests.

This type of melanoma is commonly associated with melanocytic nevi. Melanomas of lentigo maligna and acral lentiginous types show a predominance of solitary units of melanocytes at the dermal-epidermal junction (lentiginous melanoma). Lentigo maligna is associated with marked solar elastosis and usually affects the head and neck region. Acral lentiginous melanomas occur by definition at acral sites. Nodular melanoma refers to an invasive melanoma without or only a minimal detectable in situ component. There has been much debate about the validity of this classification scheme and to what extent the dominant histologic growth pattern is a reflection of anatomic site. Because this historical classification scheme lacks prognostic value and there is overlap in histologic patterns (e.g., lentigo maligna or acral melanomas may also show pagetoid growth patterns) as well as significant interobserver variability, many pathologists no longer use this classification in their daily practice. However, recent observations that the histologic patterns correlate to some extent with distinct mutations (see the following) have led to renewed interest in the classification of melanomas. Histologic pattern analysis may provide a screening method for the probability of molecular pathway alterations that may be relevant for therapy.

Melanoma of Skin by Histology



Melanomas have also been classified by growth phases. The so-called radial growth phase refers to a flat peripheral spread of melanoma and is said to lack competence for metastasis. The so-called vertical growth phase reflects invasive downward growth and indicates the ability to metastasize. In this concept radial and vertical growth phases are not entirely synonymous with in situ and invasive melanoma. Radial growth phase is said to include intraepidermal (in situ) melanomas with isolated small solitary units or clusters of melanocytes in the papillary dermis without mitotic figures and compact dermal tumor cell aggregates larger in size than the largest junctional melanocytic nest. The concept of radial and vertical

growth phase has been incorporated into some prognostic models, but has been questioned by others on philosophical and practical grounds, because some melanomas said to be confined to the radial growth phase were found to have metastasized on clinical follow-up, and many melanomas said to be in the vertical growth phase are cured by simple excision. There is emerging evidence that melanomas are genetically heterogeneous and can be subclassified by molecular signatures (profile of chromosomal aberrations) and mutations (e.g., BRAF, KIT, miscellaneous signal pathways). The molecular profiles seem to depend on anatomic site, the mode of sun damage, and correlate with histologic patterns (e.g., BRAF mutations are common in "superficial spreading" melanomas arising in association with nevi of non-chronic sun-damaged skin, whereas they are rare in tumors of chronically sun-damaged skin or acral or mucosal sites with limited or no sun exposure; KIT mutations occur primarily in acral, mucosal lentiginous, and heavily pigmented melanomas). Molecular classification of melanomas is currently primarily of investigational value, but will likely play an increasing role for selecting patients for various treatment regimens targeting specific mutations.

PROGNOSIS

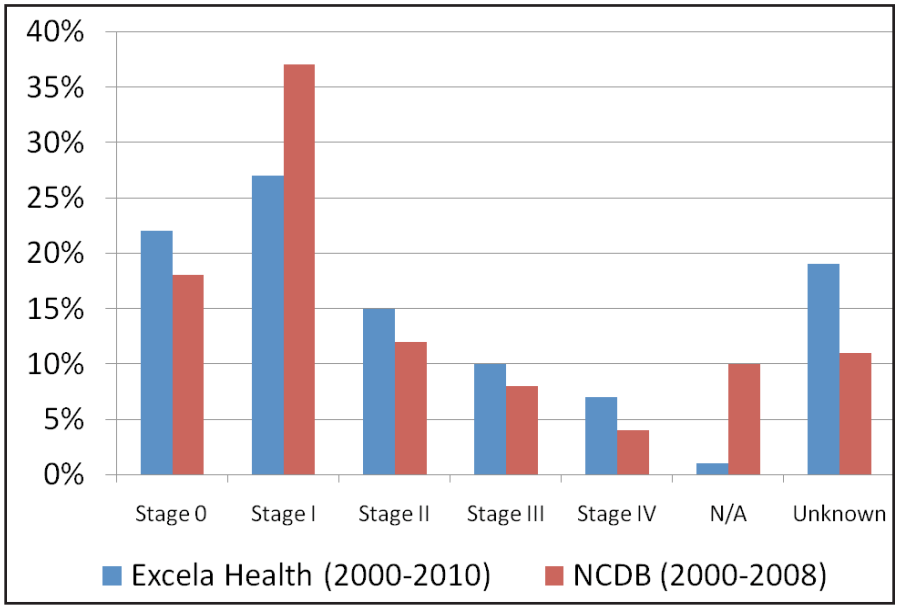
The prognosis of a patient affected by melanoma depends on the clinical stage.

Clinical Stages I and II
For those with localized primary melanoma, the histologic features of the primary melanoma, in particular tumor thickness, presence of ulceration, tumor mitotic rate, and level of invasion are relevant parameters to assess a patient's risk for recurrence. Host factors such as age and immunocompetence are also important.

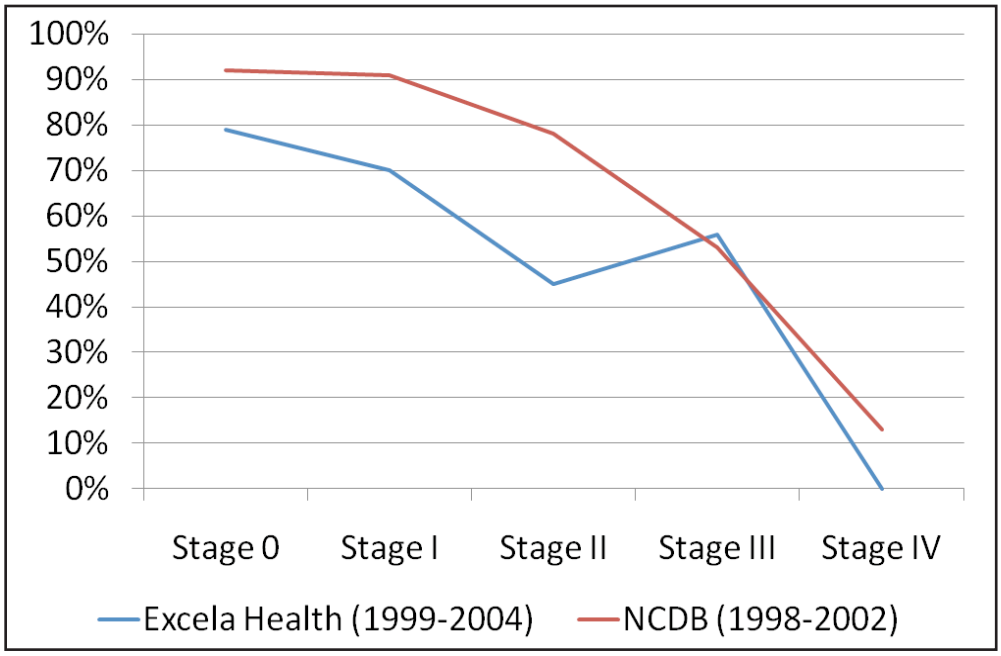
Clinical Stage III
Regional lymph node metastasis is associated with a five-year survival rate between 13 percent and 69 percent. The odds for survival depend on the number of nodes involved and extent of disease (micrometastasis versus macrometastasis). Regional cutaneous or soft tissue metastases (also known as in-transit or satellite lesions) are associated with a 30 percent to 50 percent 5-year survival rate. The prognosis is worse (reduced 10 percent to 30 percent five-year survival), if both regional cutaneous and nodal metastases are present.

Clinical Stage IV
The prognosis for distant metastatic disease is generally poor, with five-year survival rates of less than 20 percent. The prognosis depends on the number and site of metastases as well as on host factors.

Melanoma of Skin by Stage



Observed 5-year Survival Melanoma of Skin



SURGICAL MANAGEMENT

Biopsy/Excisions of Melanocytic Nevi

Although shave biopsies are suitable for small pigmented lesions, especially if located in the face or if the suspicion for melanoma is low, they are to be discouraged for large and clinically complex-appearing lesions. Although in many cases a definitive diagnosis can be made on a shave biopsy, partial small tissue sampling carries the risk of sampling errors as well as suboptimal diagnostic evaluation because of the fact that important histologic parameters, such as symmetry or circumscription of the peripheral border of a lesion, cannot be evaluated.

Once a melanocytic nevus is diagnosed histologically, it does not need to be excised except for specific requests by patients for cosmetic reasons or concerns about its biology; for example, if the diagnosis is not entirely certain because of sampling issues (too small a biopsy to distinguish nevus from melanoma) or for other reasons (unusual morphology that is difficult to interpret). Margins for such excisions may be as narrow as possible.

Primary Melanoma

Malignant melanomas should be completely excised surgically. Recommendations for the optimal width of an excision for a primary cutaneous melanoma (see Figure 10) should be viewed as guidelines not as dogmatic rules. They have been revised repeatedly at various times with a trend toward more conservative surgery.

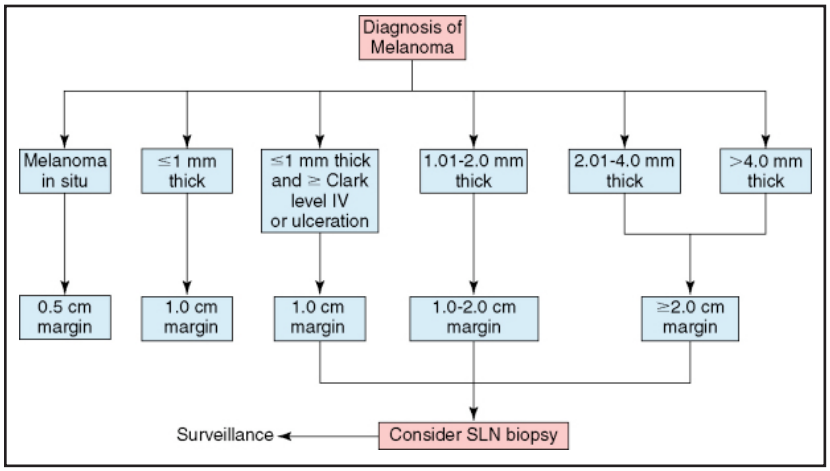


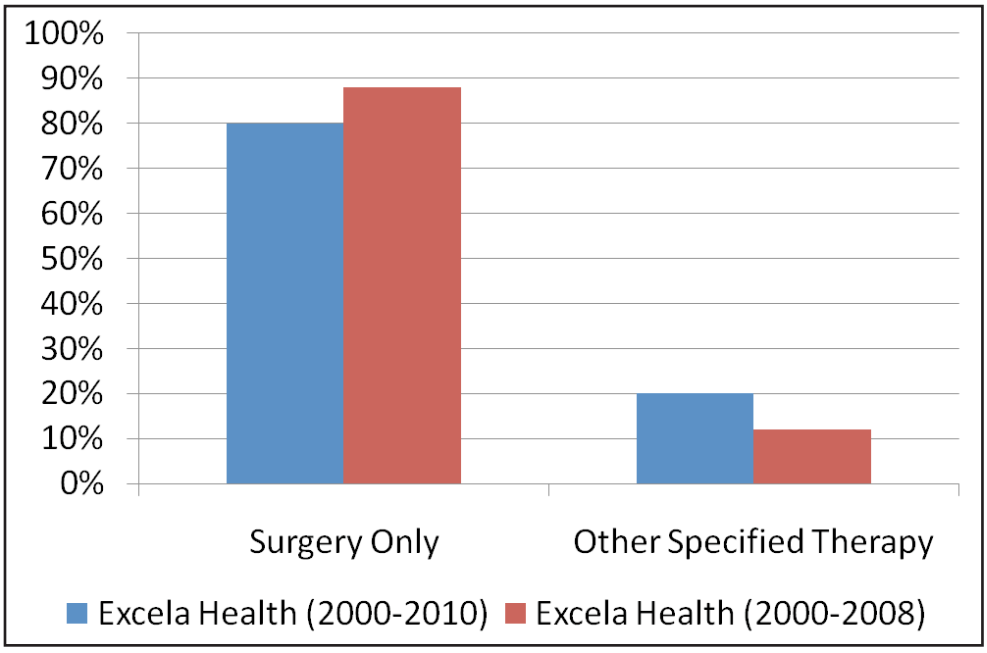
FIGURE 10 Treatment algorithm for primary cutaneous melanoma.

NONSURGICAL TREATMENT OPTIONS

Various nonsurgical therapies are being offered for primary and metastatic lesions of melanoma. Topical agents, such as imiquimod or radiation, may be used for the management of lentigo maligna, when surgery may not make sense (e.g., comorbidity). Radiation may also be used for primary or locally persistent melanomas, when a negative surgical margin cannot be achieved, especially in the head and neck region.

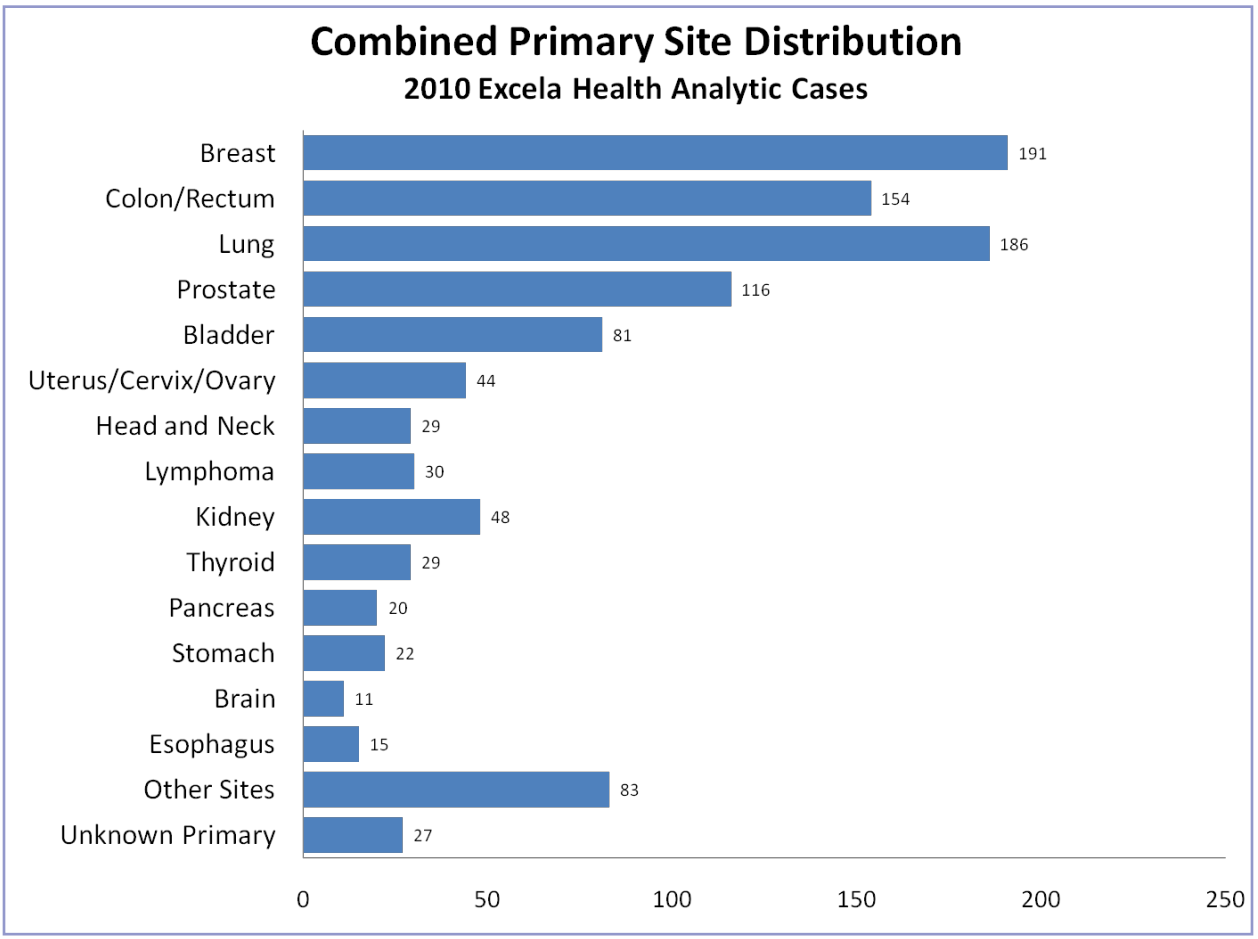
Medical treatments of metastatic melanoma to date have for the most part been disappointingly ineffective. Single or multiagent chemotherapy may produce responses from 5 percent to 30 percent. The combination of chemotherapy with immunomodulators, such as IL-2, which is also referred to as biochemotherapy, may yield a slightly better response. However, the impact of most current treatment regimens on overall survival has been marginal. With the discovery of distinct mutations associated with various melanomas, such as KIT mutations in mucosal or acral melanoma, a number of trials are currently underway to explore the use of small molecules for targeted therapy. Various vaccine trials are also being pursued. Targeted therapy and novel immunologic approaches currently hold the greatest promise for improvements in the medical treatment of patients with metastatic melanoma.

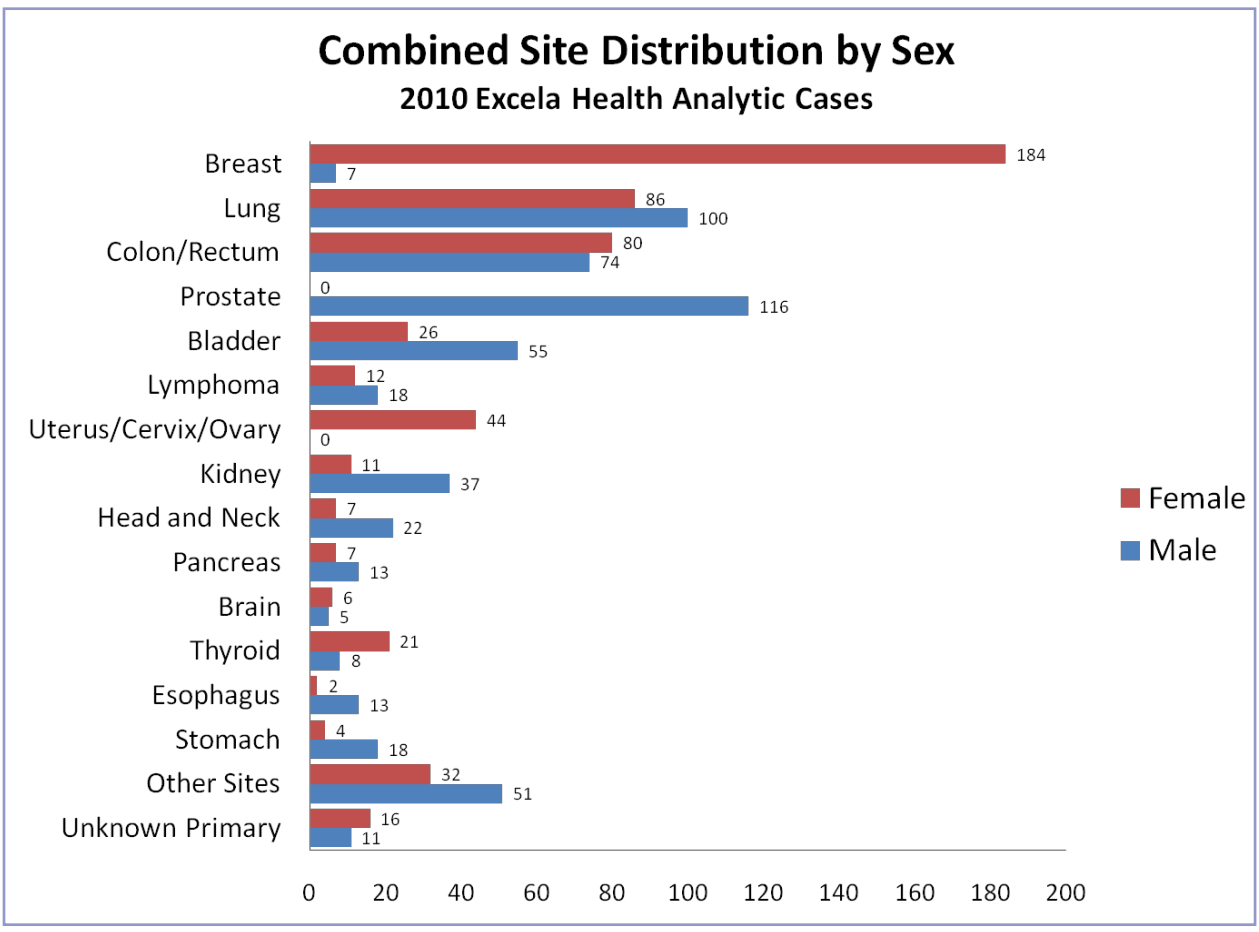
Melanoma of Skin by First Course Treatment

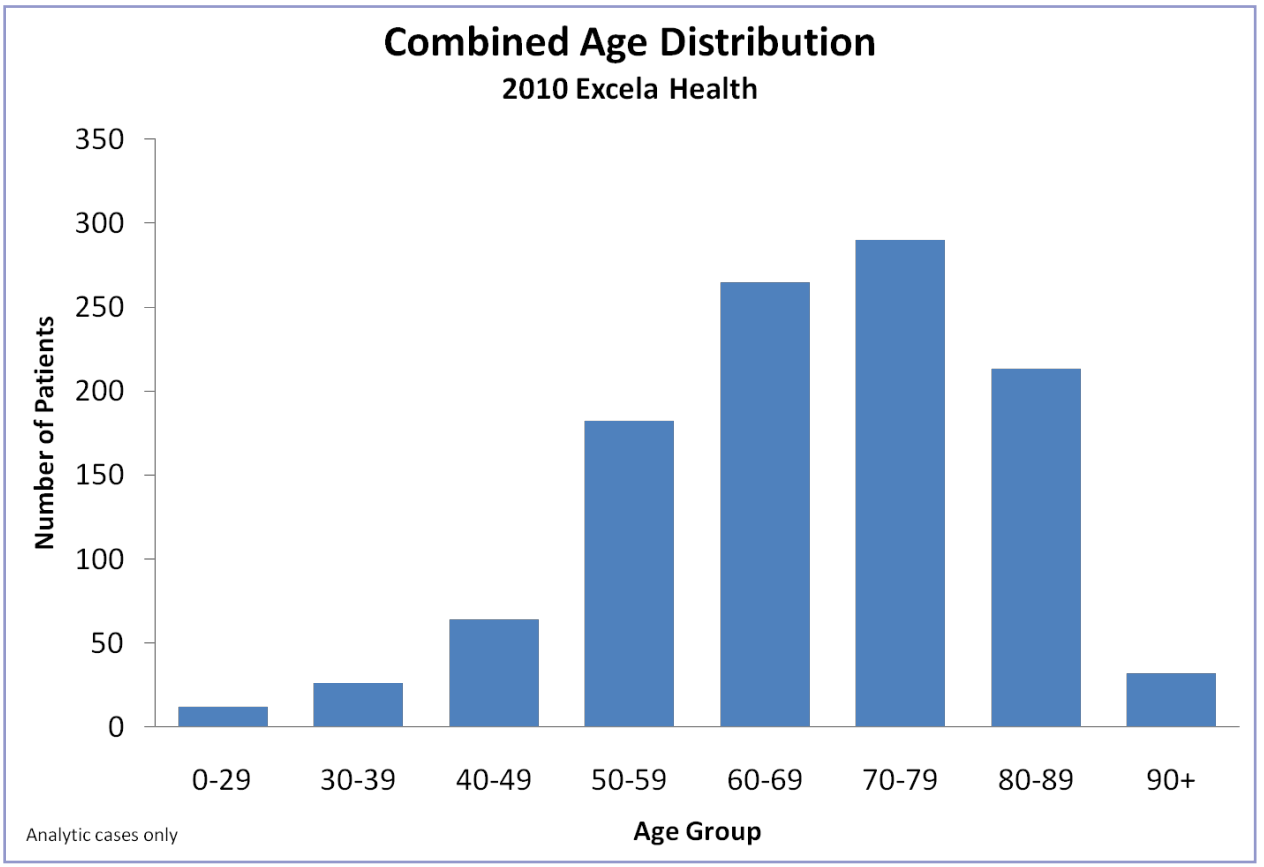


Elias Memari, MD
Pathology

References:
Busam, K. Dermatopathology: A Volume in the Foundations in Diagnostic Pathology Series
Commission on Cancer, American College of Surgeons, NCDB Benchmark Reports


Combined Primary Site Distribution
2010 Excela Health Analytic Cases
Breast 191
Colon/Rectum 154
Lung 186
Prostate 116
Bladder 81
Uterus/Cervix/Ovary 44
Head and Neck 29
Lymphoma 30
Kidney 48
Thyroid 29
Pancreas 20
Stomach 22
Brain 11
Esophagus 15
Other Sites 83
Unknown Primary 27
0 50 100 150 200 250


Combined Site Distribution by Sex
2010 Excela Health Analytic Cases
Breast 184 7
Lung 86 100
Colon/Rectum 80 74
Prostate 0 116
Bladder 26 55
Lymphoma 12 18
Uterus/Cervix/Ovary 44 0
Kidney 11 37
Head and Neck 7 22
Pancreas 7 13
Brain 6 5
Thyroid 21 8
Esophagus 2 13
Stomach 4 18
Other Sites 32 51
Unknown Primary 16 11
0 20 40 60 80 100 120 140 160 180 200
Female
Male



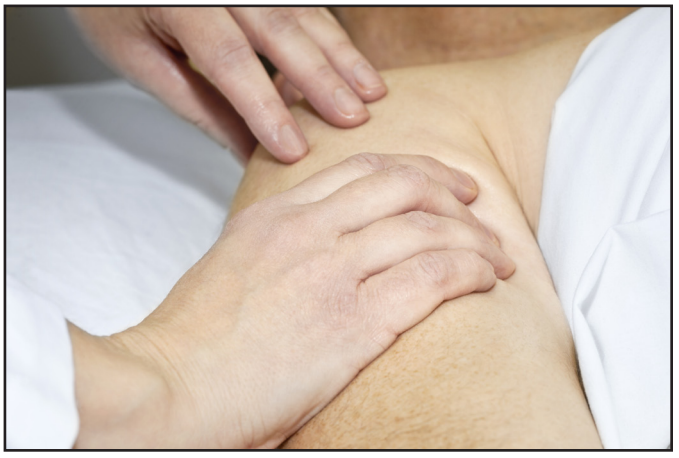
REHABILITATION SERVICES

The Physical Medicine and Rehab Services at all three hospitals and 10 outpatient centers offer comprehensive therapy by skilled professionals. Patients receive rehabilitation services during the acute phase of their illness. Continued care is then offered as an outpatient or as an inpatient on the inpatient rehab unit.

Our specialized services include: lymphedema management, treatment of head and neck cancers, post mastectomy and breast reconstruction care, and treatment of pelvic floor pain and dysfunction related to urogynecological cancers. Patients who have lost function related to all types of cancers may benefit from exercise and mobility training on land or in the aquatics pool. Education about lymphedema was offered to the general public at Arnold Palmer Pavilion.

The Excela Health team of occupational, physical and speech therapists work collaboratively with the patients and their caregivers, physicians, nurses and case managers to ensure quality service.

Joni Beckman, OTR/L CLT



NUTRITION SERVICES

The primary goal of nutrition intervention is to prevent or correct nutritional deficiencies, achieve and maintain optimal body weight and improve tolerance to treatment. Dietitians enhance both the quality of life and the outcomes of oncology patients through assessment, care planning and appropriate nutrition education. Continuity of nutrition care for the oncology patients is provided during their treatment at the hospital, the Arnold Palmer Pavilion and in the patients' homes via telephone conversation.

In 2010, nutrition care was provided through the Arnold Palmer Pavilion to outpatients diagnosed with head and neck, and lung cancer, as well as referrals from physicians, ancillary services and patients. Dietitians from both Westmoreland and Latrobe campuses provided 16 hours of weekly nutrition services.

The Power of Low Fat classes for breast cancer survivors continue to be offered to all breast cancer patients. The program provides participants with the tools and support to decrease dietary fat in an effort to improve relapse rates of breast cancer. The dietitians also provided other educational programs, including an informal monthly question and answer session entitled, *Ask the Dietitian*, which is conducted in the lobby of the Arnold Palmer Pavilion. The class rotates morning and afternoon to reach out to as many patients and family members as possible. Educational information and samples of supplements are provided. Additionally, a dietitian presented the topic of "Nutrition During and After Cancer Treatment" to patients attending the ***I Can Cope*** educational series.

Diane M. Coleman, RD, LDN
Paula Piper, RD, CDE, LDN
Anita L. Gallagher, MS, RD, CNSD, LDN
Food and Nutrition Services

SOCIAL WORK SERVICES

Social work services at the Arnold Palmer Pavilion cover a wide array of patient concerns. The goal of the social worker is to link patients with the resources they need to be successful during their treatment. Issues regarding insurance and helping patients access co-payment programs for both treatment and prescriptions consume a majority of the caseload. Other items that are addressed include Durable Medical Equipment orders, enteral formula and supplies, Home Care and Hospice referrals, coordinating care between disciplines, and education and support for our patients and their families. Throughout the fiscal year the social worker also conducted a support group at the Arnold Palmer Pavilion, Mountain View office. The group was held the second Tuesday of each month.

As an advocate for our patients, the social worker tries to meet with each new patient and complete a full assessment that addresses all their concerns and aspects of treatment. On average each month, 92 patients were seen by social work services for the 2010 fiscal year. The social worker was at the Mountain View facility Monday, Wednesday and Friday each week from 10 a.m. to 3:30 p.m. During 2010, the social services department at the Arnold Palmer Pavilion underwent some changes in personnel. Renae Hammerman served as the social worker from January to June 2010 when Katie Kalp, LSW took over as the social worker for the facilities.

Katie Kalp, LSW