

PowerPoint Presentation for Transplant Patients and Families

- This presentation was designed to be given by a health-care professional to an audience of transplant patients and their families
- The presenter should feel free to modify the slides and the presentation to fit the needs of the audience
- Slides 9 and 12 are graphic depictions of skin cancers. The presenter should use discretion as to whether these images, or other materials in the presentation, are suitable for any particular audience
- Explanations and elements of narration can be found in the notes section

Skin Cancer in Organ Transplant Patients: Lessons in Life

Supported by an unrestricted educational
grant from Connetics Corporation



After Transplantation –
Reduce Incidence of Skin Cancer

AT-RISC Alliance



After Transplantation –
Reduce Incidence of Skin Cancer



Skin Cancer Facts: the AT-RISC Fact Sheet

- Skin cancer is a serious problem for transplant patients
 - Up to 70% of high-risk long term patients will develop
- Immunosuppression and sun damage cause skin cancer
- Skin cancer can significantly decrease transplant recipients' quality of life
 - Some patients may develop > 100 skin cancers per year
- Skin cancer may even cause death
 - After the fourth year post-transplant, 27% of patients in high risk areas die of skin cancer

Skin Cancer Facts: the AT-RISC Fact Sheet

- Sun protection is the best strategy to prevent skin cancer
- Early diagnosis of skin cancer can save lives
- Sun protection practices are currently inadequate
 - Only 54% of transplant recipients remember receiving skin cancer education
 - Only 40% of transplant recipients regularly use sunscreen

How Bad a Problem Can Skin Cancer Be?



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Reduce Incidence of Skin Cancer

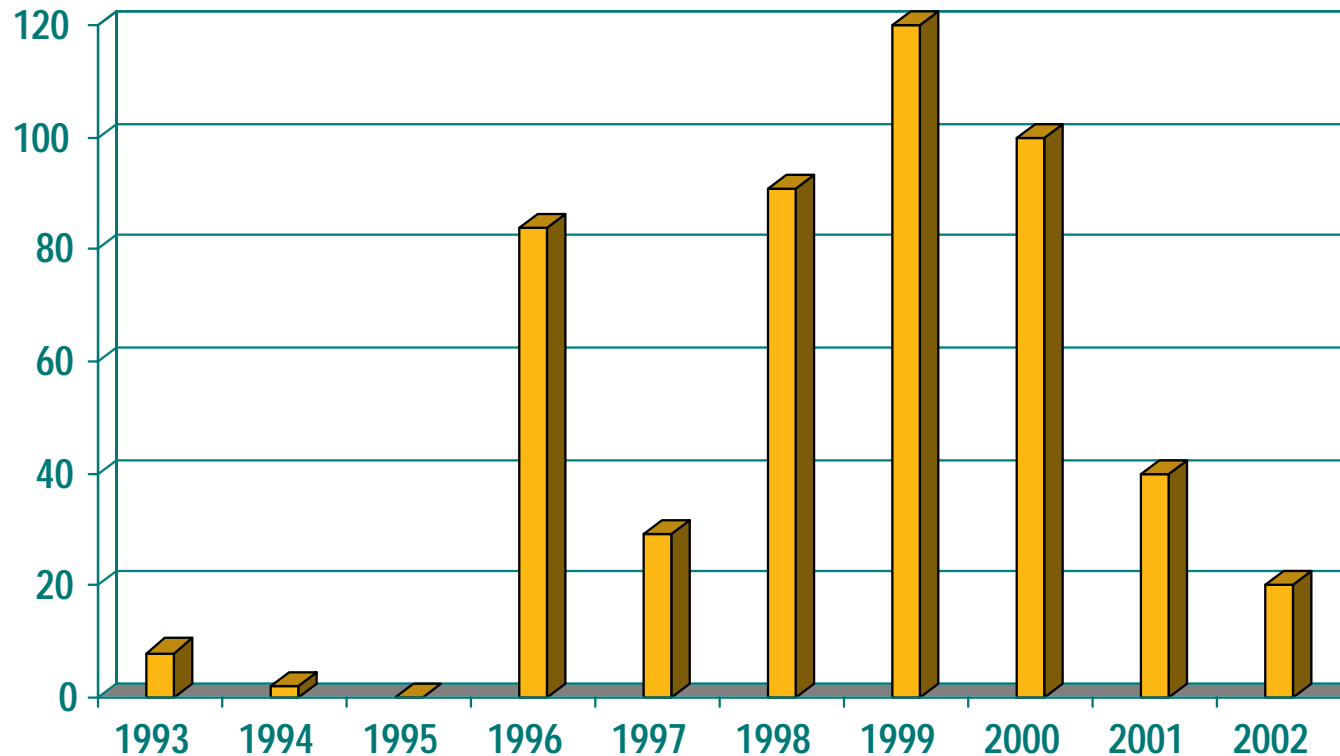
Transplant Recipients Can Develop Hundreds of Skin Cancers



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73 Year-old Outdoorsman s/p Cardiac Transplant 1993



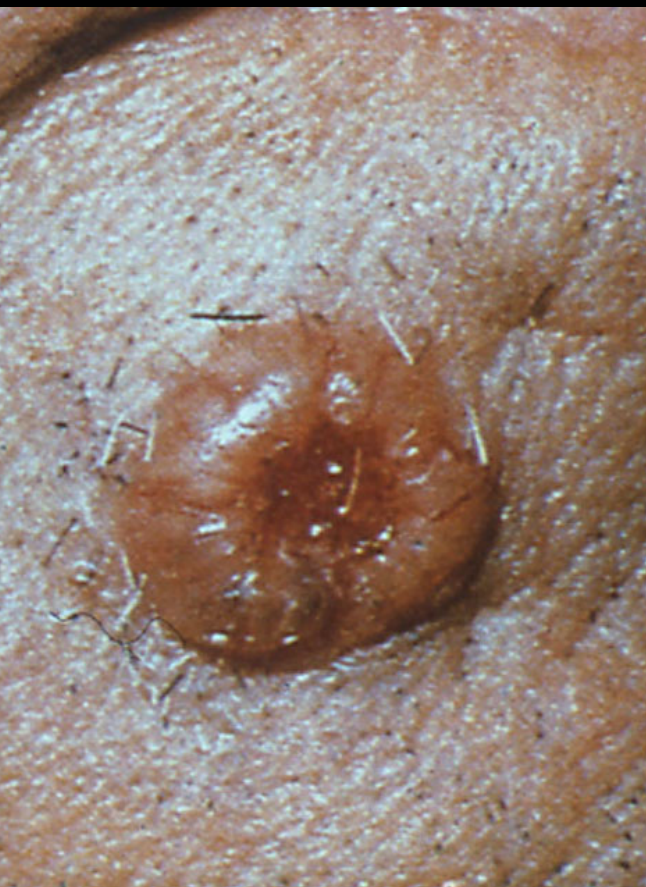


The State of Skin Cancer

- Basal cell carcinoma 1,000,000
 - Incidence doubles every 25 years
- Squamous cell carcinoma 300,000
 - Incidence doubles every 20 years
- Melanoma 51,400
 - Incidence doubles every 15 years

Types of Skin Cancer

- Basal Cell Carcinoma (BCC)
- Squamous Cell Carcinoma (SCC)
- Melanoma
- Others exist, but are less frequent



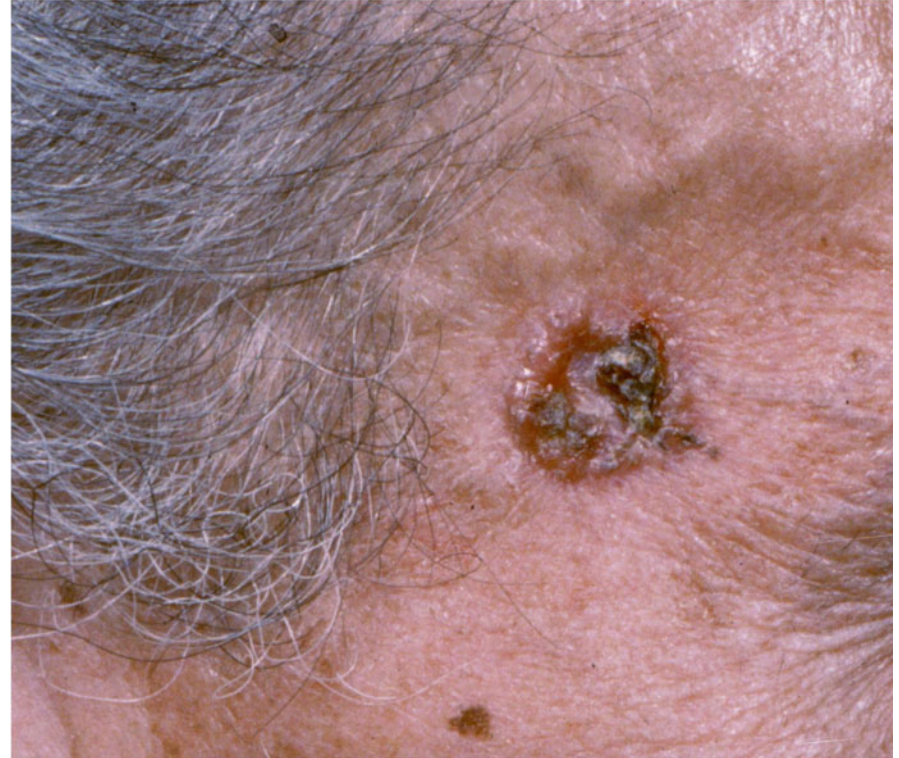


Basal Cell Carcinoma (BCC)

- Most common cancer in the US
- Incidence: >1,000,000/yr
- Location: 85% on head/neck
- Risk of spread to other organs (Metastasis): Very, very low
- Local cancer growth can lead to severe problems
- Different types with different appearances
 - Nodular
 - Superficial
 - Morpheaform

Features of Nodular (Classic) BCC

- Most often on the face, ears and other sun-exposed areas
- A bump with rolled borders
- Pearly sheen
- Blood vessels at the edges
- Central ulceration
- NON-HEALING SORE

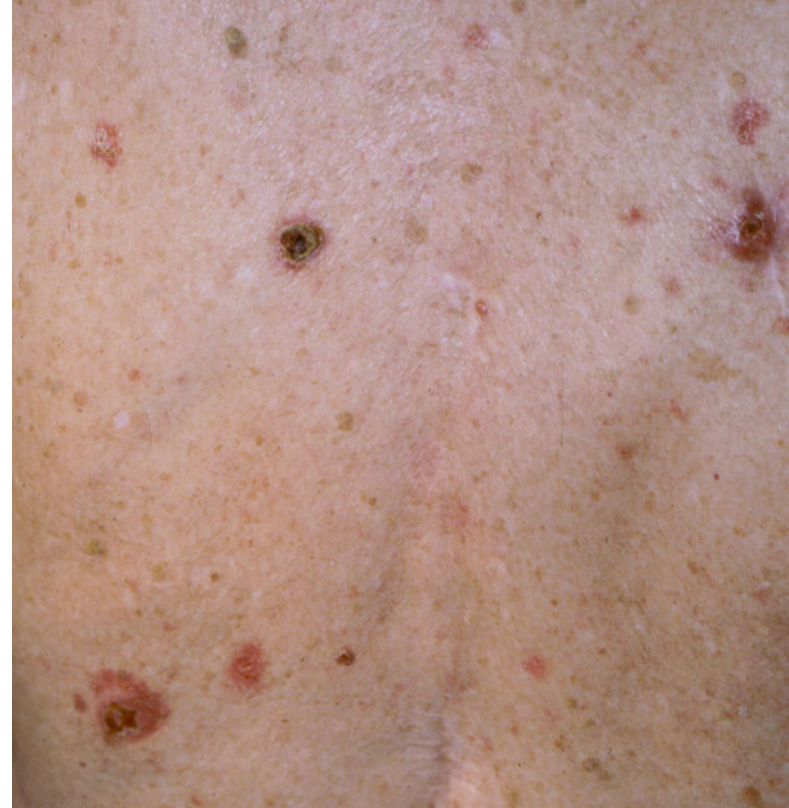




- Basal Cell Carcinoma-nodular

Features of Superficial BCC

- Most common on shoulders, chest, back and arms
- Area of redness, often with scale
- May have brown color at the border
- Slow growing

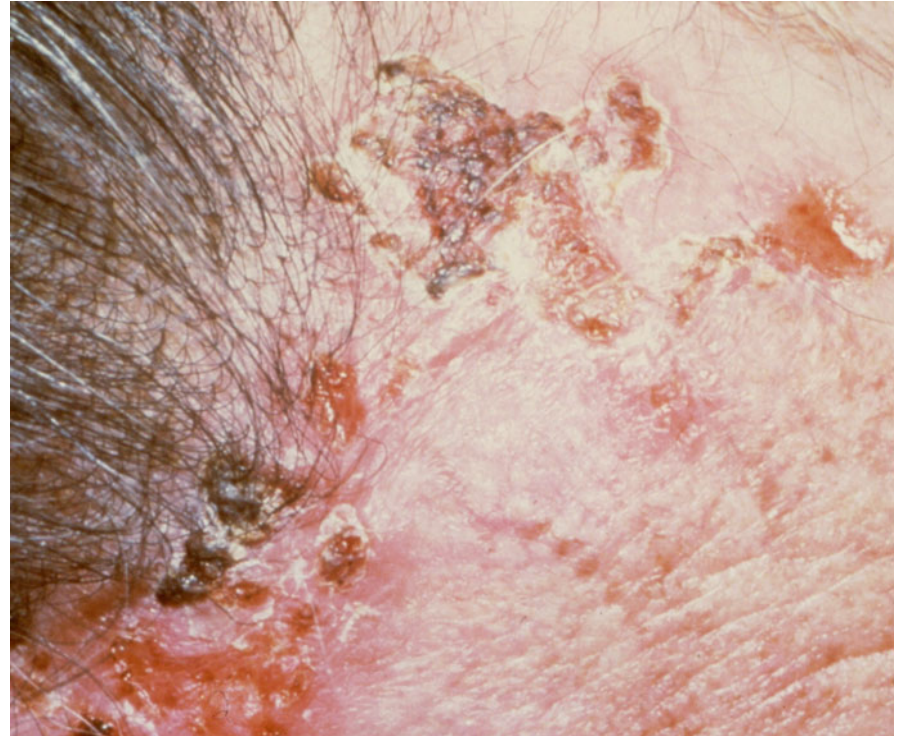




- Basal Cell Carcinoma-superficial

Features of Morpheaform BCC

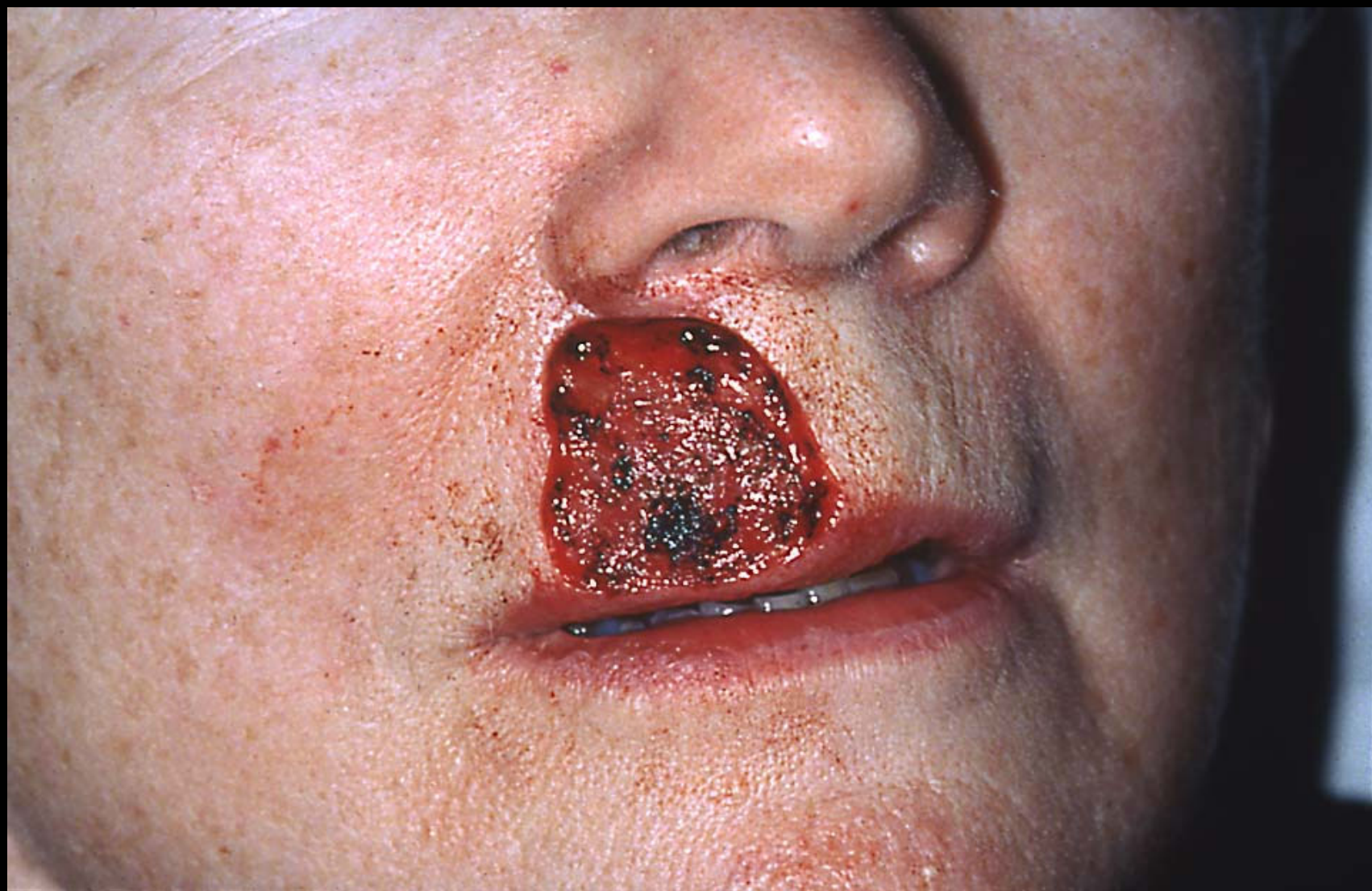
- Most often on the face
- May look like a scar with poorly defined borders and a shiny, taut surface
- May ulcerate
- Usually more aggressive
- Often cosmetically destructive





- Basal cell carcinoma-morpheaform type



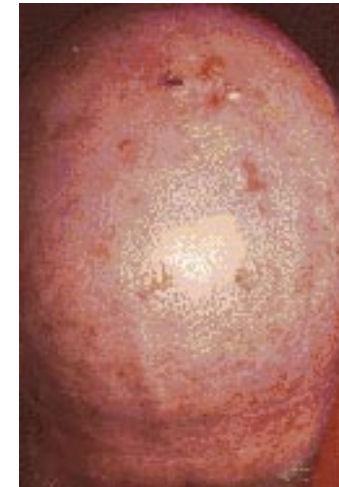
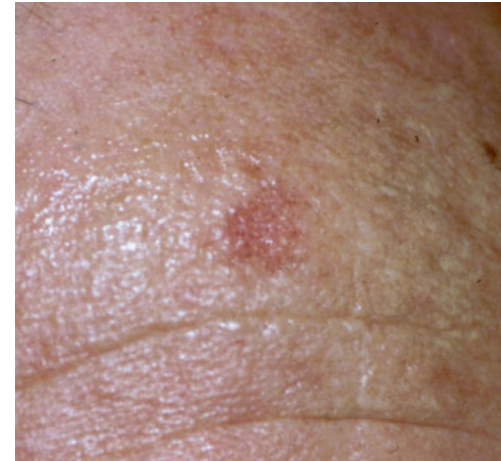


Squamous Cell Carcinoma (SCC)

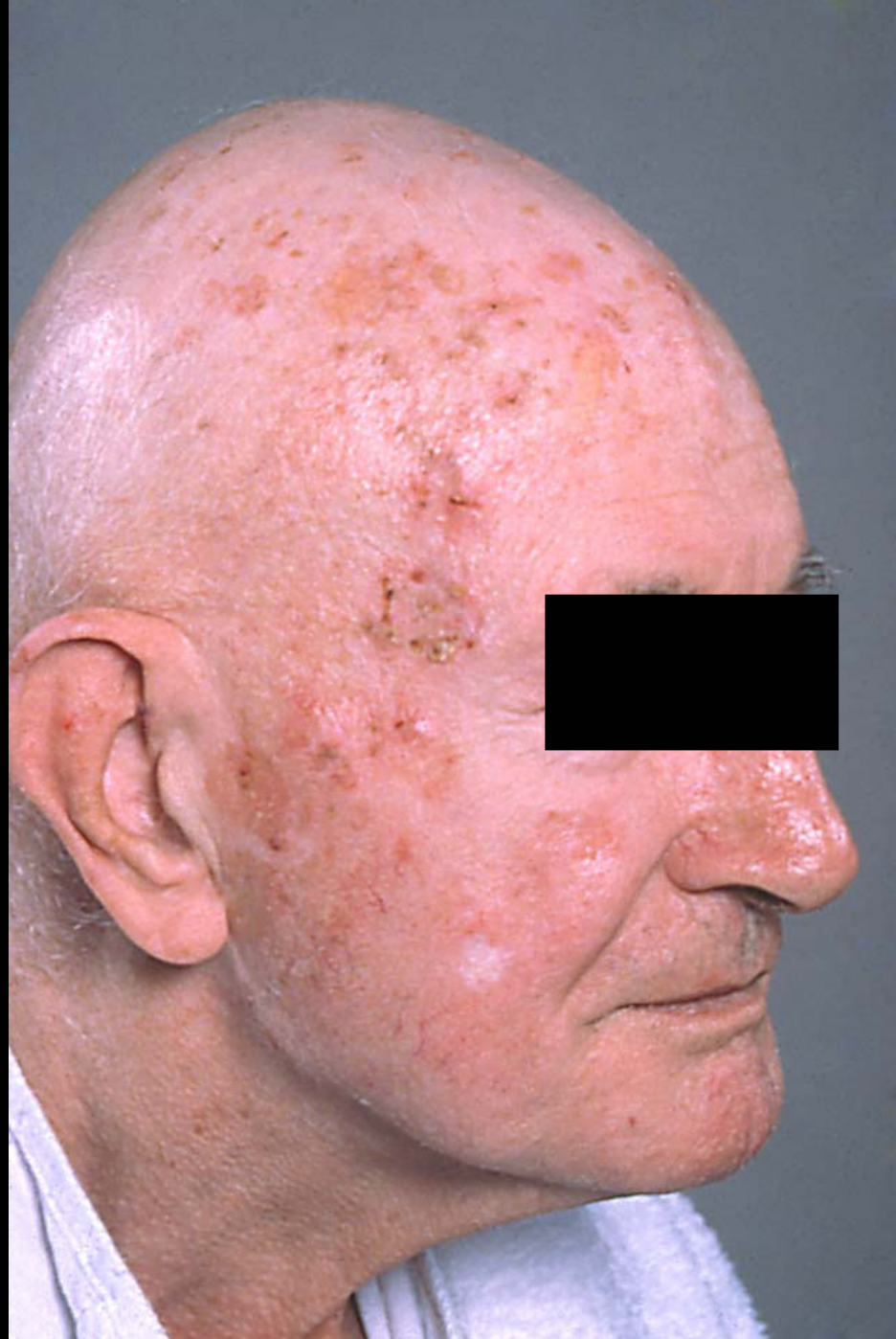
- Second most common skin cancer in general population
- Most frequent cancer in transplant patients
- 300,000/year in the US
- Location: 75% on head/neck or hands
- Risk of metastasis in general population: 0.5-5%
 - Increased for organ transplant patients

Actinic Keratosis (a.k.a. the First Stage of SCC)

- Rough, scaly spot on a red, irritated base
- May shed to leave red base--then recur
- May be more easily felt than seen
- Individuals often have multiple actinic keratoses







SCC

- As the lesion progresses from the appearance of an AK
- Red, scaly patch
- With or without crusting
- May develop a nodule



SCC

- As the lesion progresses from the appearance of an AK
- Red, scaly patch
- With or without crusting
- May develop a nodule



SCC

- More developed SCC
- Nodule increases in size
- May ulcerate



SCC

- Aggressive tumors may grow rapidly

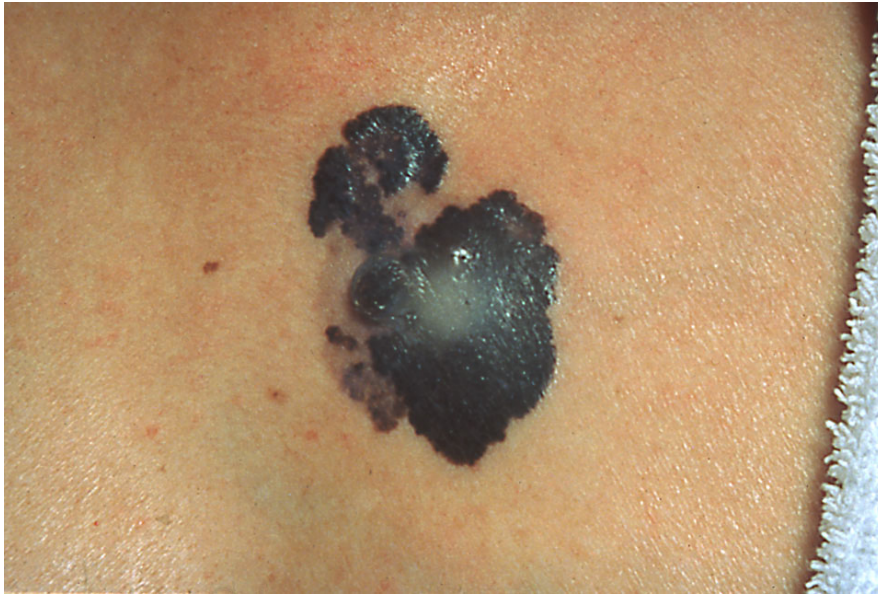




- Squamous Cell Carcinoma of the lip

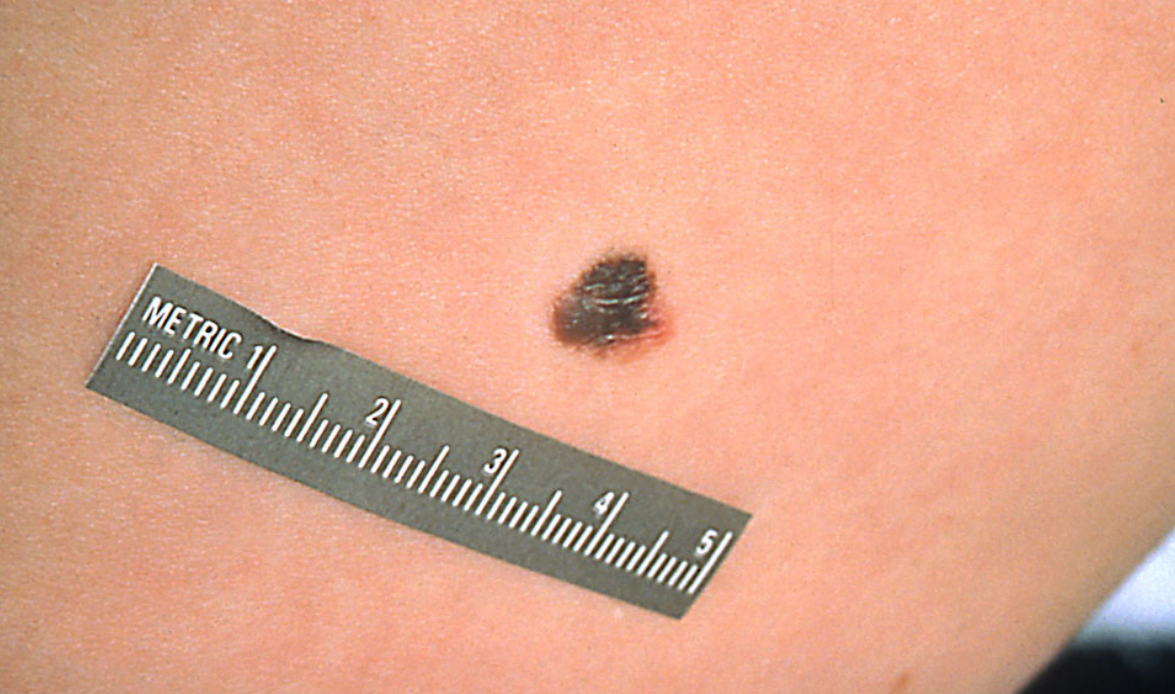
Malignant Melanoma (MM)

- Least common skin cancer but the most deadly
 - Fifth most common cancer in men, sixth in women
- Location: most common on legs, back
- Risk of spread (metastasis):
 - Dependent on tumor depth at diagnosis
- Surgery
 - Wide local excision
 - Sentinel lymph node biopsy



Melanoma

- Assymetry
- Irregular Border
- Variations in Color
- Diameter >6mm
- Evolving (changing)



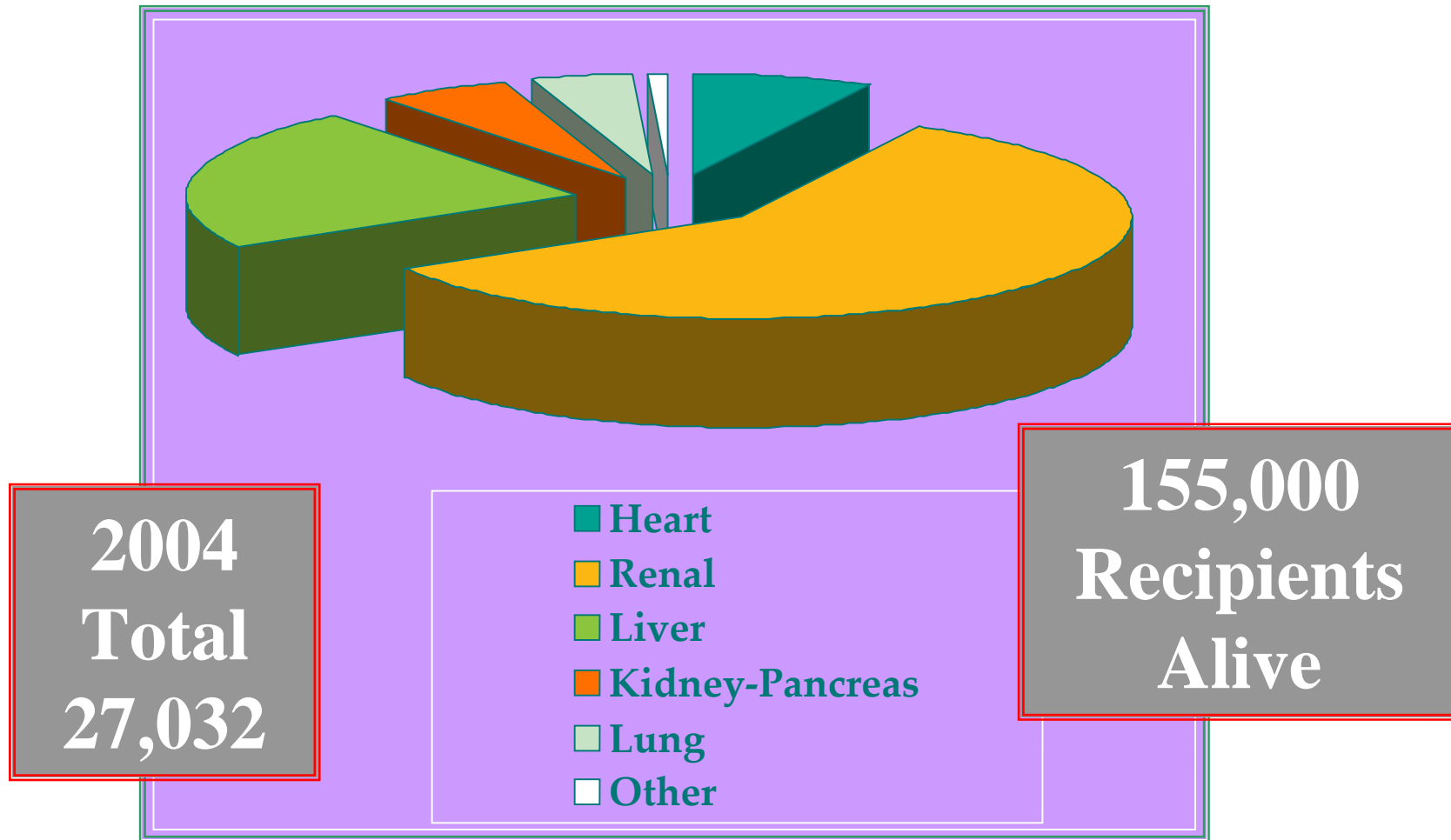


LENTIGO MALIGNA MELANOMA

The State of Transplantation in the U.S. - UNOS Data

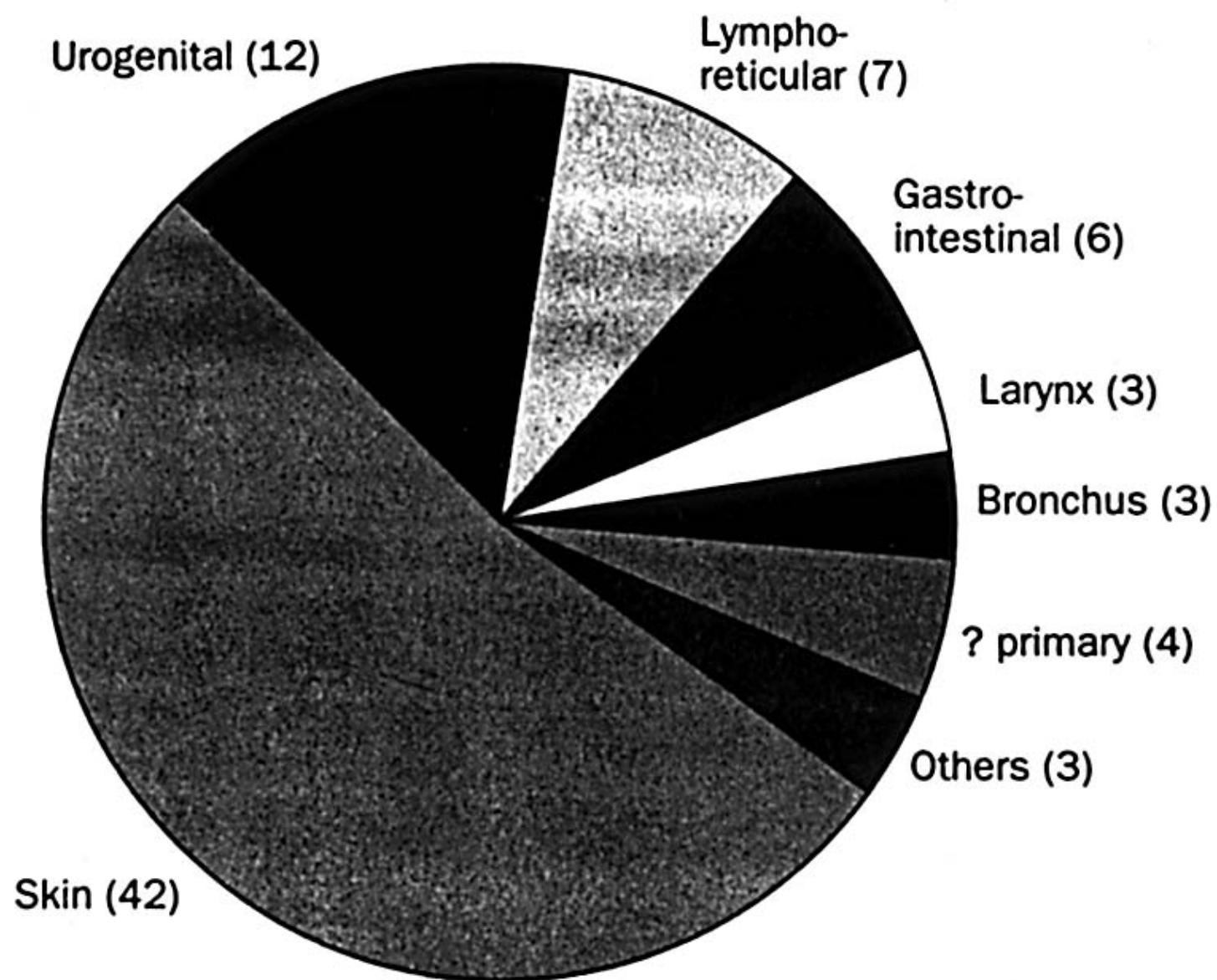
- Over 28,000 organ transplants per year
- Approximately 155,000 organ recipients currently alive in U.S.
- Over 90,000 people awaiting transplants
- Over 7,300 die waiting each year
- Organ donation numbers increasing only slightly
- Organ scarcity is major problem

US Organ Transplants in 2004

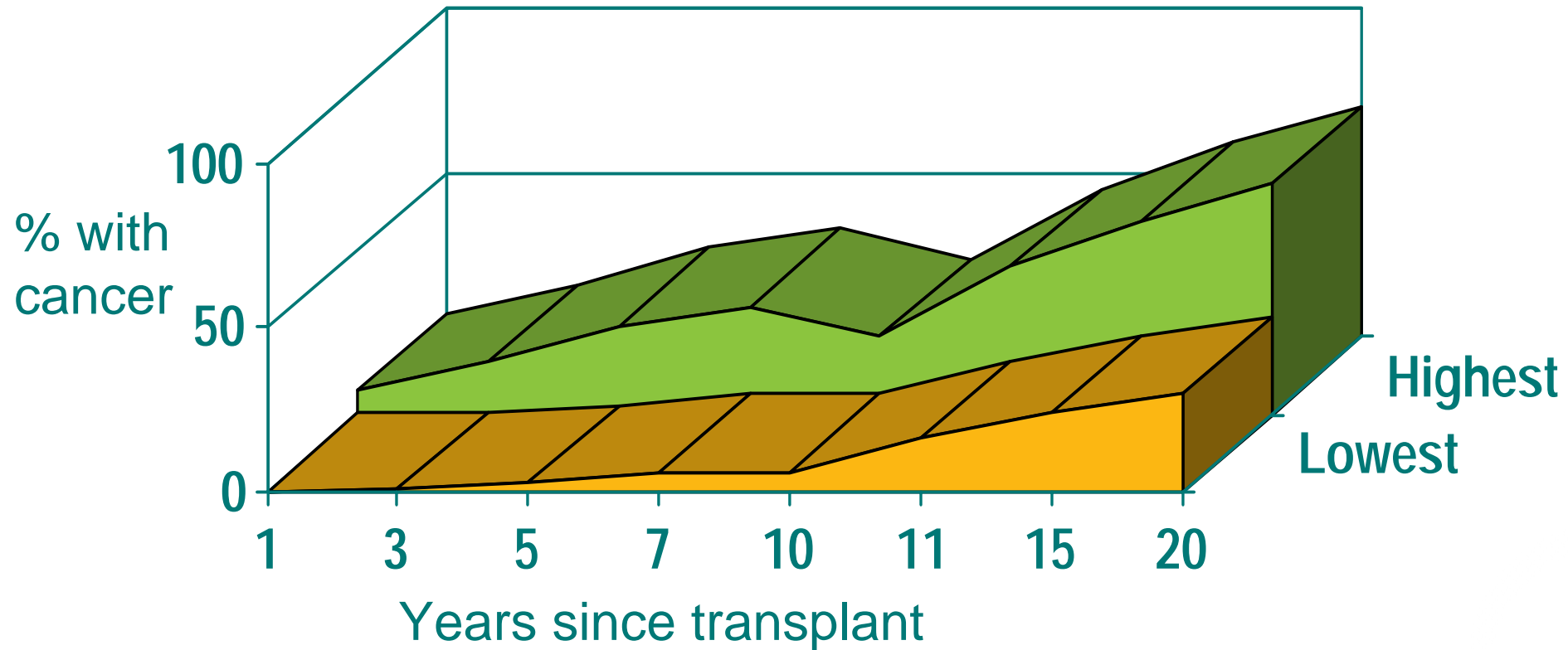


Skin Cancer in Organ Transplant Recipients

- Most common post-transplant malignancy
- The spectrum of skin cancer in organ transplant patients is quite wide
 - For some patients it will be a minor problem requiring simple treatment
 - For others it will be a serious problem requiring multiple doctor visits and surgeries
 - For a few it will cause death



Prevalence of Skin Cancer in Transplant Patients: High and Low Estimates



Increased Risk From Skin Cancer in Transplant Patients vs. the General Population

- Squamous Cell Carcinoma
- SCC of lip
- Basal Cell Carcinoma
- Melanoma
- 65-fold increase
- 20-fold increase
- 10-fold increase
- 3.4-fold increase

Ref: Jensen JAAD 1999;40:17 Hartevelt Transplantation
1990;49:506.

Characteristics of Nonmelanoma Skin Cancer in Transplant Recipients

- Occur average of 30 yrs earlier
- More frequently there are multiple skin cancers
- May resemble warts
- May have more rapid rate of growth
- Increased rate of recurrence
- Increased rate of metastasis

Death From Skin Cancer

- In a New Zealand/Australian study
 - Over 5% of SCCs lead to the death of the patient
- In Sydney, Australia, metastatic skin cancer (SCC, MM, MCC) accounted for 27% of all deaths after the fourth year post cardiac transplantation (Ong. JAAD 1999;40:27)

Who is at Most Risk?

- Some factors are the same for transplant and non transplant patients
 - Age--older means higher risk
 - Skin type--Fair skin (burns easily), blue green or hazel eyes, red or blonde hair means higher risk
 - Sun exposure--the more sun, the higher the risk
 - History of a previous skin cancer--increases the risk for another

Who is at Most Risk?

- Some factors are unique to transplant patients
 - Age at transplantation--older means higher risk
 - Time since transplantation--longer means higher risk
 - Level of immunosuppression--higher levels mean higher risk
 - Warts--increase the risk of skin cancer

What About Pediatric Transplant Recipients?

- Highest risk is for lymphoma
- Skin cancer comprises 20% of all neoplasms (compared with 38% in adults)
- Melanoma is more common in transplanted children, comprising 15% of all skin cancers (compared with 5% in adults)

Immunosuppressive Medications - What Do They Do?

- Prevent graft rejection--give the gift of life
- But, they also
 - Suppress entire immune system
 - Increase susceptibility to infection
 - Cause skin cancer

The State of Immunosuppression

- Intense regimen to prevent acute rejection after transplantation
- Tapered regimen to prevent chronic rejection as time passes
- Improved survival rates since cyclosporine was introduced
- Stable survival since cyclosporine
- As newer drugs become available, patients may be on many combinations

Rejection Versus Cancer

PREVENT REJECTION

- More drugs
 - Less rejection
 - Higher survival with transplant
 - More skin cancer

PREVENT CANCER

- Fewer drugs
 - Less skin cancer
 - Higher survival from cancer
 - Increased quality of life
 - ? More rejection

Recent Changes in Immunosuppression

OLDER DRUGS

- Prednisone
- Azathioprine
- Cyclosporine

NEWER DRUGS

- Mycophenolate mofetil
- Tacrolimus
- Rapamycin
- Immunostimulatory blocking antibodies

The Hope - The Future

- Prevent rejection of the grafted organ without suppressing the entire immune system

What Can Be Done?



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Reduce Incidence of Skin Cancer

Are You at Risk?

- Fair or easily burned skin
- Blue, green or hazel eyes
- Red or naturally blonde hair
- Extensive freckling
- History of extensive outdoor sun exposure
- A prior history of skin cancer
- A family history of skin cancer

High Risk Patient Recognition

- If you said “yes” to any of the listed risk factors, you should have an initial complete skin exam by a dermatologist.

How to Prevent Problems with Skin Cancer

- Before the transplant be evaluated for possible skin cancers
- Discuss with your doctor your risk for skin cancer
- Be educated about sun protection and sun avoidance
- Examine your skin at least monthly
- See your dermatologist regularly for a skin exam
- Have any precancers or cancers treated early

Sun Protection

- Wear broad spectrum sunscreen with a SPF 30 or higher
 - Find a sunscreen you like
 - Apply liberally - it takes 1 to 2 ounces to cover the body adequately
 - Apply 30 minutes before going out
 - Repeat application after swimming, sweating etc
 - Look for sunscreen in daily moisturizer and make-up if worn
 - Make sunscreen a daily habit!

Sun Protection

- Limit out-door activities between 10AM & 4PM
 - Avoid tanning
- No tanning booths!

Sun Protection

- Protective clothing
 - Favorite worn-in white t-shirt? Won't protect you!
 - Long-sleeve shirt, long pants
 - Tight weave fabric, if you can see through it, it won't protect
 - Special clothes with SPF are available
 - Special detergents are available to give SPF to clothes
- Wear a broad-brimmed hat

There is No Safe Tan

(Except Sun-less Tanning Cream)



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After Transplantation -
Reduce Incidence of Skin Cancer

Once a Month Self Skin Examination

- Well-lit room
- Two mirrors
- Family member may help
- Look at all skin surfaces
- Early detection is key



Examine your body front and back in the mirror, then right and left sides with arms raised.



Bend elbows and look carefully at forearms, upper underarms and palms.



Look at the backs of your legs and feet, the spaces between your toes and on the sole.



Examine the backs of your neck and scalp with a hand mirror. Part hair for a closer look.



Finally, check your back and buttocks with a hand mirror.

What To Look For?

- Persistent red areas
- Areas with persistent sandpaper like scales
- Persistent sores that don't heal
- Areas that bleed easily
- Spots that change colors
- ABCDE guidelines for moles

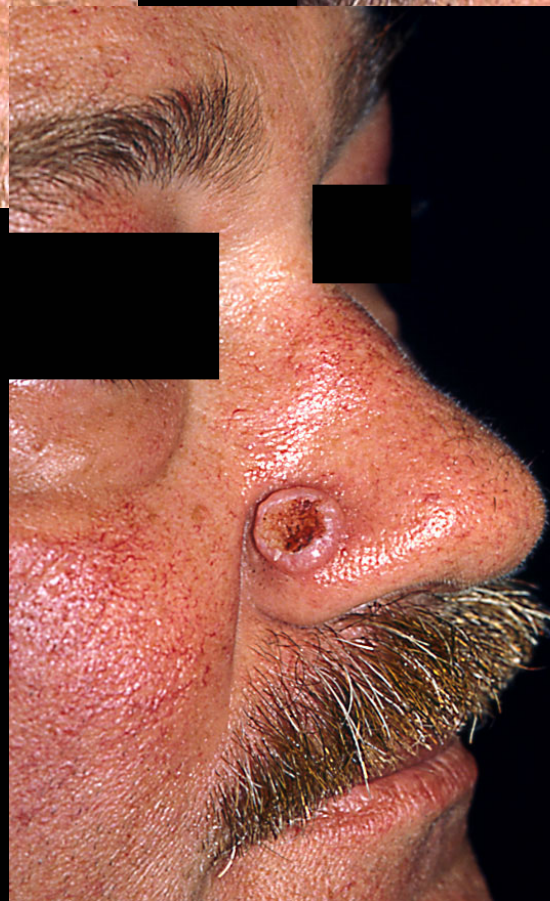
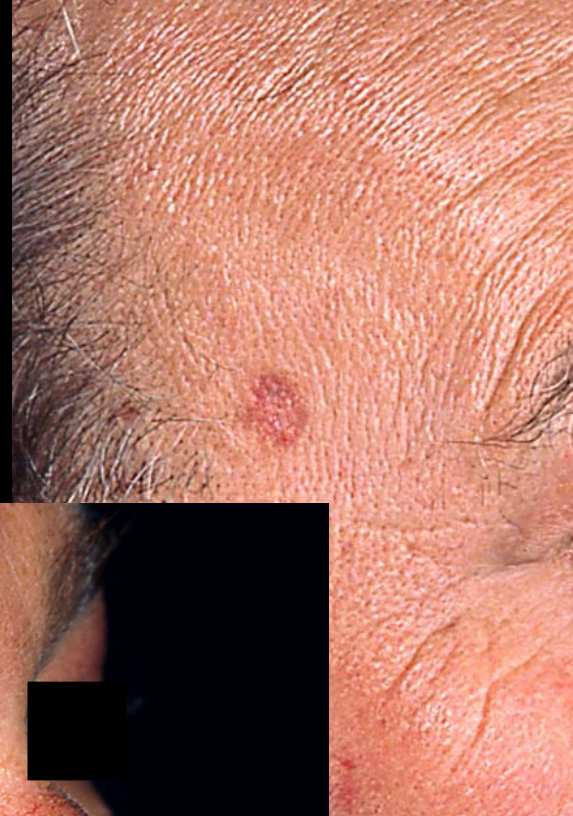
ABCDE Guidelines

- A - Asymmetry
- B - Border irregularity
- C - Color variation
- D - Diameter greater than 6mm (size of a pencil eraser)
- E - Evolution (change in size, color, etc.)



The Progression of Squamous Cell Carcinoma

- ↓ Actinic damage
- ↓ Actinic Keratosis
- ↓ Squamous Cell Carcinoma in-situ
- ↓ Invasive Squamous Cell Carcinoma
- ↓ Metastatic Squamous Cell Carcinoma



- Actinic Keratoses



- Actinic Keratoses



Treatment and Prevention of Actinic Keratoses

- Cryosurgery (freezing the spots)
- Surgically removing the spots
- Topical 5-fluorouracil (Efudex, Carac, etc.)
- Topical Imiquimod (Aldara)
- Photodynamic Therapy
- Topical Retinoids (Retin A, Renova, etc.)

Treatment of Early, Less Aggressive Squamous Cell Carcinoma

- Suspicious lesions need a biopsy!
- Electrodesiccation and curettage (scraping and burning)
- Excision
- Mohs Micrographic Surgery



Treatment of Aggressive Squamous Cell Carcinoma

- Excision
- Mohs Micrographic Surgery
- May require additional treatment
- Radiation therapy
- Lymph node removal



Multiple Tumors Require Multiple Procedures



Treatment of Squamous Cell Carcinoma Which is Aggressive, Metastatic or Frequent

- In addition to surgical treatment your doctors may consider
 - Radiation therapy
 - Reducing immunosuppression
 - Oral retinoids



See Your Dermatologist Frequently

- | | |
|-----------------------------|----------------|
| • No history of skin cancer | Every year |
| • History of skin AKs | Every 6 months |
| • History of NMSC | Every 6 months |
| • History of multiple NMSC | Every 4 months |
| • History of dangerous SCC | Every 3 months |
| • History of metastatic SCC | Every 2 months |

How Informed Are You?

- In a survey of transplant patients
 - 91% knew the sun was harmful
 - 77% knew immunosuppression makes it worse
 - 69% used sun precautions
 - But only 43% used sunscreen
 - Only 10% used regularly used SPF 10 +

Education - Does it Work for Skin Cancer?

- Only 54% recalled advice to sun protect after transplant
- Repetitive advice may be helpful, so you will hear this often from your doctors and nurses

Treat Yourself Well
and Remember to Care
for Your Skin!



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ORGAN TRANSPLANT RECIPIENTS

SKIN CANCER PREVENTION

awareness

risk factors

quality of life

sun avoidance

clothing

sunscreens

follow-up



INTERNATIONAL TRANSPLANT
SKIN CANCER COLLABORATIVE



www.ITSCC.org

ARE YOU
AT RISC?



Reduce the Incidence of Skin Cancer
After Organ Transplantation



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