Let's Talk about:
Skin Aging and Skin Cancer

Skin
The skin is the outer covering of the body. It is the largest organ of the integumentary system made up of multiple layers of ectodermal tissue. The skin guards the underlying muscles, bones, ligaments and internal organs.

Because it interfaces with the environment, skin plays a key role in protecting the body against pathogens and excessive water loss. Its other functions include insulation, temperature regulation and the synthesis of vitamin D. Severely damaged skin will try to heal by forming scar tissue. Scars are often discolored or depigmented.

Skin contains melanocytes which produce melanin, a pigment which absorbs some of the potentially dangerous ultraviolet radiation (UV) in sunlight. Skin also contains DNA-repair enzymes that help reverse UV damage, and people who lack the genes for these enzymes suffer higher rates of skin cancer.

Skin Aging
Photoaging refers to the damage that is done to the skin from prolonged exposure, over a person's lifetime, to UV radiation. Most of the skin changes that occur as we get older are accelerated by sun exposure. Examples of skin changes from photoaging include:

- Dark spots
- Wrinkles
- Droopy skin
- A yellowish tint
- Broken blood vessels
- Leathery skin
- Skin cancer

Cigarette smoking also contributes to wrinkles. The wrinkling increases with the amount of cigarettes and number of years a person has smoked.

Recommendations:
You can protect yourself from photodamage by staying out of the sun when it is strongest (11am - 4pm), using an SPF 30 broad spectrum sunscreen, wearing protective clothing including hats wherever possible, and avoiding sunlamps and tanning beds.

Skin Cancer:
Skin cancer is a disease in which skin cells lose the ability to divide and grow normally. Abnormal cells can grow out of control and form a mass or 'tumor'. A malignant skin tumor is considered low risk for spread if it is limited to a few cell layers and does not invade surrounding tissues or organs. Once invasion has occurred, the malignant tumor cells may spread to other organs causing further damage and illness.

Cancer cells crowd out and destroy nearby healthy cells forming growths called malignant tumors. Most skin growths, however, are non-malignant, benign (not harmful) tumors.

Types of skin cancer:
Basal cell carcinoma is the most common kind of skin cancer. More than 90 per cent of all skin cancers in the United States are basal cell carcinomas. Fortunately, basal cell carcinoma also is the least serious kind of skin cancer. That's because it grows slowly and rarely spreads.

Squamous cell carcinoma is more serious because it does spread to vital organs inside the body. Spread occurs in a few cases in every 100. It does so slowly. At first cancer cells tend to spread only as far as the nearest lymph nodes structures, which filter out and trap the cancer cells. If spread has occurred, the affected lymph nodes can be removed before cancer spreads to vital organs.

Malignant melanoma is the most serious kind of skin cancer because it may spread quickly from the skin through the lymph nodes or blood, to internal organs.
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People at higher risk of skin cancer are those who:
- previously had a skin cancer and/or have a family history of skin cancer
- have a large number of moles on their skin
- have a skin type that is sensitive to ultraviolet (UV) radiation and burns easily
- have a history of severe/blistering sunburns, especially during childhood
- spend lots of time outdoors, unprotected, during their lifetime
- actively tan or use solariums, sunlamps and sunbeds
- work outdoors

How skin cancer is diagnosed
Skin cancer is diagnosed by physical examination and skin biopsy.
A skin biopsy is a quick and simple procedure where part or all of the skin lesion is removed and sent to a laboratory. It may be done by your family doctor or you can be referred to a dermatologist or surgeon. Results may take one to two weeks before they are available.

How skin cancer is treated
In choosing the best treatment option, your doctor will consider your age and general health, the type and size of cancer, where it is on your body and what you want. The treatment choice will also depend on whether the skin cancer has spread elsewhere in your body.

Types of treatment include:
- surgery
- freezing
- scraping
- radiotherapy
- chemotherapy

A unique provincial resource, the Providence Health Care Division of Dermatology provides 24-hour-a-day, 7-day-a-week coverage of St. Paul's Hospital and cross-coverage of Vancouver Acute weekdays and evenings.

Dermatology clinics for urgent consultation and follow-up are located twice weekly in the Rapid Access Specialist Clinic, once weekly at the Mount St. Joseph's Hospital Ambulatory Clinic, and twice weekly in the John Ruedy Immunodeficiency Clinic, under the auspices of the Medicine/Ambulatory and HIV/AIDS Programs.

Just as important as the high-quality care we provide is our teaching and research mandate that helps us to better understand skin conditions, improve patient care and develop new treatment solutions.

The dermatologists undertake clinically based independent and collaborative research and clinical trials, as well as supervise basic research programs in immunology, photobiology and the molecular biology of neoplastic and inflammatory skin diseases.

The Division of Dermatology has recently expanded its clinical services to involve the Mental Health Program at St. Paul's Hospital. The Skin Health Liaison (SKIL) Clinic is a highly specialized multidisciplinary clinic attended by both psychiatry and dermatology. The focus of the clinic is to help patients with complex skin problems that may either relate to underlying mental illness or cause significant debilitation due to the chronic nature of skin disease. Another exciting initiative is the recent establishment of an Urgent Dermatology Clinic at Mount St. Joseph's Hospital. This clinic will allow the timely assessment of emergency dermatologic patients within Mount St. Joseph's Hospital, its Emergency Department, and other Providence Health facilities.

To support programs like this at St. Paul's Hospital, please visit www.helpstpauls.com to make a donation to the Department of Medicine Academic Fund.

Source:
The Canadian Dermatology Association, American Academy of Dermatology, Wikipedia