



EUROPEAN
ACADEMY OF
DERMATOLOGY &
VENEREOLOGY

Information Leaflet
for Patients

Moles and malignant melanoma



The aim of this leaflet

This leaflet is designed to help you understand more about the evolution of moles (melanocytic naevi) and malignant melanoma (dark skin cancer/cancerous mole) during pregnancy. It tells you what these conditions are, what causes them, and what can be done.

Moles and malignant melanoma

MOLES

What are moles?

Moles (melanocytic naevi) are benign (non-cancerous) spots which are usually dark brown in colour, but can also be skin-coloured and have different shapes and sizes. They can be raised on the skin or may contain dark hairs; the number varies between 10 and >100 moles on a person. This number may change throughout life. Moles are also called "beauty marks." Sometimes they are congenital (present at birth) but most of them are acquired (which appear later). In the majority of cases they are harmless, but rarely they can become cancerous.

What causes moles?

Genes (heredity) play an important role in the formation of moles. In the case of acquired moles, sunlight exposure or any artificial sources of ultraviolet (UV) light exposure (sun beds or tanning lamps) also contribute.

What should I look for in a mole that develops during pregnancy?

During pregnancy, moles can become darker and larger, particularly on the abdomen and breasts, due to normal skin expansion. These benign changes are usually symmetrical. Therefore, any asymmetrical change in size, shape, or colour should be examined by your dermatologist. A *dermatoscopic* evaluation (examination with a hand-held magnifier) of moles during pregnancy may reveal some modifications in the structure, yet these often completely resolve after delivery. However, generally, pregnancy does not induce significant physiological changes in moles.

MALIGNANT MELANOMA

What is malignant melanoma?

Malignant melanoma is a skin cancer originating from a pre-existing *naevus* (mole) or *lentigo* (freckle), although in a large majority of cases, it arises from normal skin. Melanoma can arise anywhere on the body, but occurs predominantly on sun-exposed areas of the skin. The condition is curable if the malignant process is limited to the surface of the skin and treated early. If not treated, melanoma may grow down into deeper layers of the skin and may finally spread throughout the body (*metastasis*).

What causes malignant melanoma?

Age, genetics and excessive sun exposure are considered to be major risk factors for melanoma. The incidence of melanoma is increased in people with a personal (and family) history of melanoma, with fair skin, many freckles, or red hair. Also, it is increased in individuals who have had excessive sunlight exposure and subsequent blistering sunburns (both during childhood and adulthood), or who exposed themselves to excessive UV artificial radiation through the use of sun beds or tanning lamps.

The following are risk factors for developing a melanoma:

- Increasing age (the incidence of melanoma increases with age)
- fair skin, high density of *lentiginos* (freckles), red hair
- more than 50 *melanocytic naevi* (moles)
- the presence of more than 5 atypical moles (moles with irregular shape and colour)
- personal history of melanoma (melanoma *in situ*)
- family history of melanoma (especially in the case of first-degree relatives)

- excessive sun exposure (either acute intermittent [on holidays], or chronic accumulated [lifelong]).

What is the appearance of melanoma in pregnancy and what should I look for?

The appearance of melanoma in pregnancy is identical to that in non-pregnant women. Any spot that changes in colour, size, or shape, or bleeds, becomes an open wound (*ulcerates*), is painful, or itchy must be examined by a dermatologist.

A regular self-examination should follow the **ABCDE rule**:

A (ASYMMETRY) meaning one-half of the mole does not match with the other half;

B (BORDER IRREGULARITY) meaning the border or the edges of the mole are irregular, ragged, scalloped, blurred, or poorly defined;

C (COLOUR VARIATION) meaning the colour is not the same throughout the whole surface of the spot and varies in shades of tan, black, brown, red, blue, or white;

D (DIAMETER OVER 6 MM) usually the diameter of a malignant lesion is greater than 6 mm, but can (rarely) also be smaller;

E (EVOLVING) meaning enlarging, changing in time.

How is melanoma evaluated in pregnant patients? Is testing safe for the baby?

When the clinician suspects a melanoma, a dermatoscopic examination followed by an excision (biopsy) of the spot will be performed. As a rule, there is no need to delay removal of a suspicious lesion during pregnancy. The tissue removed would be examined under a microscope (histopathological examination), a process that takes from 1 to 2 weeks). This examination will establish whether it is a melanoma (and, if so, the thickness of the melanoma), or not. The condition

is staged in the same way between pregnant and non-pregnant women.

In order to establish the stage of the melanoma, the main aspects to be considered are:

- the thickness (how deep the melanoma has grown into the skin)
- the type of melanoma
- involvement of lymph nodes
- the spread of melanoma into other organs (*metastasis*).

Thin melanoma (1 mm deep) usually has a very good outlook, but more skin may still need to be removed to ensure that it has been treated adequately.

Other medical procedures that may be used for staging the melanoma are: sentinel lymph node biopsy, ultrasound, or MRI (*magnetic resonance imaging*).

Sentinel lymph node biopsy is used in order to know whether the melanoma has spread beyond the skin, and consists of a biopsy of the first lymph node into which the melanoma drains. In order to identify the lymph node into which the melanoma drains, a procedure called lymphoscintigraphy is performed. Pregnancy is not a contraindication to this procedure, if the pre-operative lymphoscintigraphy is performed with Technetium99. Patent Blue dye, used in non-pregnant patients, should be avoided in pregnancy due to the risk of anaphylaxis (allergic reactions) and teratogenicity (fetal malformations).

Ultrasound can be used, yet methods using X-rays or radioactive isotopes must nevertheless be avoided. MRI scans should be avoided in the first trimester of pregnancy due to the possible risk of fetal heating & cavitation. Likewise, CT (computed tomography) scans, or PET (a positron emission tomography) scans should be avoided due to the risks associated with irradiation.

How is melanoma treated during pregnancy? What are the implications of treatment for the baby?

Treatment depends both on the stage of the melanoma and on the stage of pregnancy. The first-line treatment for all melanoma is surgery (removal of the melanoma under local anaesthesia). Normally, the initial excision is followed by a wide local excision, aimed to ensure that the melanoma has been treated adequately. Biopsies and wide local excisions can be safely performed during pregnancy.

For more advanced melanoma that has spread into other organs, other treatments can be considered on a case by case basis, and taking into consideration the risks and the benefits of each procedure. The lack of evidence regarding the safety during pregnancy of chemotherapy or immunotherapy should play a nodal role in the use of these treatments. Likewise, radiotherapy – known to possibly cause fetal malformations and death, or childhood leukemia – should be postponed, where possible, until the postpartum period.

Can melanoma spread to the baby?

In most cases of melanoma, the baby will not be affected either by melanoma or by surgical treatment. If the condition is at a late stage, when lymph nodes or internal organs are involved (advanced disease), the disease may spread to the placenta and the baby. In this situation, the placenta should be examined, and the baby should be monitored in the following months for any signs of melanoma. However, this situation is very rare.

Is melanoma contagious for other people?

No, it is not.

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Does pregnancy worsen the prognosis of melanoma?

Pregnancy itself does not worsen the prognosis of melanoma. However, in pregnancy, diagnosis and treatment are often delayed, a fact that may lead to a late-stage melanoma and thus worsen prognosis. It is therefore important to remove a mole that is suspicious for melanoma as **early as possible**. Also, melanoma does not influence the outcome of the pregnancy for mother or baby.

What can I do if I had a melanoma in the past and want to become pregnant?

If you have been diagnosed with melanoma, some doctors recommend waiting for some time before becoming pregnant. This is because melanoma (particularly thick melanomas) may spread to lymph nodes and internal organs sometime after the initial diagnosis, even after the melanoma has been removed. However, there are no guidelines regarding the length of time a woman should wait before becoming pregnant. The decision should be made after careful consideration of all the pros and cons, and after discussion with your partner and your doctor.

What can I do to avoid another melanoma?

There are some rules that help to prevent the development of melanoma and help you detect a melanoma as early as possible:

- Examine all areas of your skin regularly, in order to detect any changing moles; apply the **ABCDE rule**. Any changing mole should be examined by a dermatologist.
- Avoid artificial UV light (sun beds or tanning lamps) and protect yourself from excessive sunlight.
- Avoid peak-sun exposure between 10 a.m. and 4 p.m.
- Use a broad-spectrum sunscreen that will protect you against UVA and UVB (sun protection factor 50+) and apply it half an hour before going into the sun; reapply every 2-3 hours. But remember: covering up is better than using a sunscreen lotion!
- Make sure you get enough vitamin D.

While every effort has been made to ensure that the information given in this leaflet is accurate, not every treatment will be suitable or effective for every person. Your own clinician will be able to advise in greater detail.