Mohs micrographic surgery (MMS)
to treat your skin cancer: Slow Mohs

Your doctor has recommended MMS to remove your skin cancer. This leaflet explains what the procedure involves as well as its risks and benefits. If you have any questions or concerns, please speak to a doctor or nurse caring for you.

What is MMS?
This is a specialised form of surgery to remove certain skin cancers (tumours) and is called Mohs surgery after the doctor who developed it.

Your surgeon removes the visible portion of your tumour and then removes further tissue that may contain cancer cells, one layer at a time. This tissue is examined under a microscope while you are still in the dermatology unit. If the tissue contains cancer cells, another layer of tissue is removed and examined. This is repeated until all the cancer cells have been removed. The whole procedure may last several hours. In standard MMS this happens all in one day.

Slow Mohs
A variation on MMS is a technique called Slow Mohs which is what your doctor has recommended.

This process involves a layer of skin being removed using the micrographic technique explained above, and a secure dressing placed over the wound. Unlike regular MMS where tissue processing takes only 2-3 hours, Slow Mohs requires tissue processing of more than 24hrs. Availability of results may vary depending on how large the sample is and what subtype or diagnosis is discovered. You will then go home and return to hospital either to have more tissue removed or for dressing changes. If more tissue is removed, this will be repeated until the tumour is completely removed. This means that the procedure is carried out over multiple days rather than in one day.

Due to the nature of the surgery some patients may require hospital accommodation overnight. You will be advised on this during your consultation.

There are a number of reasons why Slow Mohs is recommended. These include:
- removal of dermatofibrosarcoma protuberans (DFSP)
- removal of lentigo maligna
- for any patient with a known infectious disease (such as HIV or Hepatitis)

Why should I have MMS?
Other types of surgery for skin tumours rely on the surgeon being able to see the exact extent of the cancer, which isn’t always possible. This can sometimes lead to a large wound and scar if too much healthy tissue is removed. It could also lead to too little tissue being removed and the cancer returning. MMS maximises the chances of your tumour being completely removed while minimising the amount of surrounding normal skin that needs to be taken away.
What are the risks?
Your doctor will explain the potential risks for this type of surgery with you in more detail, but possible complications are listed below.

- Bleeding at the site of the wound.
- Pain, although the local anaesthetic should last until you return home. If you need to, you can buy aspirin-free pain relief (such as paracetamol or co-codamol) over the counter from a chemist. Always check that the painkillers will not react with any other medication you are taking and follow the instructions on the packet. The doctor or nurse caring for you can give you more advice.
- Nerve damage - although your surgeon will try to avoid this, nerves can sometimes be damaged during surgery, leading to a numb area of skin. This is usually temporary.
- Infection at the wound site. You will be given instructions on how to care for your wound to minimise this risk.
- Scarring - you will have a scar after the surgery, although the doctors use closure techniques to minimise scarring. Any scars will fade over time.

Are there any alternatives?
Your doctor has advised that this is the most appropriate treatment for you. Any alternatives will have been discussed at your consultation. If you have further questions, please contact us (details at the end of this leaflet).

If your skin cancer is not treated, it will continue to grow and you may need more aggressive treatment in the future.

How can I prepare for my surgery?
Please let the staff looking after you know if you are taking any antiplatelet medicines (such as aspirin or clopidogrel) or any anticoagulant medicines (such as warfarin or rivaroxaban) as they may increase the risk of bleeding during and after the procedure. The doctor at your consultation will advise you if you need to stop any of your medicines before your surgery.

If you are taking warfarin, please visit your local warfarin clinic two or three days before your surgery date and have your INR level checked. If it is below 2 or above 3.5, please contact the dermatology clinic, as your surgery date may need to be rearranged (contact details at the end of this leaflet).

Please let us know if you have any allergies to medications including local anaesthetic, or if you are planning to travel within two weeks of your surgery date.

On the day of surgery please do not wear any makeup or jewellery on or near the site of your surgery. Please bring a packed lunch with you as you may be here for several hours and you will not be able to leave the unit until all of your surgery has been completed.

We strongly suggest that you bring a friend or family member with you to travel home with. We recommend that you do not travel home by public transport and you should not, under any circumstances, drive yourself on the day of your surgery.

Consent - asking for your consent
We want to involve you in decisions about your care and treatment. If you decide to go ahead, you will be asked to sign a consent form. This states that you agree to have the treatment and you understand what it involves. If you would like more information about our consent process, please speak to a member of staff caring for you.
What happens during Slow Mohs surgery?
There are several stages to MMS. First, the doctor will inject the area where your tumour is with a local anaesthetic. This numbs the area, so you will not feel any pain during surgery but will be awake. If you are particularly anxious, we can give you a mild sedative to help you relax – please discuss this with your doctor. We may also use anaesthetic eye drops if the tumour is near your eye.

Once the anaesthetic has taken effect, the visible part of the tumour is removed, along with a small amount of surrounding normal skin tissue. This tissue is taken to a laboratory to be processed and, unlike conventional MMS, this can take several days. A dressing would be applied to the wound and you would be given instructions for your next appointment. You will be able to go home after this.

If cancer cells are present in this tissue, you will be contacted by our team to attend the clinic for another layer of tissue to be taken. This cycle (of tissue being taken away, processed in a laboratory and examined under the microscope) will be repeated until all the tumour cells have been removed.

The local anaesthetic injected has a lasting effect for about two hours, so pain can be managed with over-the-counter painkillers. Due to the nature of this procedure, we are unable to tell you exactly how many days this procedure will involve.

What happens after the procedure?
Once all the tumour cells have been removed, there are several options for repairing your wound, depending on your individual circumstances. These will be discussed with you in more detail before your surgery. Your wound may be:
- closed by the team who performed the MMS, immediately after the tumour has been removed.
- dressed and then repaired by a plastic surgeon at St Thomas’ Hospital.
- left to heal by itself under a dressing.
- repaired at another hospital. In this case, we will renew your dressing before you travel to your referring hospital. We will also give you a letter from our doctors to hand to your surgeon when you arrive at your referring hospital. You will then be told how to look after your wound by the team that repairs your wound.

What do I need to do after I go home?
If you had your wound reconstructed by our team you will leave the hospital with information about how to look after your wound at home, and a date for your follow-up appointment.

You will probably need to rest after the surgery for about 48 hours. If you work, we recommend that you take at least two days off after the surgery. Aftercare will depend on the size of your wound, we will give you more advice on the day of your surgery.

If your wound was repaired by another team, follow-up care instructions will be given by the attending team.

Will I have a follow-up appointment?
You will have a follow-up appointment with the team that repaired your wound. If your follow-up is with us at Guy’s Cancer Centre, we will see you one week after your surgery to check that your skin is healing well and to remove any stitches you may have. If there are any changes to this, we will advise you on the day of your surgery. If another team repairs your wound, they will arrange your follow-up appointment.
Further sources of information
Please check out our film on Mohs surgery, w: www.youtube.com/watch?v=IM2FgGl7zMw, or you can search ‘Mohs surgery explained’ on w: www.youtube.com.

Dimbleby Cancer Care at Guy’s and St Thomas’. This service offers information and support for patients with cancer, their relatives and friends. Please contact t: 020 7188 5918, e: RichardDimblebyCentre@gstt.nhs.uk or visit one of the drop-in centres:
- Guy’s Hospital – Outpatient Department, Ground Floor, Tabard Annexe (next to the Minor Injuries Unit).
- St Thomas’ Hospital – Clinical Oncology, Lower Ground Floor, Lambeth Wing.

Macmillan Cancer Support
t: 0808 808 0000 (for information on all aspects of cancer)
t: 0808 801 0304 (benefits enquiry line), w: www.macmillan.org.uk

Cancer Research UK
t: 0808 800 4040 (for information on all aspects of cancer), w: www.cancerhelp.org.uk

Pharmacy Medicines Helpline
If you have any questions or concerns about your medicines, please speak to the staff caring for you or call our helpline. t: 020 7188 8748, Monday to Friday, 9am-5pm.

Language and accessible support services
If you need an interpreter or information about your care in a different language or format, please get in touch. t: 020 7188 8815  e: languagesupport@gstt.nhs.uk

NHS 111
This service offers medical help and advice from fully trained advisers supported by experienced nurses and paramedics. Available over the phone 24 hours a day. t: 111  w: www.111.nhs.uk

NHS website
This website gives information and guidance on all aspects of health and healthcare, to help you take control of your health and wellbeing. w: www.nhs.uk

Contact us
For administration purposes only, please contact reception, t: 020 7188 6407.

For clinical queries only, please contact the Dermatological Surgery and Laser Unit (DSLU), t: 020 7188 6284, Monday to Friday, 9am-5pm. Please leave your name, hospital number and telephone number, and someone will contact you as soon as possible. This is not an emergency service.

In an emergency please contact your GP or your nearest Emergency Department (A&E).

For more information leaflets on conditions, procedures, treatments and services offered at our hospitals, please visit w: www.guysandstthomas.nhs.uk/leaflets

Leaflet number: 3284/VER3
Date published: December 2019   Review date: December 2022
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A list of sources is available on request

Our values: Put patients first | Take pride in what we do | Respect others | Strive to be the best | Act with integrity