Patient Information Leaflet

Managing Common side-effects from EGFR Tyrosine Kinase Inhibitors in Lung Cancer

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Introduction
This guideline relates to the Epidermal Growth Factor Receptors (EGFR) Tyrosine Kinase Inhibitors (TKIs) that are used to treat some patients with lung cancer. This includes:

- Erlotinib (Tarceva)
- Gefitinib (Iressa)
- Afatinib (Gilotrif)
- Osimertinib (Tagresso)

This guide outlines the most common side-effects you may experience when taking these medications, with some tips on how to manage any symptoms that occur. It is unlikely you will experience all of these side-effects, and there are rare ones that are not mentioned here.

The most important thing is to keep your oncology team informed of how you are feeling so they can manage any problems you have as effectively as possible.
General Points
General points to remember about taking your medication:

- Inform your doctor of all medications that you take, including over the counter medications, as they may interact with your treatment.
- Take your medication on an empty stomach
- Please do not eat grapefruit, or drink grapefruit juice as it can interact with your medication
- If you are having difficulty swallowing your tablets please let your oncology team know, there are some strategies to help this
- You will be reviewed regularly by your medical team who will carry out blood tests to ensure your body is tolerating the medication and tests to check the lung cancer is responding to the treatment
Pneumonitis
Very rarely these medications can cause inflammation of the lungs, which is called pneumonitis. If you develop sudden difficulty breathing or a dry cough at any stage in your treatment, then please contact your medical team urgently on the numbers in the back of this booklet.
Diarrhoea
This is a common side-effect of TKI medications. At the start of your treatment your doctor will ask about your normal bowel function so we can have a clear idea of any changes that occur.

Diarrhoea means that your stools are loose or watery and you may open your bowels more frequently. If this starts to happen:

- Avoid fatty or spicy foods
- Ensure you drink plenty of fluids

If you develop diarrhoea it is important to tell your oncology team to discuss continuing TKI treatment. They will first need to check that there are no other causes for the diarrhoea such as an infection. If the medication is causing the diarrhoea then the treatment will depend on the severity of the diarrhoea.

If you having 6 or less episodes of diarrhoea per day the recommendation is to start taking loperamide. Initially take 4mg and then take 2mg after each episode of diarrhoea. The maximum dose is 16mg per day. Drink isotonic fluid such as water mixed with oral rehydration sachets (you can buy these from the chemist).

If your diarrhoea persists despite loperamide or you are having more than 6 episodes of diarrhoea a day then you will need to be reviewed by your oncology team. They may start an extra medication called codeine and give you fluids through a drip. It may be necessary to stop or reduce the dose of your TKI for a period until any diarrhoea starts to improve.
Rash
There are several different types of rash you might develop whilst taking TKI medications. The rash is caused by inflammation of the skin; it is not usually infectious. You may experience:

- Generally dry and itchy skin
- A rash that looks similar to acne, most commonly affecting the face and chest. It can affect any part the body including genital area.
- Red, painful dry skin over your hands and feet
- There can be other rare changes such as facial swelling

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<th>Moisturising lotions:</th>
<th>Eucerin Intensive lotion</th>
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<td>E45 lotion</td>
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<td>Dermol 500 lotion</td>
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<td>Aveeno lotion</td>
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<td>Vaseline Dermacare</td>
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<th>Creams and Gels:</th>
<th>Balneum Plus</th>
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<td>Ungmentum</td>
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<td>Doublebase</td>
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<td>Epaderm cream</td>
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<td>Cetraben</td>
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<td>Hydromol</td>
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| Ointments:            | White soft paraffin     |
|                       | Emulsifying ointment     |
|                       | Yellow soft paraffin     |
|                       | Epaderm ointment         |
|                       | Diprobase ointment       |
|                       | Hydrous ointment         |
|                       | Hydromol ointment        |

| Soap substitutes:     | Balneum Plus bath oil   |
|                       | Aqueous cream           |
|                       | Doublebase emollient shower gel |
|                       | Doublebase bath additive |
|                       | E45 bath additive       |
|                       | Oilatum shower gel      |
Some simple steps to take to reduce the chance of developing these problems:

- Moisturise all of your skin, twice a day
- Always wear sunscreen (at least sun protection factor 30 and a high UVA rating) when going outside
- Swap soap for an soap substitute (see above) to avoid drying the skin
- Do not use ‘acne treatment’ products, these will dry your skin
- Try and avoid any products with alcohol or fragrance in as these can irritate the skin further.

Some products that are recommended for your skin:

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<th>For a dry, itchy scalp:</th>
<th>T-gel shampoo</th>
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If you develop any rash despite these precautions your doctor will add in extra treatments. This could include.

- Steroid creams
- Antibiotic creams
- Oral antibiotics

If your rash continues despite these treatments you may need to be referred to a skin specialist. If your rash is severe then we may need to reduce the dose, or interrupt your TKI treatment until your skin is improving.
Paronychia
Paronychia is inflammation around the finger and toe nails. It appears as redness and swelling around the nails, which can develop into splits in the skin, or the nail can be affected and separate from the nail bed.

To help prevent paronychia:
- Keep your hands and feet moisturised
- Wear gloves when doing cleaning, don’t leave hands or feet in soapy water without protection
- Dry your feet thoroughly and wear shoes that fit correctly
- Try and avoid injury and impact to the hands and feet, take particular care when cutting nails
- Please speak to your oncology team if you are planning on getting a pedicure or manicure

Sometimes you will still develop paronychia despite these measures. Your doctor may recommend one or more of the following treatments:

- Vinegar soaks: Mix 50mls of warm water and 50mls of white vinegar and soak affected fingers or toes in the mixture for 15 minutes each day
- Strong steroid creams
- Antiseptic creams
- Antibiotic creams
- Referral to a skin specialist
- Referral to a podiatrist for advice on feet related symptoms
- Silver nitrate to treat thickened damaged skin

If the paronychia does not settle with these treatments then it may be necessary to interrupt the TKI or reduce the dose until the symptoms improve. Very rarely it may be necessary to have minor surgery on the nail area.
Stomatitis/Mucositis

Stomatitis is inflammation of the mouth and mucositis refers to inflammation of the gastrointestinal tract. If you develop this side-effect your mouth may feel generally sore and look more red than usual, or you may develop mouth ulcers. It is important to maintain good oral hygiene to reduce the chance of these problems occurring.

- Brush teeth regularly using a soft bristle toothbrush
- Use a non-alcoholic mouthwash
- Check that dental appliances such as braces, dentures and retainers are well fitting, if there any concerns you may need to see a dentist.
- Eat food that will not injure the mouth, i.e. soft, moist, non-irritating food that is easy to chew and swallow
- Avoid food which is very hot and may burn the inside of the mouth
- Drink plenty of water
- Use lip balm

If you develop symptoms despite these precautions then your oncology team may recommend further treatment such as:

- Saline or sodium bicarbonate mouth rinses
- Medications to prevent or treat fungal, viral and bacterial infections
- Interruption or reduction in dose of TKI
- Topical anaesthetic or mucosal coating agents
- Pain killers
Change in body hair
Some people notice a change in their hair whilst taking this medication.

- Hair on your head may become finer, curlier or more brittle. Your hair may thin or may fall out.
- Beards may require less shaving, conversely some patients may notice increased growth of fine hair around the lips and lower face.
- Eyelashes may grow longer and more curly, in some cases they may grow inwards and irritate the eye
- Eye brows can grow thicker and more curly.

If you are very worried about changes to your hair then you can discuss preventative measures with your oncology team. These measures could include using a mild steroid cream and steroid shampoos to reduce inflammation around the hair follicles. This may not stop hair loss, but should prevent scarring and allow the hair to re-grow.

If you want to dye your hair use non-ammonia products; usually semi-permanent hair dye is ammonia free.

There are a variety of methods to help disguise hair loss. If you wish to discuss these please speak to your cancer specialist nurse.

If you start to have increased hair growth, which is causing distress then there are some treatments that may help.

If you have changes to your eye-lashes then you can trim the lashes. If the lashes cause irritation to your eye then you will be referred to an eye specialist.
Remember
Please remember that although these drugs are associated with all of the above side-effects most of the time the symptoms are mild and can be managed with intervention as outlined above. You may be on this medication for a long time and side-effects can occur at any stage of your treatment. Always seek advice if you develop new symptoms.

Please be aware this is not a comprehensive list including all rare side-effects, please read your medication leaflet for this information.

We are giving you these medications to help improve the quality of your life, so if you feel that any of these symptoms are impeding your lifestyle then please let your oncology team know and we will do our best to help.
References:


Melosky B, Hirsh V. Management of Common Toxicities in Metastatic NSCLC Related to Anti-Lung Cancer Therapies with EGFR-TKIs. Front Oncol 2014 Sep 16;4:238


This leaflet has been written by Dr Hannah Rush, Rachel Thomas (Lung CNS), Jo Vick (Lung CNS), Dr Katie Lacy, Dr Rohit Lal.

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This leaflet is available in large print and other formats and languages.

Contact: Oncology Outpatients nurses from 09:00 – 17:00
Tel: 01752 763969
Or
Brent Ward out of hours
Tel: 01752 430043

Or alternatively your lung cancer nurse specialists for non-urgent concerns
Monday – Friday 08:30 – 16:30
Tel: 01752 432383 answerphone available

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