Systemic Anti Cancer Treatment Protocol

Erlotinib
Non-Small Cell Lung Cancer

PROTOCOL REF: MPHAERLLU
(Version No: 1.1)

This protocol has been temporarily amended-please see the ORAL SACT OPERATIONAL CHANGES DURING COVID -19.

Amendments may include less frequent blood monitoring, telephone SACT assessments and longer durations of treatment being dispensed.

Approved for use in:

First line treatment of locally advanced or metastatic epidermal growth factor receptor tyrosine kinase (EGFR-TK) mutation positive NSCLC.

Or as a second line treatment option in patients that have not received prior EGFR tyrosine kinase inhibitors because of delayed confirmation that their tumour is EGFR-TK mutation positive.

Dosage:

Drug	Dosage	Route	Frequency
Erlotinib	150mg	Oral	Once daily

Tablets will be supplied at 28 day intervals.
Treatment is continued until disease progression or unacceptable toxicity.

Supportive treatments:

Loperamide 2 to 4mg four times a day as required for management of diarrhoea.

Emollients such as Aqueous cream, E45 or Diprobase to prevent dry skin

Extravasation risk:

Not applicable

Administration:

Erlotinib should be taken with water, at least one hour before or two hours after the ingestion of food.

Interactions:

Smokers

Current smokers should be advised to stop smoking, as plasma concentrations of erlotinib in smokers as compared to non-smokers are reduced. Cigarette smoking has been shown to reduce erlotinib exposure by 50-60%.

Please consult SPC for full list of interactions: available via medicines.org.uk or discuss with a pharmacist.

Main Toxicities:

Dry mouth, skin rash, diarrhoea, pyrexia, confusion.

Investigations and Treatment Plan:

	Pre	Cycle 1	Cycle 2	Cycle 3	Cycle 4	Ongoing
Medical Assessment	X		X	X		Every 3 cycles
Nursing Assessment	X	X	X	X	X	Every cycle
FBC	X	X	X	X	X	Every cycle
U&E & LFT	X	X	X	X	X	Every cycle
LDH		X	X	X	X	Every cycle
CT scan	X			X*		*CT scan to be carried out prior to cycle 3 then every three months or as clinically indicated
Informed Consent	X					
PS recorded	X	X	X	X	X	Every cycle
Toxicities documented	X	X	X	X	X	Every cycle
Weight recorded	X	X	X	X	X	Every cycle

Dose Modifications and Toxicity Management:

Haematological toxicity

Erlotinib is not myelosuppressive; however, FBC should be reviewed prior to each cycle.

Non-haematological toxicities

Any patient with a grade 3 or 4 toxicity not controlled by optimum supportive care will require a dose reduction as per the table below.

Level	Erlotinib Dose
Starting Dose	150mg daily
1st Reduction	100mg daily
2nd Reduction	50mg daily

Dose adjustment for skin rash:

Typical erlotinib rash has the following appearance:

- Pustular/ papular appearance and usually involves the face, head and upper torso.
- Erlotinib rash may be secondarily infected as diagnosed by:

  - A tan/brown crust overlying inflammatory lesions, with significant oozing of fluid
  - And/or an abrupt change in the appearance of lesions (particularly if they differ from those in other areas).

Toxicity	Symptoms	Dose modification	Management
Grade 1	Generally localised Minimally symptomatic No sign of infection	None	Simple emollientssuch as Aqueous cream, E45 or Diprobase with the addition 1% Hydrocortisone cream, and/or 1% Clindamycin lotion
Grade 2	Generalised moderate symptoms No sign of infection	Dose interruption may be required	As for grade 1 plus consider adding doxycycline 100mg daily. Review after 2 weeks
Grade 3	Generalised severe symptoms, potential for infection Significant impact on daily life.	Dose interruption for 7 to 14 days may be required. 50mg dose reduction required on resuming treatment. Discontinuation may be necessary	As for grade 2 plus oral Prednisolone can be given starting at 25mg daily for 1 week then reducing by 5mg per day over 5 days. Review after 2 weeks

Other supportive medicines

Consider adding in antihistamines e.g. chlorphenamine/ hydroxyzine and painkillers, paracetamol/ ibuprofen if itching and or painful.

Topical retinoids and other acne medications (e.g. benzyl peroxide) are NOT recommended since rash is not acne. Their skin drying effects may exacerbate rash.

Dose adjustment for diarrhoea:

50% patients taking erlotinib experience some diarrhoea.

Toxicity	Dose modification	Management
Grade 1 or 2	None Encourage fluid intake	Loperamide (4mg at first onset followed by 2mg after each loose stool (max 16 mg /day)
Grade 3	If unresponsive to antidiarrhoeal medication for 24 hours then stop drug until resolution to grade <1 and then restart at next dose level down	As above
Grade 4	If unresponsive to antidiarrhoeal agent for >24 hours then discontinue drug	As above

In more severe or persistent cases of diarrhoea leading to dehydration erlotinib treatment must be stopped and appropriate measures should be taken to intensively rehydrate the patients intravenously.

Interstitial lung disease (ILD)

ILD, which may be acute in onset, has been observed in around 1 in 100 patients receiving erlotinib, and some cases have been fatal. If patients experience worsening of respiratory symptoms such as dyspnoea, cough and fever, erlotinib should be interrupted and the patient should be promptly investigated. If ILD is confirmed, erlotinib must be discontinued and the patient treated appropriately.

Hepatic Impairment

Erlotinib is eliminated by hepatic metabolism and excretion. Caution should be used when administering to patients with hepatic impairment. Dose reduction or interruption should be considered if severe adverse reactions occur.

Renal Impairment

No dose adjustments are required in patients with mild to moderate renal impairment. There is limited data for patients with severe renal impairment.

References:

http://www.medicines.org.uk/emc

NICE TA 258: Erlotinib for the first-line treatment of locally advanced or metastatic EGFR-TK mutation-positive non-small-cell lung cancer

NICE TA 374 Erlotinib and gefitinib for treating non-small-cell lung cancer that has progressed after prior chemotherapy