Systemic Anti-Cancer Therapy Protocol

Peg-Interferon Myeloproliferative Neoplasms

PROTOCOL REF: MPHAPEGIHA
(Version No: 1.0)

Approved for use in:

- Myeloproliferative neoplasms (MPN), (high risk essential thrombocythaemia, high risk polycythaemia vera or myelofibrosis with proliferative features)
- Consider as fist line therapy in younger patients with early disease progression
- Consider as second line therapy in patients refractory/ intolerant to hydroxycarbamide

Blueteq registration not required

Dosage:

Drug	Dose	Route	Frequency
Peg-interferon alfa-2a (Pegasys ®)	45 to 180 micrograms (increasing by a maximum of 45micrograms at a time)	SC	Once weekly continuous

Frequency of injections can be reduced to 2 to 3 weekly in patients showing sustained haematological remission

Administration:

- Administer subcutaneously in the abdomen or thigh. Exposure to PEG-interferon is reduced if administered in the arm
- Keep refrigerated
- Each syringe is single use

- For patients with a history of psychiatric disorder encourage them or carers to report any changes to psychiatric state

Anti-emetic risk:

Minimal

Supportive treatments:

- Allopurinol 300mg once daily until counts are controlled
- Aspirin or equivalent if no existing anticoagulation therapy (ask GP to prescribe, consider addition of gastro-protection where appropriate)

Dosing in renal and hepatic impairment:

Renal	Hepatic
No adjustment necessary	Safe if Child-Pugh A Use with caution if Child-Pugh B or C

Interactions:

The clearance of theophylline and aminophylline are slightly reduced by peg-interferon alfa-2a, consider measuring theophylline concentration if necessary.

Please refer to the relevant SPC for more drug-drug interaction information

Cautions/ Contraindications:

- In patients with a history of psychiatric disorders interferon or peg-interferon may cause deterioration and should only be used with caution and after careful consideration of risk versus benefit. Specific monitoring of psychiatric state should be in place.
- Contra-indicated in pre-existing cardiac disease
- Contra-indicated in epilepsy

- Contra-indicated if history of unstable pre-existing cardiac disease in the last 6 months, e.g. uncontrolled congestive heart failure, recent myocardial infarction, severe arrhythmic disorder.
- Contra-indicated in pre-existing uncontrolled thyroid disease
- Contra-indicated in severe hepatic dysfunction

Side effects:

Common:

Flu-like symptoms: headache, dizziness, diarrhoea, nausea, abdominal pain; anaemia, neutropenia, thrombocytopenia, hyperthyroidism, hypothyroidism, anorexia, hypertriglyceridemia, depression, insomnia and pruritus

Rare: Pulmonary infiltrates, pneumonitis, and pneumonia, occasionally resulting in fatality, have been observed rarely with interferon treatment.

Please refer to the relevant SPC for more information on toxicities.

Investigations and treatment plan:

	Pre	Cycle 1	Cycle 2 onwards	Ongoing
Informed Consent	X			
Clinical Assessment	X	X	X	
SACT Assessment (including toxicity assessment and PS)		X	X	
ECG + ECHO	X			If at risk of cardiac disease
FBC	X	X	X	Prior to every cycle. A cycle may extend to three months in length once patients are stable on treatment. FBC should be taken within 7 days of prescribing but may be taken up to 14 days prior to prescription at clinician's discretion. **Prescribers must check FBC prior to prescribing and document that this check has taken place in the medical notes. SACT assessment will not include checking of this parameter in this instance.**
U&E & LFTs	X	X	X	Must have had within 6 months of prescription. **Prescribers must check U+E & LFT prior to prescribing and document that these checks have taken place in the medical notes. SACT assessment will not include checking of these parameters in this instance.**
Hepatitis B and C and HIV screen	X			
TFTs	X			Repeat every 6 months
Lipids, Glucose and amylase	X			Repeat every 6 months
Height	X			
Weight	X	X	X	
Pregnancy test	X			If clinically indicated
Eye examination	X			Optician review including retinal scan. Repeat if eye symptoms

Dose Modifications and Toxicity Management:

Treatment should be held in the event of grade 3 non-haematological toxicity.

For fevers, flu-like symptoms and rigors consider restricting this to grade 4.

For grade 2 liver toxicity, monitor closely and stop interferon treatment if persistent. Once toxicity has recovered to grade 1, restart with the dose reduced by 45 micrograms.

Haematological toxicity:

Titrate peg-interferon dose every 4 weeks based on haematological response

WCC > 10 $x10^9$ and/or Platelets > 400 $x10^9$	Increase dose by 45 micrograms
WCC < 10 $x10^9$ **and** Platelets 100 - 400 $x10^9$	Maintain current dose
ANC < 1.0 $x10^9$ and/or Platelets < 400 $x10^9$ or New anaemia (Hb < 100g/L)	Decrease dose by 45 micrograms
Any grade 4 haematological event	Withhold dose until recovery

References:

1. Roche. Summary of product characteristics Pegasys. Updated 12/11/2019. Accessed via http://www.medicines.org.uk/emc on 02/04/2019.

2. Harrison et al (2010) Guideline for investigation and management of adults and children presenting with a thrombocytosis. BJH 149(3):352-375

3. Reilly et al (2012) Guideline for the diagnosis and management of myelofibrosis. BJH 158(4):453-471

4. Barosi et al (2013) Revised response criteria for polycythemia vera and essential thrombocythemia: an ELN and IWG-MRT consensus project. Blood 121(23):4778-4781.

5. Tefferi et al (2013) Revised response criteria for myelofibrosis: International Working Group-Myeloproliferative Neoplasms Research and Treatment (IWG-MRT) and European LeukemiaNet (ELN) consensus report. Blood 122(8):1395-1398