INTERFERON-ALFA (ROFERON-A or INTRON A)

Interferon-alfa may be used in the following haematological conditions:

ET Polycythaemia vera	} }	first-line use for patients aged < 40 years who require cytoreductive therapy, and also during pregnancy
Primary myelofibrosis		only recommended for early stage disease with proliferative disease features[1]
CML		during pregnancy

Drugs/Dosage: The initial dose and frequency of interferon-alfa therapy must be specified by the Consultant treating the patient. It will be dependent on patient, disease and brand of interferon being used, as well as individual Consultant preference.

Indication	Dosing
Primary MF	High starting doses are poorly tolerated Initiate treatment with 1.5MU 3 times weekly, increasing to a maximum of 15MU per week, as tolerated
ET and PV	Initiate treatment with 1.5 - 3MU 3 times weekly, adjusting upwards or downwards according to response and tolerability Maintenance doses can vary widely, with a median of 3MU 3 times weekly
CML	both Intron A and Roferon-A have licensed dosing schedules (see relevant SPC)

Doses will need to be reviewed and adjusted according to patient tolerability and disease response. Once a patient is stabilised on therapy, do not change brands.

Roferon-A is available as single dose pre-filled syringes as follows:
3MU in 0.5ml
4.5MU in 0.5ml
6MU in 0.5ml
9MU in 0.5ml
The syringes are not graduated, and the smallest individual Roferon dose which may be administered is 3MU.

Intron A is available as multi-dose pre-filled pens containing:
18MU - which can deliver 1.5 - 6MU per dose
30MU - which can deliver 2.5 - 10MU per dose
60MU - which can deliver 5 - 20MU per dose
Each pen may be used for a maximum of 4 weeks and should then be discarded. A new injection needle must be used for each dose. (Needles are provided with each pen)

Other Drugs: Paracetamol 500 - 1000mg 1 hour before first injection, then up to qds as needed to manage flu-like symptoms
Anti-depressant may be required if long-term depression

Reason for Update: removed redundant indications, updated products available	Approved by Chair of Network TSSG: Dr A Laurie
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Prepared by: S Taylor	Checked by: C Tucker

Administration:	Subcutaneous bolus injection into the thigh or abdomen The patient (or family member) will need to be trained to self-inject. Ensure that the patient has a cin-bin for disposal of syringes and needles.
Frequency:	treat indefinitely unless either relapsed/unresponsive to treatment or intolerable side effects
Main Toxicities:	flu-like symptoms; fatigue; mild neutropenia; (tolerance is acquired after about 2 weeks, but symptoms will return if treatment is stopped and restarted); depression or anorexia may occur with long-term use
Anti- emetics:	mildly emetogenic – domperidone or metoclopramide may be required
Regular Investigations:	FBC and all other monitoring is to be carried out as indicated according to disease and individual patient.

Dose Modifications

Haematological Toxicity:	Interferon has a suppressive effect on the bone marrow, leading to a fall in the white blood count, particularly granulocytes, platelet count and, less commonly, haemoglobin concentration. Blood counts should be performed at appropriate periods during therapy. If considered necessary, interferon therapy should be temporarily withdrawn, in which case recovery of any haematological deviations due to interferon should occur within seven to ten days.
Renal Impairment:	Contra-indicated in severe renal impairment (CrCl < 10ml/min)
Hepatic Impairment:	Contra-indicated in severe hepatic impairment
Patient Information:	Macmillan leaflet for "Interferon Alpha (Intron A; Roferon-A)"
References:	[1]Reilly, JT et al, Br J Haem 2012; 158 (4): 453 – 471 (BCSH Guidelines for myelofibrosis) McMullin, M et al, Br J Haem 2005; 130 (2): 174 – 195 (BCSH Guidelines for polycythaemia) Harrison, C et al; Br J Haem 2010; 149 (3): 352 – 375 (BCSH Guidelines for thrombocytosis)