

<b>Indication</b>	Patients with essential thrombocythaemia (ET), polycythaemia vera (PV), myelofibrosis (PMF) who are refractory to standard therapy.
<b>Treatment Intent</b>	Disease modification for Myeloproliferative Neoplasms
<b>Frequency and number of cycles</b>	<b>Myeloproliferative neoplasms:</b> 2 treatment options:-see below* Repeat course every 4 to 6 weeks until the platelet count is reduced to <math>400 \times 10^9/L</math>.  Continue treatment until therapeutic response or unacceptable toxicity
<b>Monitoring parameters pre-treatment</b>	<ul style="list-style-type: none"> <li>FBC, U&amp;Es &amp; LFTs prior to first cycle and then every 2 weeks or as clinically indicated.</li> <li><b>Renal Impairment:</b> No dose reduction required in renal impairment</li> <li><b>Hepatic Impairment:</b> Use with caution in hepatic impairment and monitor LFTs.</li> <li>Although, busulfan is not considered to be significantly hepatotoxic at lower doses, hepatobiliary toxicities such as hepatic veno-occlusive disease can occur.</li> <li>Risk of pulmonary toxicity on prolonged treatment</li> <li>Consider the use of allopurinol in those patients with raised serum urate and/or history of gout.</li> <li>Hyperpigmentation may become persistent on prolonged treatment.</li> <li><b>Drug Interactions:</b></li> <li>Paracetamol may decrease glutathione levels and may therefore decrease busulfan clearance and increase toxicity.</li> <li><b>*Treatment options:</b></li> <li>1: 2mg-4mg OD for 7 to 14 days</li> <li>2: 20mg-50mg STAT according to magnitude of desired effect.</li> </ul>
<b>Reference(s)</b>	SELCN v1 2008. SpC Busulfan (Aspen) accessed online 03.02.2021

**NB For funding information, refer to CDF and NICE Drugs Funding List**

For myeloproliferative-neoplasms:

Condition	Drug	Dose	Route	Directions
Myeloproliferative Neoplasms	<b>Busulfan</b>	<b>2mg-4mg</b>	PO	OD for up to 14 days

Protocol No	HAEM-MDS-009	Kent and Medway SACT Protocol Disclaimer: No responsibility will be accepted for the accuracy of this information when used elsewhere.	
Version	1	Written by	M.Archer
Supersedes version	New protocol	Checked by	H.Paddock B.Willis
Date	10.08.21	Authorising consultant (usually NOG Chair)	C.Wykes