MYELOPROLIFERATIVE NEOPLASM UPDATE FROM EHA

1. **PEGINVERA study.** Ropeginterferon alfa-2b is a long acting, mono-pegylated interferon. This study evaluated the tolerability and safety of Ropeginterferon alfa-2b in polycythaemia vera. An update on long-term maintenance treatment was presented. 29 patients were switched from therapy administered once every 2 weeks to the once every 4 weeks long-term maintenance dosing after a median of approximately 2 years. All patients could be maintained on the schedule for another 2 years representing 100% treatment adherence. The high rate of haematological (>80% of patients achieved partial or complete haematological response) and molecular responses (>80% of patients achieved a partial complete molecular response) seen on this medication with the 2-week schedule were maintained after the switch to the 4-week schedule. After 4 years of Ropeginterferon alpha-2b the majority of patients showed a sustained reduction of the mutant JAK2V617F allelic burden to below 10%, demonstrating the disease modifying capability of Ropeginterferon alpha-2b treatment.

Ropeginterferon alfa-2b is not approved or available in Australia for the treatment of patients with myeloproliferative neoplasms.

2. **PROUD PV study.** This study compared hydroxycarbamide with Ropeginterferon alpha-2b in 254 patients with polycythaemia vera. Data presented at ASH in 2016 demonstrated a similar rate of complete haematological response rate in both arms confirming non-inferiority of Ropeginterferon alpha-2b. The 12-month discontinuation rates were similar in both arms. At EHA Prof Kiladjian presented on the molecular responses seen in 10 of the French patients participating in this study. Both treatments induced a decrease in JAK2 mutant allele burden at 12 months in peripheral blood but bone marrow clonogenic assays suggested that Ropeginterferon alfa-2b was specifically able to target JAK2 mutation progenitors which was an effect not seen in hydroxycarbamide treated patients. As a result of this data Prof Kiladjian commented that a sustained long-term molecular response may only be achieved with interferon-based therapy.

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3. **RESPONSE-2 update.** This was an 80-week update on therapy with ruxolitinib versus best available therapy (BAT) in hydroxycarbamide-resistant/intolerant patients with PV without splenomegaly. The 80-week update confirmed that ruxolitinib provides durable haematocrit control, durable complete haematological response, reduction in venesection requirement, improve symptomatic burden and was well tolerated with >90% of patients remaining on therapy at this time point. Ruxolitinib is not approved or available in Australia for the treatment of patients with polycythaemia vera.

4. **SIMPLIFY-1 study.** Momelotinib is an investigational oral JAK inhibitor which has previously been shown to reduce spleen volume, improve disease associated symptoms and improve red blood cell transfusion requirements in patients with myelofibrosis. This study was to test the noninferiority of momelotinib versus ruxolitinib therapy in patients with primary myelofibrosis, post-polycythaemia vera or post-essential thrombocythaemia myelofibrosis who had not previously received a JAK inhibitor. The study enrolled over 200 patients in each arm and >80% of patients completed the 24-week double-blind phase. The results demonstrated that momelotinib is non-inferior to ruxolitinib for spleen response but not for symptom response. Momelotinib is associated with a reduced transfusion requirement.

Momelotinib is not approved or available in Australia for the treatment of patients with myelofibrosis.