

## **Guidance Proposal from SSC Malignancy and Haemostasis Subcommittee**

### **“Prevention and treatment of venous thromboembolism in adults receiving asparaginase therapy”**

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#### **Background:**

- Administration of asparaginase for the treatment of acute lymphoblastic leukemia is associated with high rates of venous thromboembolism complications
  - >30% in analyses of DFCl protocol (Grace et al. BJH 2011)
  - High rate of cerebral sinus venous thrombosis
- Asparaginase lowers levels of endogenous anticoagulants (antithrombin, protein C and S)
- Number of potential risk factors have been identified including number of doses, age, co-administration of steroids or anthracycline-based chemotherapy
- Approaches to thromboprophylaxis vary considerably across centers
  - Prophylactic strategies evaluated include prophylactic low molecular weight heparin and/or antithrombin concentrate
- Treatment and prevention of asparaginase-induced VTE not addressed in societal guidelines

#### **Guidance document will address the following issues:**

- Primary prophylaxis
  - Anticoagulation including which target populations and indications
  - Laboratory monitoring and repletion of antithrombin, fibrinogen, and platelets
  - Differential approaches for induction or consolidation
- Treatment of asparaginase-related VTE
  - Selection of anticoagulant
  - Role for antithrombin concentrate and monitoring levels
  - Management of central venous catheter
  - Implications for ongoing use of asparaginase
  - Duration of anticoagulation