CLINICAL GUIDELINES
ANTICOAGULATION IN PALLIATIVE CANCER IN-PATIENTS

Background

- Cunningham et al. have suggested that:
  - “Ensuring that people with cancer receive appropriate thromboprophylaxis is an important clinical governance issue.”
  - “All patients with cancer admitted to hospital should undergo formal risk assessment for VTE upon admission”
- This is a difficult area with no guidelines designed specifically for a palliative care/ hospice population. Discussions in the field are ongoing (www.palliativedrugs.com – ‘Bulletinboard’ January 2007)
- There is no evidence that prophylaxis improves survival; symptoms; or clinical outcomes
- Cancer patients are at increased risk of clotting and bleeding
- Any use of these guidelines needs to be tailor made to the needs of the individual patient taking into account the risks and benefits (e.g. are they at risk of bleeding? / are they taking any prothrombotic drugs?)
- Warfarin is not recommended for patients with extensive or metastatic disease, or poor performance status.
- The National Patient Safety Agency first produced guidance on this topic in 2007 and since produced a “How to Guide” on VTE risk Assessment. It emphasises that where appropriate, patients should be made aware of the risks, and their views sought.
- NICE have produced a clinical guideline (No. 92) on reducing the risk of VTE in patients admitted to hospital and this document is encompassed in these local guidelines.
- The proposed CQUIN payment framework now links payment to risk assessment of VTE.

Primary prevention

- Document the risk/benefit assessment for all in-patients using a modified version of the National Risk Assessment Model (DH2010) – Appendix 1
- Consider all hospitalized / non-ambulatory cancer patients (e.g. cord compression, fracture, acute medical illness*) for VTE prophylaxis in the absence of bleeding or other contraindications;
- In the acute setting thromboprophylaxis is generally for less than 2 weeks
- Low molecular weight heparin is the preferred anticoagulant, from August 2010 locally dalteparin is the LMWH of choice.
- LMW heparin is acceptable to patients (in both primary and secondary prevention)
- Platelet counts need to be monitored on LMWH. For example between 5-10 days.

* PCF3 suggests medical illness likely to render them bedbound ≥3 days
* other papers (one in cancer and one in general surgical patients) suggest ≥ 4 days
Provisos

- In renal failure (CrCl <30 ml/min) doses of LMWH need to be reduced and individual cases should be discussed with the renal team.
- Routine prophylaxis of ambulatory cancer patients is not recommended.\(^7\)
- Thromboprophylaxis is less relevant to cancer patients in the last few weeks of life.
- Patients on the LCP (i.e., in the last few days of life) should not routinely be offered prophylaxis.\(^7\)
- Aspirin alone does not constitute adequate thromboprophylaxis in people with cancer\(^16\).
- There is no clear guidance on what to do regarding thromboprophylaxis when these patients go home, a decision should be made by the MDT after discussion with the patient and/or family following resolution of the acute episode. This should be clearly communicated with the primary care team.

Secondary prevention

- Patients with DVT/PE and cancer at increased risk of death\(^16\)
- LMWH heparin is more effective with less bleeding risk than oral anticoagulation.
- For patients considered to be at high risk of bleeding (e.g., those with extensive disease, cerebral metastases, or brain cancer) full dose LMWH for 7 days followed by a long term decreased fixed dose should be considered\(^4\):
  - Study continued for 3 months, on treatment dose Tinzaparin.\(^17\)
  - Study only continued for 6 months, on treatment dose of 1 month then 75% of treatment dose for 5 months Dalteparin.\(^18\)
  - Study continued for 3 months, on treatment dose for 1 week then 10 000 IU for 3 months Dalteparin\(^19\) (this is greater than a prophylactic dose and less than a treatment dose as per BNF 56).
- Long-term full-dose LMWH should be the drug of choice in the secondary prophylaxis of venous thromboembolism in patients with cancer of any stage, performance status, or prognosis\(^4\).
- The optimum duration of treatment is unclear (generally > 6 months) however because of the thrombotic tendency is ongoing, indefinite treatment is generally recommended\(^4\):
  - Evidence suggests treatment dose for 3-6 months yet it has been shown that people with active malignancy remain at a higher risk of recurrence beyond 6 months\(^20\)
  - For patients with permanent risk factors at least 6 months anticoagulation is recommended. “Further trials are still necessary to assess prolonged therapy beyond 6 months.”\(^21\)
  - One study demonstrated palliative care patients with advanced cancer and VTE (n=62) being treated for up to 243 days (median 97 days) with LMWH\(^22\). Most patients continued treatment until the last few days of life. There were no major bleeding events. Doses were as per CLOT and Montreal regime (as above).
- For patients with contraindications to anticoagulation an IVC filter should be considered\(^4\)
- Local formulary use of Enoxaparin as per current BNF guidance
Continuing anticoagulation for pre-existing conditions

- Check clinical indication for use
- Review recent INR control
- Review patient understanding and preference
Flow-chart for Thromboprophylaxis for palliative care in-patients

**Primary prophylaxis**

- Hospitalised / non-ambulatory / non-end-of-life cancer patient

  **No contra-indications or increased risk of bleeding.**
  (eg active bleeding; platelets < 75 x 10⁹; liver failure)

  - Prophylactic dose of low molecular weight heparin (LMWH) e.g Dalteparin 5000 UNITS SUBCUT

  - Review after 24 hours and then weekly involving MDT or when clinical condition changes (eg on LCP)

  - Monitor platelets after 5-10 days of treatment


  - **Offer** written and verbal information to patient.

  - **Inform** GP of final outcome after discussion

**Secondary prophylaxis**

- Assess the risk of bleeding?

  **HIGH** risk of bleeding e.g. brain cancer, cerebral mets, extensive disease

  - Full treatment dose of low molecular weight heparin (LMWH) for >7 days

  - Reduce treatment dose e.g. to 75% of original dose long term

  - Document decision and review regularly

  - Inform GP of final outcome after discussion

**Appendix 1: Adapted from the National Risk Assessment Model (DH 2010)\(^6\)\(^7\)**

### Palliative Care, In-Patient, Risk Assessment for Venous Thromboembolism (VTE)

<table>
<thead>
<tr>
<th>Is the patient on the Liverpool Care of the Dying Pathway?</th>
<th>Yes</th>
<th>No</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mobility-</strong>&lt;br&gt;<strong>all patients</strong>&lt;br&gt;(tick one box)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Mobility reduced compared to usual &amp; LIKELY to recover</td>
<td>tick</td>
<td></td>
</tr>
<tr>
<td>Mobility reduced &amp; UNLIKELY to recover</td>
<td></td>
<td>tick</td>
</tr>
<tr>
<td>Mobility not reduced</td>
<td></td>
<td></td>
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</tbody>
</table>

### Thrombosis Risk

<table>
<thead>
<tr>
<th>Patient related</th>
<th>tick</th>
<th>Admission related</th>
<th>tick</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer or cancer treatment</td>
<td></td>
<td>Probably immobile &gt; 3 days</td>
<td></td>
</tr>
<tr>
<td>&gt;60</td>
<td>tick</td>
<td>Cord compression</td>
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<tr>
<td>Dehydration</td>
<td></td>
<td>Hip/lower limb fracture</td>
<td></td>
</tr>
<tr>
<td>Thrombophilia</td>
<td></td>
<td>Abdominal/pelvic pathology</td>
<td></td>
</tr>
<tr>
<td>Obesity</td>
<td></td>
<td>Recent surgery</td>
<td></td>
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<tr>
<td>Significant comorbidity</td>
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<td></td>
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<tr>
<td>Previous history of VTE</td>
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### Bleeding Risk

<table>
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<th>Patient related</th>
<th>tick</th>
<th>Admission related</th>
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<tbody>
<tr>
<td>Active bleeding</td>
<td></td>
<td>Recent neuro or eye surgery</td>
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<tr>
<td>Bleeding disorde</td>
<td></td>
<td>Procedure with bleeding risk</td>
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<tr>
<td>Thrombocytopaenia</td>
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<td>Spinal analgesia</td>
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<tr>
<td>Severe hypertension</td>
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<tr>
<td>Acute stroke</td>
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<tr>
<td>Already on warfarin</td>
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<td></td>
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<tr>
<td>Cerebral tumour/metastases</td>
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</tbody>
</table>

### Patient Involvement- all patients

<table>
<thead>
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<th>Patient involved</th>
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<th>Admission related</th>
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<tbody>
<tr>
<td>Discussed with patient</td>
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<td>Not discussed with patient</td>
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### Decision (as per Flow Chart)

<table>
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<tr>
<th>Decision (as per Flow Chart)</th>
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</thead>
<tbody>
<tr>
<td>Primary prophylaxis</td>
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<tr>
<td>Low Molecular Weight Heparin appropriate</td>
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<td></td>
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<tr>
<td>Secondary prophylaxis</td>
<td></td>
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</tr>
<tr>
<td>Low Molecular weight Heparin NOT appropriate</td>
<td></td>
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</tr>
</tbody>
</table>
References


5. NPSA Patient safety alert number 18, March 2007

6. NPSA How to Guide Venous Thromboembolism Risk Assessment February 2011


16. Levitan N et al. Rate of initial and recurrent thromboembolic disease among patients with malignancy versus those without malignancy; risk analysis using Medicare claims data. Medicine 1999;78: 285-291


