In patients with a high clinical suspicion of DVT/PE, in the absence of contraindications, it is recommended that treatment with anticoagulants be started while awaiting the outcome of diagnostic test(s).

- For suspected PE, consider obtaining ECHO, troponin level, and BNP.
- Incidental VTE findings should be managed as symptomatic VTEs.

Anticoagulation Management

APPENDIX A: Contraindications to Systemic Thrombolysis

APPENDIX B: Criteria for after hours STAT 2D-ECHO for Patients with Suspected PE

APPENDIX C: PE Classification

APPENDIX D: Outpatient Treatment Criteria

APPENDIX E: Recurrent VTE Anticoagulation Therapy Options for Patients Currently on Standard Anticoagulant Therapy

APPENDIX F: Contraindications to Anticoagulation Therapy

APPENDIX G: Anticoagulation Therapy Options for Cancer Patients with Active VTE

APPENDIX H: Direct Oral Anticoagulants (DOACs)

APPENDIX I: Child-Turcotte-Pugh (CTP) Scoring System

Suggested Readings

Development Credits

Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care. This algorithm should not be used to treat pregnant or lactating women.

BNP = brain natriuretic peptide  DVT = deep vein thrombosis  ECHO = echocardiogram  PE = pulmonary embolism
Upper Extremity

DVT

First occurrence?

Yes

Ultrasound/doppler

Acute DVT confirmed?

Yes

Ultrasound/doppler

New defect?

Yes

See Anticoagulation Management (Box A) on Page 5

No

See Anticoagulation Management (Box A) on Page 5

No

Ultrasound/doppler

Significant extremity swelling?

Yes

Consult Vascular Surgery or Interventional Radiology

Consider catheter-directed thrombolysis if age of clot < 30 days

Is catheter infected and/or dysfunctional?

Yes

Consider removal of catheter

Maintain catheter and anticoagulate indefinitely while catheter is in place

No

See Anticoagulation Management (Box A) on Page 5

No

Ultrasound/doppler

Catheter related?

Yes

See Anticoagulation Management (Box A) on Page 5

No

Consult Vascular Surgery or Interventional Radiology

Consider catheter-directed thrombolysis

In patients with a high clinical suspicion of DVT/PE, in the absence of contraindications, it is recommended that treatment with anticoagulants be started while awaiting the outcome of diagnostic test(s)

Significant extremity swelling as evidenced by significant impact on performance status that affects quality of life, or is associated with phlegmasia or lymphedema

See Appendix A: Contraindications to Systemic Thrombolysis

Anticoagulation after catheter removal can be stopped after 3 months

Consider post-thrombotic syndrome if symptoms occur in same extremity as prior VTE

1

2

3

4

5
Adult Venous Thromboembolism (VTE) Treatment for Cancer Patients (DVT and PE)

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Lower Extremity DVT

1. **First occurrence?**
   - Yes: **Ultrasound/doppler**
     - Acute DVT confirmed?
       - Yes: **Consult Vascular Surgery or Interventional Radiology**
         - Consider catheter-directed thrombolysis if age of clot is < 30 days
       - No: **See Anticoagulation Management (Box A) on Page 5**
     - No: **See Anticoagulation Management (Box A) on Page 5**
   - No: **Ultrasound/doppler**
     - New defect?
       - Yes: **See Anticoagulation Management (Box A) on Page 5**
       - No: **Continue current management**
         - Consider post-thrombotic syndrome or other causes of symptoms
         - Consider applying compression stockings if post-thrombotic syndrome

1. In patients with a high clinical suspicion of DVT/PE, in the absence of contraindications, it is recommended that treatment with anticoagulants be started while awaiting the outcome of diagnostic test(s)
2. Significant extremity swelling: significant impact on performance status that affects quality of life, or is associated with phlegmasia or lymphedema
3. See Appendix A: Contraindications to Systemic Thrombolysis
4. Consider post-thrombotic syndrome when symptoms occur in site of prior VTE
Suspected Pulmonary Embolism (PE)

CT angiogram

- Determine RV/LV ratio by contacting radiology department
- Consider checking BNP and troponin level

PE confirmed?

First occurrence?

Yes

Low risk

Low-Intermediate risk, High-Intermediate risk or High risk

Consult Pulmonary Embolism Response Team (PERT) First Responder and refer to PERT algorithm

No

New defect?

Yes

Low risk

Low-Intermediate risk, High-Intermediate risk or High risk

Consult PERT First Responder and refer to PERT algorithm

No

Continue current management

Low risk

Low-Intermediate risk, High-Intermediate risk or High risk

Consult Pulmonary Embolism Response Team (PERT) First Responder and refer to PERT algorithm

Low risk

Low-Intermediate risk, High-Intermediate risk or High risk

Continue current management

Low risk

Low-Intermediate risk, High-Intermediate risk or High risk

Continue current management

1 In patients with a high clinical suspicion of DVT/PE, in the absence of contraindications, it is recommended that treatment with anticoagulants be started while awaiting the outcome of diagnostic test(s). For suspected PE, obtain the following: ECHO, troponin level, BNP.
2 If CT angiogram cannot be performed, consider VQ scan. Consider STAT ECHO if clinical criterias are met, refer to Appendix B: Criteria for after hours STAT 2D-ECHO for Patients with Suspected PE.
3 See Appendix C: PE Classification
4 Admission criteria to Telemetry/Intermediate unit: Low-Intermediate Risk patients requiring anticoagulation
5 Admission criteria for ICU: High-Intermediate and High Risk patients in need of inotropic support with bradycardia, hypotension, or right ventricular dysfunction, RV/LV diameter ratio > 1 by 2D ECHO or CT, and elevated troponin or BNP
6 PERT First Responder: On-Call fellow/trainee and attending provider

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Anticoagulation Management

Upper Extremity DVT
Lower Extremity DVT
Low Risk PE

A

Contraindications to anticoagulation?

Yes

No

Does patient meet outpatient criteria for anticoagulation treatment? (see Appendix D)

Patient on current anticoagulation therapy?

Yes

No

Order placed for IVC filter

Withhold anticoagulation and monitor

Interventional Radiology (IR) reviews request for patient eligibility for IVC filter

Findings inconclusive for filter placement

Consult Benign Hematology

Patient eligible for filter placement

Permanent filter?

Yes

No

Permanent filter placement with no plan for retrieval

Retrievable filter placement

No

Refer to IVC Filter Retrieval algorithm

Consult Benign Hematology

Patient not eligible for filter placement

Select anticoagulants, see Appendix E for management instructions

Monitor patient per selected anticoagulation therapy (see respective appendices)*

*For patients with VTE and cancer, continue anticoagulant therapy indefinitely, or until cancer resolves, if no contraindication emerges

Admit patient for evaluation and treatment or if already inpatient, continue with evaluation and treatment

1 See Appendix F: Contraindications to Anticoagulation Therapy
2 Permanent IVC filter placement: permanent contraindication to anticoagulation with no plan to retrieve; expected survival < 6 months or persistent and/or irreversible bleeding; persistent and/or irreversible thrombocytopenia; hemorrhagic brain tumor
3 Criteria to consider placement of retrievable filter for a temporary indication: anticipated surgery; current contraindication to anticoagulation with potential for retrieval

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APPENDIX B: Criteria for After Hours STAT 2D-ECHO for Patients with Suspected PE

- Patient has to be seen first by a member of the PERT team in order to confirm that none of the other imaging modalities are possible (CT angiogram or VQ scan).
- Patient is hemodynamically unstable (SBP < 90 mmHg or receiving vasopressors).
- PE has to be highly suspected and no other etiology would explain shock (no septic, hemorrhagic or hypovolemic shock).
- PERT team member is to contact and discuss directly the need of the echo with the cardiologist on-call before sonographer is contacted.
Adult Venous Thromboembolism (VTE) Treatment for Cancer Patients (DVT and PE)

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APPENDIX C: PE Classification

<table>
<thead>
<tr>
<th>Low Risk</th>
<th>Intermediate Risk</th>
<th>High Risk</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any PE:</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
| • Without right ventricular (RV) dysfunction **and**
  • With normal BNP/troponin | Low-Intermediate | High-Intermediate |
| RV dysfunction **or** elevated BNP **or** troponin | RV dysfunction **and** elevated BNP **or** troponin | • Sustained hypotension (SBP < 90 mmHg for at least 15 minutes) **or**
  • Persistent bradycardia (heart rate < 40 bpm) with signs or symptoms of shock **or**
  • Need for inotropic support |

APPENDIX D: Outpatient Treatment Criteria

- See Appendix F for contraindications
- No co-morbidity requiring inpatient hospitalization
- No clinical conditions requiring hospitalization
- Likelihood of good compliance, ability to provide self-care and not at high-risk for falls
- Adequate home support system and geographical accessibility for follow-ups
- If pulmonary embolism, low risk and pulse oximetry > 95%; stable vital signs
- Not intermediate risk (not submassive)

APPENDIX E: Recurrent VTE Anticoagulation Therapy Options for Patients Currently on Standard Anticoagulant Therapy

- If patient is on sub-therapeutic warfarin, adjust dose to achieve a target INR of 2-3
- If INR is therapeutic, change warfarin to low-molecular-weight heparin (LMWH)
- If patient is on a LMWH, check anti-factor Xa level 4 hours post injection
- If peak anti-factor Xa level is subtherapeutic (< 0.5 anti-factor Xa units), adjust dose of the LMWH\(^1\) to achieve a peak anti-factor Xa of 0.5 – 1.5 units
- If peak factor Xa level is within the therapeutic range\(^2\), consider increasing dose of LMWH\(^1\) by 20%
- If peak factor Xa level is therapeutic and the VTE event is a symptomatic pulmonary embolism, place a permanent IVC filter
- Consider General Internal Medicine or Benign Hematology consult
- If patient on direct oral anticoagulants (DOAC), consider changing to alternative class of anticoagulants

\(^1\) See recommendations for specific agents on Pages 9-10
\(^2\) Range may vary, based on specific institutional ranges

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APPENDIX F: Contraindications to Anticoagulation Therapy

### Absolute Contraindications:
- Cerebral hemorrhage, hemorrhage in the eye or vital organs or a drop in hemoglobin of 2 grams/dL in 24 hours
- Neurosurgery, ocular surgery or intracranial bleeding within past 10 days
- Platelets < 25 K/microliter, consult to benign hematology

### Relative Contraindications:
- Brain metastases conferring risk of bleeding (renal, choriocarcinoma, melanoma, thyroid cancer)
- Spinal procedure and/or epidural placement
- Major trauma or head trauma
- Major abdominal surgery within 48 hours
- Severe hypertension (SBP > 200 mmHg, DBP > 120 mmHg)
- Endocarditis/pericarditis
- Gastrointestinal, genitourinary bleeding within past 14 days
- Preexisting coagulopathy
- Platelets < 50 K/microliter, consider consult to benign hematology
- Hypersensitivity to heparin, low molecular weight heparin (LMWH) or heparin induced thrombocytopenia
- Patient on active protocol that prohibits use of anticoagulation
- Bleeding diathesis
# Adult Venous Thromboembolism (VTE) Treatment for Cancer Patients (DVT and PE)

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## APPENDIX G: Anticoagulation Therapy Options for Cancer Patients with Active VTE (does not include prophylactic dosing)

<table>
<thead>
<tr>
<th>LMWH1 Treatments</th>
<th>DOSE / ROUTE / FREQUENCY</th>
<th>MONITORING2</th>
<th>DOSE ADJUSTMENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dalteparin (Fragmin®)*</td>
<td>Round to nearest International Units (IU) dose, given subcutaneously daily</td>
<td>• Baseline CBC with platelets, aPTT, PT and serum creatinine</td>
<td>Renal: • If creatinine clearance &lt; 30 mL/minute: adjust dose to obtain anti-Xa level of 0.5-1.5 IU/mL (4-6 hours after fourth dose)</td>
</tr>
<tr>
<td>*FDA approved for cancer patients</td>
<td>Actual Body Weight (kg)</td>
<td>Month 1 200 IU/kg</td>
<td>Month 2-6 150 IU/kg</td>
</tr>
<tr>
<td>Hold in patients with platelets &lt; 25 K/microliter</td>
<td>≤ 56</td>
<td>10,000 IU</td>
<td>7,500 IU</td>
</tr>
<tr>
<td></td>
<td>57-68</td>
<td>12,500 IU</td>
<td>10,000 IU</td>
</tr>
<tr>
<td></td>
<td>69-82</td>
<td>15,000 IU</td>
<td>12,500 IU</td>
</tr>
<tr>
<td></td>
<td>83-98</td>
<td>18,000 IU</td>
<td>15,000 IU</td>
</tr>
<tr>
<td>≥ 99</td>
<td>Consider monitoring anti-Xa levels and adjust dose as needed. Limited data suggests dalteparin 200 IU/kg based on actual body weight (with no dose capping) in one or two divided doses. An alternative option is enoxaparin 1 mg/kg twice daily (see below).</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

| Enoxaparin (Lovenox®) | 1 mg/kg subcutaneously every 12 hours or 1.5 mg/kg subcutaneously daily in selected patients | • Baseline CBC with platelets, aPTT, PT and serum creatinine | Renal: • If creatinine clearance < 30 mL/minute: 1 mg/kg daily |
| Hold in patients with platelets < 25 K/microliter | • Limited data suggest once per day dosing is inferior in cancer patients and may increase risk of bleeding | • For surgical patients, platelets every 3 days between days 4 and 14 after beginning LMWH then, as clinically indicated | Weight: • Obtain anti-Xa level in patients with weight < 50 kg or weight > 150 kg or BMI ≥ 40 kg/m²: |
| | • Limited data suggest dose of 0.75-0.85 mg/kg every 12 hours in obese patients (BMI ≥ 40 kg/m²) | • For surgical patients, platelets every 3 days between days 4 and 14 after beginning LMWH then, as clinically indicated | o For 1 mg/kg every 12 hour dosing regimen: adjust dose to obtain anti-Xa level of 6-1 IU/mL (4-6 hours after fourth dose) |
| | | | o For 1.5 mg/kg every 24 hour dosing regimen: adjust dose to obtain anti-Xa level of 1-2 IU/mL (4-6 hours after fourth dose) |
| | | | Platelets: • Limited data suggest the following enoxaparin dose modification: |
| | | | o For platelet count > 50 K/microliter: full-dose 1 mg/kg twice daily; alternative dose 1.5 mg/kg once daily |
| | | | o For platelet count 25-50 K/microliter: half-dose, 0.5 mg/kg twice daily |
| | | | o For platelet count < 25 K/microliter, hold all anticoagulants |

1 Note: • Low-molecular-weight heparin = LMWH (preferred agents) • If LMWHs are not accessible, consider switching to warfarin after 5 days of LMWH therapy. Heparin and warfarin therapy should overlap 5 days during the acute management of venous thrombosis • Patients who tolerate anticoagulation should be continued on it indefinitely or until active cancer resolves • Patient should be observed closely for bleeding and signs and symptoms of neurological impairment if therapy is administered during or immediately following diagnostic lumbar puncture, epidural anesthesia, or spinal anesthesia

2 If lab results indicate heparin induced thrombocytopenia, follow management guideline per Heparin Induced Thrombocytopenia (HIT) Treatment algorithm

3 Multi-dose vials not recommended for home use

Continued on next page
APPENDIX G: Anticoagulation Therapy Options for Cancer Patients with Active VTE (does not include prophylactic dosing) - continued

<table>
<thead>
<tr>
<th>Unfractionated Heparin (UFH)</th>
<th>MONITORING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>DOSE / ROUTE / FREQUENCY</strong></td>
<td>Baseline labs for heparin should be CBC with platelets, aPTT/PT, serum creatinine</td>
</tr>
<tr>
<td>● If fixed dose, unmonitored subcutaneous UFH is chosen</td>
<td>● INR Goal: 2-3</td>
</tr>
<tr>
<td>● Initial dose: 333 units/kg subcutaneously for one dose, followed by 250 units/kg subcutaneously twice daily in addition to warfarin for at least 5 days until the INR is ≥ 2</td>
<td>● Baseline CBC with platelet count, aPTT/PT, liver function tests</td>
</tr>
<tr>
<td>Warfarin⁴ (Selected Vitamin K Antagonists) – For Long-term Management</td>
<td>● Follow-up for PT/INR regularly</td>
</tr>
<tr>
<td><strong>DOSE / ROUTE / FREQUENCY</strong></td>
<td>● Renal:</td>
</tr>
<tr>
<td>● Overlap warfarin (5 mg PO) with induction therapy (LMWH, Factor Xa Inhibitor, or UFH-SC) beginning on Day 1 of therapy</td>
<td>● If creatinine clearance is between 30-50 mL/minute: use with caution</td>
</tr>
<tr>
<td>● Continue induction therapy until INR ≥ 2 for two days, AND patient has received at least 4-5 days of induction therapy overlap</td>
<td>● If creatinine clearance is &lt; 30 mL/minute: contraindicated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Fondaparinux (Arixtra®) (Factor Xa Inhibitor)</th>
<th>MONITORING</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ACTUAL BODY WEIGHT (kg)</strong></td>
<td><strong>FONDAPARNUX Daily SC DOSE</strong></td>
</tr>
<tr>
<td>&lt; 50</td>
<td>5 mg</td>
</tr>
<tr>
<td>50 – 100</td>
<td>7.5 mg</td>
</tr>
<tr>
<td>&gt; 100</td>
<td>10 mg</td>
</tr>
<tr>
<td>Renal:</td>
<td>● If creatinine clearance is between 30-50 mL/minute: use with caution</td>
</tr>
<tr>
<td>Weight:</td>
<td>● If creatinine clearance is &lt; 30 mL/minute: contraindicated</td>
</tr>
<tr>
<td>Platelets:</td>
<td>● For BMI ≥ 40 kg/m², no dose adjustment necessary</td>
</tr>
<tr>
<td></td>
<td>● Use fondaparinux with caution in patients with platelets &lt; 100 K/microliter</td>
</tr>
</tbody>
</table>

¹ Use of warfarin in cancer patients has been shown to be less effective at preventing clot recurrence than LMWH
Adult Venous Thromboembolism (VTE)
Treatment for Cancer Patients (DVT and PE)

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APPENDIX H: Direct Oral Anticoagulants (DOACs)

Notes: DOACs are suggested for treatment of VTE in selected patients who have compelling indications to avoid LMWH. A multidisciplinary consultation is strongly recommended with Benign Hematology, Cardiology, and/or General Internal Medicine. Each case needs to be individually assessed prior to use of DOACs. There is no evidence available with DOACs in cancer patients who experience chemotherapy induced thrombocytopenia. See note below for reasons to avoid the use of DOACs.

Reasons to avoid use of DOACs in the cancer population
- Gastrointestinal and genitourinary cancers have shown increased risk of major bleeds with DOACs. DOACs should also be used with caution in cancers with high risk for mucosal bleeding.
- Lack of standardized testing for monitoring
- Complicated drug-drug interactions with chemotherapy agents. Assessing for drug-drug interaction and to transition patient to and from DOACs

<table>
<thead>
<tr>
<th>DOACs</th>
<th>Rivaroxaban (Xarelto®) Oral Factor Xa Inhibitor</th>
<th>Apixaban (Eliquis®) Oral Factor Xa Inhibitor</th>
</tr>
</thead>
</table>
| VTE Dosing Instructions | CrCl ≥ 15 mL/minute 15 mg PO twice daily with food for 3 weeks followed by 20 mg PO daily with food | No dose adjustment is recommended for CrCl, even when CrCl < 15 mL/minute
| | CrCl < 15 mL/minute or ESRD | Strong dual CYP 3A4 and concomitant P-glycoprotein inhibitor¹ |
| | Strong dual CYP 3A4 and concomitant P-glycoprotein inhibitor¹ | Decrease dose by 50% [if patient already on 2.5 mg twice daily, then avoid] |
| | Strong dual CYP 3A4 and concomitant P-glycoprotein inducer² | Avoid use |

Use in liver disease | CrCl class B or C: NOT recommended |
Significant drug-drug interactions | P-glycoprotein and CYP 3A4 interactions |
Contraindications | Active bleed, spinal puncture, neuroaxial anesthesia |
Monitoring parameters | Routine monitoring of coagulation tests not required |
| | Baseline CBC with differential, serum creatinine, renal function test, hepatic function tests (then periodically) |

¹Strong dual CYP3A4 and P-glycoprotein inhibitors (i.e., ketoconazole, itraconazole, ritonavir)
²Strong dual CYP3A4 and P-glycoprotein inducers (i.e., carbamazepine, phenytoin, rifampin, St. John’s Wort)
See Appendix I: Child-Turcotte-Pugh (CTP) Scoring System

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Continued on next page
Adult Venous Thromboembolism (VTE)
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APPENDIX II: Direct Oral Anticoagulants (DOACs) - continued

Notes: DOACs are suggested for treatment of VTE in selected patients who have compelling indications to avoid LMWH. A multidisciplinary consultation is strongly recommended with Benign Hematology, Cardiology, and/or General Internal Medicine. Each case needs to be individually assessed prior to use of DOACs. There is no evidence available with DOACs in cancer patients who experience chemotherapy induced thrombocytopenia. See note below for reasons to avoid the use of DOACs.

Reasons to avoid use of DOACs in the cancer population

- Gastrointestinal and genitourinary cancers have shown increased risk of major bleeds with DOACs. DOACs should also be used with caution in cancers with high risk for mucosal bleeding.
- Lack of standardized testing for monitoring
- Complicated drug-drug interactions with chemotherapy agents. Assessing for drug-drug interaction and to transition patient to and from DOACs: Lexicomp®, Micromedex® or Clinical Pharmacology available at http://insidemdanderson.org (for internal use only).
- DOACs should also be used with caution in cancers with high risk for mucosal bleeding.

<table>
<thead>
<tr>
<th>DOACs</th>
<th>Dabigatran (Pradaxa®) Direct Thrombin Inhibitor</th>
<th>Edoxaban1 (Savaysa®) Oral Factor Xa Inhibitor</th>
</tr>
</thead>
<tbody>
<tr>
<td>VTE Dosing Instructions</td>
<td>CrCl &gt; 30 mL/minute</td>
<td>CrCl ≥ 51 mL/minute</td>
</tr>
<tr>
<td></td>
<td>150 mg twice daily AFTER 5 days of treatment with parenteral anticoagulant</td>
<td>60 mg PO daily started after at least 5 days of treatment with a parenteral anticoagulant: If body weight ≤ 60 kg or on P-glycoprotein inhibitor dose reduce to 30 mg PO daily</td>
</tr>
<tr>
<td></td>
<td>CrCl &lt; 50 mL/minute</td>
<td>CrCl 15-50 mL/minute</td>
</tr>
<tr>
<td></td>
<td>and any concomitant administration of P-glycoprotein inhibitor</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Avoid use</td>
<td>CrCl &lt; 15 mL/minute or ESRD</td>
</tr>
<tr>
<td></td>
<td>No recommendations</td>
<td>Any concomitant administration of P-glycoprotein inhibitor</td>
</tr>
<tr>
<td></td>
<td>Avoid use</td>
<td>Any concomitant administration of P-glycoprotein inhibitor</td>
</tr>
</tbody>
</table>

Use in liver disease

CTP4 class B or C: NOT recommended

Significant drug-drug interactions

P-glycoprotein interactions

Contraindications

Active bleed, spinal puncture, neuroaxial anesthesia

Monitoring parameters

- Routine monitoring of coagulation tests not required
- Baseline CBC with differential, renal function test, hepatic function tests (then periodically)

1Edoxaban is currently not on the MD Anderson formulary
2P-glycoprotein inhibitors (i.e., amiodarone, azithromycin, clarithromycin, dronedarone, oral ketoconazole, quinidine, verapamil)
3P-glycoprotein inducers (i.e., rifampin)
4See Appendix I: Child-Turcotte-Pugh (CTP) Scoring System

CrCl = creatinine clearance (mL/minute) CTP = Child-Turcotte-Pugh score
ESRD = end stage renal disease HD = Hemodialysis

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## APPENDIX I: Child-Turcotte-Pugh (CTP) Scoring System

<table>
<thead>
<tr>
<th>Chemical and Biochemical Parameters</th>
<th>Points for Increasing Abnormality</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Hepatic encephalopathy</td>
<td>None</td>
</tr>
<tr>
<td>Ascites</td>
<td>None</td>
</tr>
<tr>
<td>Serum albumin</td>
<td>Greater than 3.5 g/dL</td>
</tr>
<tr>
<td>Total bilirubin</td>
<td>Less than 2 mg/dL</td>
</tr>
<tr>
<td>For primary biliary cirrhosis</td>
<td>1 – 4 mg/dL</td>
</tr>
<tr>
<td>Prothrombin time prolonged or INR</td>
<td>Less than 4 seconds</td>
</tr>
<tr>
<td></td>
<td>Less than 1.7</td>
</tr>
</tbody>
</table>

*CTP score is obtained by adding the score for each parameter.

CTP class:
- Class A = 5 to 6 points
- Class B = 7 to 9 points
- Class C = 10 to 15 points
Adult Venous Thromboembolism (VTE) Treatment for Cancer Patients (DVT and PE)

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SUGGESTED READINGS


Continued on next page
SUGGESTED READINGS - continued


This practice consensus statement is based on majority opinion of the VTE workgroup experts at the University of Texas MD Anderson Cancer Center for the patient population. These experts included:

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Disclaimer: This algorithm has been developed for MD Anderson using a multidisciplinary approach considering circumstances particular to MD Anderson’s specific patient population, services and structure, and clinical information. This is not intended to replace the independent medical or professional judgment of physicians or other health care providers in the context of individual clinical circumstances to determine a patient’s care. This algorithm should not be used to treat pregnant or lactating women.