CANCER-ASSOCIATED THROMBOSIS

Quick Reference Card | NICE NG158 · BSH 2024 · ASCO 2023

Dr Muhammad Mohsin | Consultant Haematologist, NHS UK

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KHORANA SCORE — VTE RISK IN AMBULATORY CANCER PATIENTS (Khorana et al, Blood 2008)

Risk Factor	Score
Very high-risk cancer site: **pancreas or stomach**	**+2**
High-risk cancer site: lung, lymphoma, gynaecological, bladder, testicular, or renal	**+1**
Pre-chemotherapy platelet count ≥ 350 × 10^9/L	**+1**
Haemoglobin < 10 g/dL, or use of RBC growth factors	**+1**
Pre-chemotherapy white cell count > 11 × 10^9/L	**+1**
BMI ≥ 35 kg/m^2	**+1**

Score 0	Score 1–2	Score ≥ 3
Low risk Routine prophylaxis not recommended	Intermediate risk Individualise decision	High risk Offer pharmacological prophylaxis (ASCO 2023 threshold: ≥ 2)

Khorana score applies to ambulatory patients before starting systemic therapy. Does NOT apply to hospitalised or post-surgical patients. Validated in a prospective cohort of 2,701 patients (Khorana et al, Blood 2008).

■ ANTICOAGULANT SELECTION FOR ESTABLISHED CAT (BSH 2024 · ASCO 2023)

Clinical situation	Preferred agent	Rationale / note
Active cancer (non-GI/GU) + confirmed VTE, adequate renal function	**Apixaban (preferred DOAC)**	10 mg BD × 7d then 5 mg BD. No initial LMWH bridging. CARAVAGGIO trial [5]
Active GI malignancy (colorectal, upper GI, gastric) + VTE	**LMWH (therapeutic)**	Higher mucosal bleeding risk with DOACs in luminal GI cancer
Active GU malignancy (bladder, renal pelvis) + VTE	**LMWH (therapeutic)**	Higher risk of haematuria with DOACs
Primary or metastatic brain tumour + VTE	**LMWH (therapeutic)**	Higher intracranial bleeding risk; specialist input required
Platelets 50–100 × 10^9/L + VTE	**LMWH with haematology input**	Individualise; consider dose reduction; monitor closely
Platelets < 50 × 10^9/L + VTE	**Avoid if possible**	Discuss with haematology; IVC filter if PE recurrence risk high
Recurrent VTE on therapeutic DOAC	**Switch to LMWH**	Verify adherence first; seek haematology review
Recurrent VTE on therapeutic LMWH	**Escalate LMWH by 20–25%**	BSH 2024; monitor response; haematology input required [2]
Incidental VTE on staging CT	**Treat as symptomatic VTE**	Same recurrence risk; anticoagulate per standard CAT protocol [2,3]
CVC-related upper limb DVT	**Anticoagulate ≥ 3 months**	Or while CVC in situ; removal not mandatory unless non-functional

■ DURATION OF ANTICOAGULATION (BSH 2024)

- Minimum **6 months** for all cancer-associated VTE
- Continue beyond 6 months while **cancer active** or systemic treatment ongoing — review at 6 months with MDT input [2]
- Cancer in **complete remission**: reassess at 6 months; stopping may be appropriate for provoked VTE with no ongoing high-risk factors
- Reassess at **every clinical review** — bleeding risk and cancer status change over time

Thrombocytopenia thresholds (BSH 2024)

Plt < 25	**Avoid anticoagulation**
Plt 25–50	**Use with caution + haematology review**
Plt 50–100	Dose-reduce + monitor closely

■ THROMBOPROPHYLAXIS

Ambulatory — before systemic therapy (ASCO 2023)

- Calculate Khorana score before each new chemotherapy course
- Score ≥ **2:** offer prophylaxis — apixaban **2.5 mg BD** or rivaroxaban **10 mg OD** [3]; LMWH is an alternative
- Score 0–1: routine prophylaxis not recommended; individualise

Hospitalised cancer patients

- VTE risk assessment on admission using validated tool [1]
- LMWH prophylaxis unless contraindicated (active bleeding, plt <50, high surgical bleed risk)

Surgical cancer patients

- LMWH perioperatively and postoperatively for all cancer surgery
- **Extended prophylaxis 28 days** after major open abdominal/pelvic cancer surgery [1,2]
- Mechanical IPC perioperatively until ambulatory

References: [1] NICE NG158 (2023). [2] BSH CAT guideline 2nd ed. BJH 2024; DOI:10.1111/bjh.19414. [3] Key NS et al. JCO 2023. [4] Khorana AA et al. Blood 2008;111:4902. [5] Agnelli G et al (CARAVAGGIO). NEJM 2020;382:1599.