

ORBIT: Bleed risk scoring tool for anticoagulation in Atrial Fibrillation (AF)

NICE recommends the use of the ORBIT bleed risk tool, alongside addressing modifiable risk factors for bleed, when considering or reviewing anticoagulant treatment of patients with AF. NICE states that that ORBIT has shown a higher accuracy in predicting absolute bleeding risk than other bleeding risk tools. ⁽¹⁾

ORBIT is a validated tool developed using data from the 'Outcomes Registry for Better Informed Treatment of Atrial Fibrillation,' (ORBIT-AF) registry. The ORBIT-AF population included patients taking either a DOAC or a vitamin K antagonist. ⁽²⁾

NICE recognises that other bleeding risk tools may need to be used until ORBIT is embedded in clinical pathways and electronic systems. ⁽¹⁾

Accurate knowledge of bleeding risk supports shared decision making and has practical benefits, for example, increasing patient confidence and willingness to accept treatment when risk is low and prompting discussion of risk reduction when risk is high. ⁽¹⁾

Bleeding Risk-**ORBIT** ⁽²⁾

Risk Factor for Bleeding	Pts. Scored
Older (75 years or older)	1
Reduced haemoglobin (<13 mg/dL in men and <12 mg/dL in women), haematocrit (<40% in men and <36% in women) or history of anaemia	2
Bleeding history- Any history of GI bleeding, intracranial bleeding, or haemorrhagic stroke	2
Insufficient kidney function (eGFR < 60 mg/dL/1.73 m ²)	1
Treatment with an antiplatelet agent	1

PLUS Modifying Bleeding Risk ⁽¹⁾

Offer monitoring and support to modify risk factors for bleeding, including:

- Uncontrolled hypertension
- Poor control of international normalised ratio (INR) in patients on vitamin K antagonists
- Concurrent medication, including antiplatelets, selective serotonin reuptake inhibitors (SSRIs) and non-steroidal anti-inflammatory drugs (NSAIDs)
- Harmful alcohol consumption
<https://www.nice.org.uk/guidance/ph24/chapter/7-Glossary#harmful-drinking-high-risk-drinking>
- Reversible causes of anaemia.

Interpretation of ORBIT score ⁽²⁾

ORBIT Score	Risk level	Number of major bleeds caused per 1,000 AF patients treated with anticoagulant therapy per year
0-2	Low	24
3	Medium	47
4-7	High	81

Major bleeding is defined according to International Society on Thrombosis and Haemostasis criteria: (i) fatal bleeding and/or (ii) symptomatic bleeding in a critical area or organ (intracranial, intraspinal, intraocular, retroperitoneal, intra-articular or pericardial, or intramuscular with compartment syndrome), and/or (iii) bleeding causing a fall in haemoglobin level of 20 g/L (1.24 mmol/L) or more or leading to transfusion of two or more units of whole blood or red cells. ⁽²⁾

References

1. NICE Guideline NG196. Atrial Fibrillation: Diagnosis and Management. April 2021 <https://www.nice.org.uk/guidance/ng196>
2. O'Brien EC et al. The ORBIT bleeding score: a simple bedside score to assess bleeding risk in atrial fibrillation. Eur Heart J. 2015 Dec 7; 36(46): 3258-3264