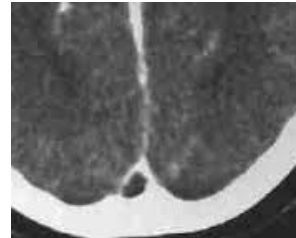


Incidence of venous thromboembolic events (VTE) in glioblastoma patients

- **VTE is frequent in glioblastoma patients**
- **VTE is a major complication associated with glioblastoma**
- **Life-time risk of symptomatic VTE is around 25% (Marras et al., Cancer, 2000)**
- **Probability of VTE is high at diagnosis and remains high throughout the course of disease (Edwin et al., Thromb Res, 2016)**
- **One third of VTE occurs peri-operatively, and one third during radiochemotherapy (Edwin et al., Thromb Res, 2016)**



Risk factors for VTE in malignant glioma patients

Patient Factors

Age (especially >75)⁴
ABO bloodtype (A, AB)¹³
Prior deep vein thrombosis or pulmonary embolism
Leg paresis, prolonged immobility^{2,6}
Multiple medical comorbidities
Obesity

Glioma-associated Factors

Tumor grade (high > low-grade glioma)^{3,4}
Intraluminal thrombosis in surgical specimen¹⁵
Recurrent disease
Tumour size (>5 cm)^{3,4}
Post-operative residual disease (biopsy>partial>gross total resection)¹⁴

Treatment-associated factors

Post-operative period
Chemotherapy⁶¹
VEGF targeted treatment³⁸
Hormonal therapy
Venous access devices

- Risk factors common to VTE in general
- Risk factors common to VTE particular in high grade gliomas - *underlying mechanisms are unclear*
- Risk factors associated with treatment of high grade gliomas

(Perry, Neuro Oncol, 2012)