| Management of patients on warfarin therapy with high INR and no bleeding |  |
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| Clinical setting | Recommendations and levels of evidence* |
| INR higher than the therapeutic range but $<4.5$ and no bleeding | - Lower or omit the next dose of warfarin <br> - Resume therapy at a lower warfarin dose when the INR approaches therapeutic range <br> - If the INR is only minimally above therapeutic range (up to $10 \%$ ) dose reduction is generally not necessary (2C) |
| INR4.5 - 10.0 and no bleeding | - Cease warfarin therapy; consider reasons for elevated INR and patient-specific factors. Vitamin $\mathrm{K}_{1}$ is usually unnecessary (2C) <br> If bleeding risk is high: ${ }^{\dagger}$ <br> - consider vitamin $\mathrm{K}_{1} 1 \mathrm{mg}-2 \mathrm{mg}$ orally or $0.5 \mathrm{mg}-1 \mathrm{mg}$ IV (GPP) <br> - measure INR within 24 hours <br> - resume warfarin at a reduced dose once INR approaches therapeutic range |
| INR>10.0 and no bleeding | - Cease warfarin therapy, administer $3 \mathrm{mg}-5 \mathrm{mg}$ vitamin $\mathrm{K}_{1}$ orally or $\mathrm{IV}^{\ddagger}(2 \mathrm{C})$ <br> - Measure INR in 12-24 hours. Close monitoring of INR daily to second daily over the following week (GPP) <br> - Resume warfarin therapy at a reduced dose once INR approaches therapeutic range <br> If bleeding risk is high: ${ }^{\dagger}$ <br> - consider Prothrombinex-VF, $15-30 \mathrm{IU} / \mathrm{kg}$ (GPP) <br> - measure INR in 12-24 hours. Close monitoring over the following week <br> - resume warfarin therapy at a reduced dose once INR approaches therapeutic range |
| INR=international normalised ratio. IV =intravenously. * Level of evidence in parentheses in italics <br> Recommendations with no evidence level are standard practice and not based on gradable evidence. <br> ${ }^{\dagger}$ Recent major bleed (within previous 4 weeks) or major surgery (within previous 2 weeks),thrombocytopenia (platelet count, $<50 \times 10^{9} / \mathrm{L}$ ), known liver disease <br> ${ }^{\ddagger}$ Extrapolated from oral vitamin $\mathrm{K}_{1}$ data in absence of IV data. |  |

