Superficial Venous Thrombosis: most respond to NSAID/heat. Data does show that at least a 10-12 day course (up to 42 days) of prophylactic LMWH or fondaparinux is more effective than NSAIDs and should be considered in patients with extensive (> 5cm), greater saphenous, or painful SVT. Rivaroxaban 10mg can be substituted if financial issues or patient concerns about injections.

Upper Extremity DVT:
Catheter related: In PICC deep venous thrombosis hold anticoagulation unless symptomatic and then for a month. Removal of PICC is key to resolution of thrombosis and therapy with 25% risk of bleeding. For tunneled catheters consider removal and 3 months therapy. If catheter is not removed then needs 3 months of therapy.
Spontaneous: 3 months of therapy. Consider catheter directed thrombolytic therapy for extensive thrombosis especially if in a dominant arm or a young patient - both for symptom relief and to find any anatomical lesions (~75% of patients)

Calf/Muscular Vein Thrombosis: 12 weeks of therapy. For low risk patient – or risk of bleeding - no therapy and repeat doppler in one week for progression. Low risk: provoked, < 5cm, negative D-dimer, no cancer, no history of VTE, and outpatient.

Proximal Vein Thrombosis (popliteal vein and above)/PE: Duration of therapy influenced by number of thrombosis and if provoked. DOACs preferred therapy

- Provoked first DVT or PE: 3 months. Provoking factors: trauma, surgery, bedrest > 72 hours, pregnancy, estrogen, long (> 4 hours) plane flights.
- Idiopathic first DVT or PE: Strongly consider indefinite therapy direct oral anticoagulants or with warfarin INR 2-3. High risk (10-25%) of recurrence in next 2 years without anticoagulation. For uncompleted patents can cut to prophylactic DOAC therapy after 6 months (ie 2.5 mg bid apixaban)

- Two or more lower extremity proximal DVT or PE: Indefinite anticoagulation

Prevention of post-thrombotic syndrome: exercise encouraged, early application of compression stockings knee-high 30-40 mmHg

"Incidental PE": treat same as symptomatic PE
Subsegmental PE: no treatment option if low risk: no cancer, good cardiopulmonary status, no history of VTE, no DVT, minimal symptoms, and outpatient.

Pregnancy: LMWH has been established to be both effective and safer in pregnancy than standard heparin. Dose for body weight and check levels after third dose then every month. Can use LMWH or warfarin with breast feeding. Duration – entire course of pregnancy and at least 6 weeks after delivery – total should be at least three months.

Thrombophilia
Inherited hypercoagulable states – raises risk of first DVT but not a predictor of recurrence. NO value in checking in provoked thrombosis or arterial thrombosis.

Cancer
DOAC preferred over warfarin except may raise risk of bleeding in patients with upper GI cancers. Long term LMWH for warfarin/DOAC failures. Studies have shown that incidentally discovered PE in cancer patients have the same adverse outcome as symptomatic PE and require aggressive therapy.

Visceral Vein Thrombosis: Portal vein thrombosis – anticoagulate unless discovered incidentally. If provoked by surgery or infections 3 months otherwise indefinite. Consider JAK2/PNH screening in idiopathic cases. Budd-Chiari - indefinite anticoagulation and JAK2/PNH screening. DOAC preferred therapy in all cases.
GENERAL References

Antithrombotic Therapy for VTE Disease: CHEST Guideline- on line Jan 2016

Antithrombotic and Thrombolytic Therapy, 8th Ed: ACCP Guidelines
Chest 2008 Jun; 133 (Suppl) : 67S-968S.

References