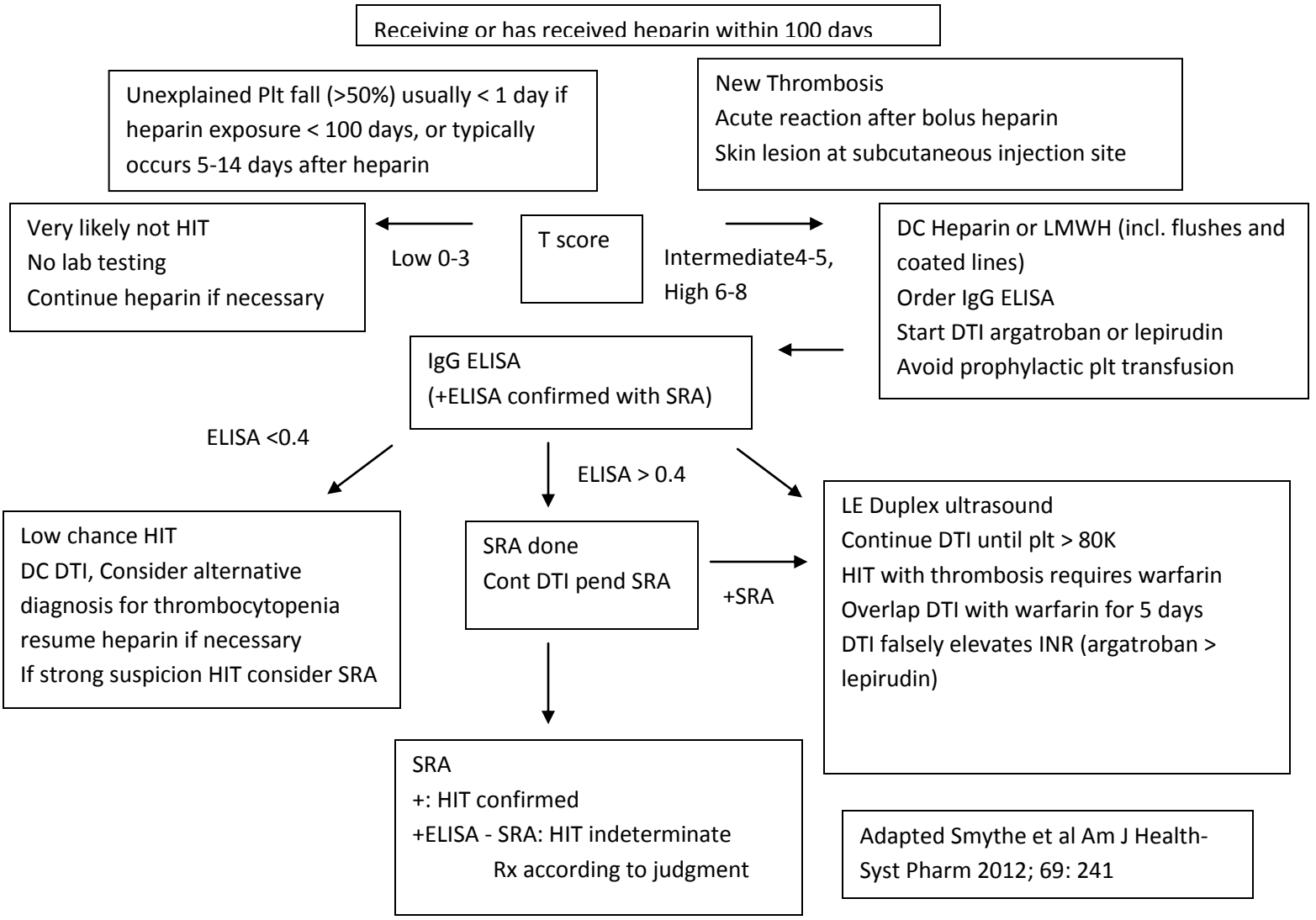
Heparin Induced Thrombocytopenia Protocol



4Ts	2 points	1 point	0 point
Thrombocytopenia	Plt fall >50% and nadir ≥20*	Plt fall 30–50% or platelet nadir 10–19	Plt fall <30% or nadir <10
Timing of plt fall	Clear onset day 5–10 or fall ≤1 day (prior heparin within 30 days)	Consistent with 5–10d fall, but not clear; onset after day 10; or fall ≤1 day (prior heparin 30–100 days ago)	Plt fall <4 days without recent exposure
Thrombosis or other sequelae	New thrombosis; skin necrosis; acute systemic reaction after heparin bolus	Progressive or recurrent thrombosis; Non-necrotizing skin lesions; Suspected thrombosis	None
Other causes	None apparent	Possible	Definite

Adapted Lo et al J Thromb Haemost 2006; 4: 759–65

Bivalirudin (Angiomax®)

Analog of recombinant hirudin (avoid use in patients allergic to lepirudin)
MOA: Directly inhibits all actions of thrombin
Duration: $t_{1/2}$ life = 25 minutes
aPTT values return to baseline in 2-6 hours after discontinuation (significantly prolonged with renal insufficiency)
Elimination: 80% is proteolyically cleaved by thrombin with the remaining 20% eliminated by renal mechanisms
Extracorpeal elimination: Dialysis-Yes, Hemofiltration-Limited, Plasmapheresis-Yes
Precautions: bleeding, antibody formation, allergic reactions, renal dysfunction
****Bivalirudin is the preferred agent for patients with **hepatic dysfunction or combined hepatic and renal dysfunction******

Argatroban

Selective thrombin inhibitor
MOA: Binds to thrombin active site inhibiting all actions of thrombin
Duration: $t_{1/2}$ life = 30-60 minutes.
aPTT values return to baseline in 2-6 hours after discontinuation (significantly prolonged with hepatic insufficiency)
Elimination: Liver and primarily excreted via biliary tract
Extracorpeal elimination: Dialysis-Minimal, Hemofiltration-No, Plasmapheresis-Yes
Precautions: bleeding, liver dysfunction
****Argatroban is the preferred agent for patients **with renal dysfunction** and normal hepatic dysfunction****

Conversion to Warfarin

Coadministration of direct thrombin inhibitors (especially argatroban) and warfarin produce synergistic effects on INR
Start warfarin therapy when platelets greater than 80,000 or after two consecutive increases in platelet count
To determine if patient is therapeutic on warfarin, discontinue direct thrombin inhibitor for 2-4 hours and check INR
INR may need to be greater than or equal to 4 on combination therapy to result in therapeutic INR on warfarin alone