Evidence to support low dose maintenance IV Iron Supplementation:

- Most common factors associated with ESA hyporesponsiveness are iron deficiency, frequent hospitalization for infection, catheter use, hypoalbuminemia and elevated CRP levels (9)

- Assessment of IV iron to replete iron stores prior to ESA usage should be undertaken (5)

- IV iron therapy, when added to ESA therapy, offers additional clinical benefits, such as a reduction in the EPO dosing requirements needed to maintain improved Hb and hematocrit levels (4, 8, 9, 10)

- Losses of iron in haemodialysis patients can be up to 6 mg per day, exceeding the absorption capacity of the gastrointestinal tract (3)

- ESA use will increase the body’s demand for iron and although sufficient iron stores exist, the iron cannot be delivered to the bone marrow fast enough to meet the increased iron demands (9)

- Inflammatory states increase the circulating level of ‘hepcidin”, an acute-phase hormone produced by the liver, which can block iron absorption from the gut and restrict the release of iron in storage – also known as inflammation-mediated reticulo-endothelial (RE) blockade (9)

- The administration of IV iron therapy (eg a 1 g repletion course) can mobilize iron, help overcome iron-restricted erythropoiesis/inflammation-mediated RE blockade and improve Hb levels (highlighted by improved levels of the iron marker reticulocyte Hb content [CHr]) – DRIVE Study (2007) (9)

- IV iron use in a patient with an active infection can facilitate microbial growth (9)

- DRIVE-II Study (2008) demonstrated a significant reduction in ESA dosing while maintaining a Hb level greater than 11 g/dL with the administration of IV iron (9)

- Regular, low dose IV iron can improve and stabilize Hb levels, preventing a “roller-coaster’ effect which can result from a repletion course (9, 10)
References:


