Therapeutic tinzaparin monitoring

Monitoring of therapeutic doses of tinzaparin is recommended if:

- eGFR < 30 ml.min^{-1}, or patient on dialysis/filtration (risks accumulation as incompletely filtered/dialysed)
- **OR** in extremes of bodyweight (e.g. < 40kg or > 140 kg)

In Covid-19, inadequate anticoagulation on standard therapeutic doses has also been described – this can resolve as the patient improves, leading to overtreatment.

When monitoring therapeutic tinzaparin:

1. Medical staff retain responsibility for requesting tests and following up results.
2. Request urgent "Anti-Factor Xa level, **peak**" via EPR; blood in blue citrate tube **4 hrs** after **third dose**. Ensure collection time correct.
3. Samples now (May 2020) processed in-house in BRI, 24/7, with a 1-2 hr turnaround time.
4. Results should now be reliably on EPR. Check collection time against time of dose for correct interpretation - peak is narrow.

Anti-Factor Xa peak (IU/mL)	Action
< 0.5	Increase dose by ~20%; recheck after three doses[3]
0.5 - 1.0[1]	Continue same dose. Can go up or down 10% if at either end of range. Recheck after three doses if renal function unstable, or weekly otherwise.
1.01 - 1.5	Reduce dose by ~20%, recheck after three doses[2,3]
1.51 - 2.0	Reduce dose by ~50%, recheck after three doses[2,3]
> 2.0	Suspend tinzaparin – check **trough level** when next dose due and then every 12h until < 0.5; discuss with haematology

[1] If confirmed major thrombosis e.g. submassive PE consider target of 0.8 – 1.2.

[2] If level rising or static despite dose reduction discuss with haematology.

[3] Consider rechecking levels sooner if significant change in renal function.