# Extravasation risk factors

## Patient-related risk factors
- veins: small, fragile, hard/sclerosed (e.g. due to prescribed or prolonged therapies), limited availability (e.g. due to restricted use of arms due to lymph node resections, lymphoedema)
- comorbidities (e.g. coagulopathies, increased vascular permeability, impaired circulation or skin diseases)
- altered communication (e.g. non-English speaking patients, communication difficulties, young children)
- impaired cognitive function (e.g. confusion, dementia)
- increased body mass index BMI (e.g. BMI > 25) – increased depth of veins from skin surface.

## Drug/solution-related risk factors
- properties of drug/solution (e.g. concentration, volume, pH, osmolarity, cytotoxicity, vasoconstriction, absorption refraction, vesicant potential).

## Administration-related risk factors
- inappropriate cannulation (e.g. large cannula in small vein, small or fragile veins, repeated use of same vein, area of movement – wrist, cubital fossa, multiple cannulations)
- pressure administration (e.g. infusion pump)
- prolonged infusion administration time
- interruptions pre-, during and post-administration
- untrained and not competent clinicians
- inadequate dressing and securement of vascular access device
- inappropriate non-coring needle – too short (risk of subcutaneous administration) or too long (risk of dislodgement)
- lack of patency – any alteration to easy aspiration and easy injection ability of vascular access device
- untrained or inexperienced staff in vascular access and management of intravenous anti-cancer drugs
- interruption or distractions during drug administration.