Supplemental Digital Content 3 Local-site reactions with recommended nurse and/or patient actions

Local-site reactions	Potential cause(s) of reaction	Nurse/patient action	Long-term management
Erythema	This may indicate the drug has been tracked upon entry or exit through the dermal skin layer causing irritation	Nurse should reassess needle insertion technique A longer needle may be required A cold compress for short periods may help Try an over the counter non-drowsy antihistamine	**The frequency of local-site reactions should decrease over time and with subsequent infusions. Educating the patient may help set expectations. The following points should be discussed with patients to help them manage any local-site reactions:** • Inform the patient that mild to moderate local infusion-site reactions (e.g., swelling and redness) are a common side effect of subcutaneous therapy, but to contact their healthcare professional if a local reaction increases in severity or persists for more than a few days • Inform the patient of the importance of having an infusion needle long enough to reach the subcutaneous tissue and of rotating the actual sites of infusion with each infusion • Inform patients to consider adjusting the infusion-site location, volume per site, and rate of infusion based on how infusions are tolerated • Inform patient to interrupt or terminate SCIG infusions if a hypersensitivity reaction occurs, such as diffuse cutaneous rash or hives. • Severe reactions should be immediately reported to the treating physician who may decide to invite the patient in for an urgent visit • Inform the patient to record all local-site reactions In their infusion log
Pruritus/Heat	This may be caused by any one of a number of irritants: a reaction to adhesive tape, dressings, cleaning alcohol, or sensitivity to the drug itself	Consider alternative methods for securing needle if sensitivity to tape/adhesive suspected A longer needle may be required A cold compress for short periods may help Try a different site location for subsequent infusions	
Blanching/whiteness	This may be a result of increased tissue pressure as the drug volume increases in the site	No action needed; usually decreases as drug absorbed A warm compress may help	
Eczema	This may be caused by any one of a number of irritants: a reaction to adhesive tape, dressings, cleaning alcohol, or sensitivity to the drug itself	Ensure sites at least 2 inches away from area until resolved Apply over the counter topical medication Contact physician if condition does not improve or worsens	
Intolerable Swelling	Swelling is normal if it decreases and dissipates totally over 24–72 hours. For intolerable swelling, adjustments can be made by decreasing volume to improve tolerability	Consider reducing volume per site or changing infusion site location A warm compress may help Patient may take a walk to help with absorption Gentle massage of area after infusion may help A longer needle may be required	
Painful swelling post-infusion	Some patients report painful or tender bumps post-infusion; this may indicate too high a volume is being infused at the site or may be due to the patient's body type	Gentle massage of area may help Warm or cold compresses may help Consider reducing volume per site	
Development of nodules at the infusion site	Some patients report small nodules of fatty tissue developing under the skin; the exact cause of these is unknown	Ensure sites at least 2 inches away from area until resolved; do not infuse into areas of scar tissue or striae; check that the needle is secure to avoid any movements up and down Ensure infusion sites are being rotated A warm compress may help Gentle massage of area may help	
Pain during infusion	This may indicate the needle is in muscle tissue	Nurse should reassess needle insertion technique A shorter needle may be required	
Bruising	This may indicate the needle disrupted a capillary	Nurse should reassess needle insertion technique Ensure sites at least 2 inches away from area until resolved	
Leakage post-infusion	This may indicate an incorrect needle length is used, the tip of the needle is not deep enough or too high a volume is being infused at the site	A longer needle may be required Ensure needle securely taped to skin during infusions Consider reducing volume per site or infusion rate	