NHS
South East London
Cancer Alliance

Self-administration of Denosumab by Subcutaneous Injection

Sub-cutaneous Denosumab self-administration policy

April 2022

Main Document Information	
Version:	1
Publication Date:	April 2022
Approval Body:	South East London Cancer Alliance
Approval Date:	April 2022
Ratification Body (delete as appropriate)**:**	SACT Steering Group, Individual Trust Chemotherapy Committee & Governance Groups
Ratification Date:	February 2022
Document Author:	Aishling McLoughlin
Responsible Executive Director:	
Review Date:	**April 2024**
Document Change from Previous:	N/A
Readership (Target Audience):	Clinical Staff

Document Location and History	
Current Document Title:	SELCA_Self administration of Denosumab by subcutaneous injection v1.0
Current Document Location:	King's Health Partners Website (via the Haematology Clinical Academic Partnership Resources tab)
Current Document Replaces:	
Previous Document Name:	N/A
Previous Version Number:	N/A
Previous Publication Date:	N/A
Location of Archived Document (delete as appropriate)**:**	N/A

Document Authors	
Document Owner:	Aishling McLoughlin
Other Contributing Authors:	Catherine Quinlan, Lilia So, Nicholas Liew, Janet Hayden

Version Control History				
Version	**Date**	**Type of Change**	**Summary of Changes**	**Author**

Dissemination Schedule (Following Ratification)				
Target Audience	**Method of Distribution**	**Person Responsible**	**Confirmation Receipt Required?**	**Method of Replacement for Previous Version**
			Yes / No	

Document Keywords	
Keywords:	Denosumab, self-administration, oncology, breast cancer, subcutaneous injection, skeletal related events, solid tumour

Supporting Documentation (complete and added as appendices)	
Policy Checklist:	Yes
Equality Impact Assessment:	Yes
Ratification Sheet*:	Yes

Table of Contents

Introduction

This standard policy and procedure outlines the safe set up for self / carer administration of subcutaneous denosumab in the community setting. The community setting denotes the patient's place of residence, i.e. patients own home. Subcutaneous administration of denosumab in the community is classified as low risk because the treatment selected is:

- Not a vesicant
- Can be given by bolus injection subcutaneously (S/C)
- Not associated with high incidence of allergic reactions (therapy that has a higher incidence of reactions will be initiated in a hospital setting).

The denosumab indication this policy covers is for the management of bone metastases from solid tumours. Denosumab is a subcutaneous injection that is administered every 4 weeks. If patients are also receiving chemotherapy then generally denosumab is administered at the same time however, often denosumab results in additional patient visits to hospital and the option of self / carer administration has the potential to improve patient experience, increase capacity in the chemotherapy day units and potentially reduce delivery costs.

Purpose and Scope

This policy provides clear guidance for healthcare professionals across South East London Cancer Alliance (SELCA) on the safe provision for self / carer administration of subcutaneous denosumab in the community setting. This policy should also be read in conjunction with the Trust's Medicines Policy and the associated Codes of Practice.

Assessment of Patient / Carer Suitability

Prior to commencing a patient on self / carer administration of denosumab in their own home, appropriate steps must be taken to ensure that they are suitable and safe candidates for this mode of treatment. The patient and/or carer must understand what is expected of them including the risks and benefits, and can consent to self / carer administration of subcutaneous denosumab at home. The patient and/or carer must be able to comply with and understand the regimen and be able to recognise complications and be able to seek emergency assistance/follow advice when given.

Patients who have communication difficulties (e.g. deaf/hard of hearing or for whom English is not their first language) should be supported where possible to ensure they have access to this scheme if appropriate.

Inclusion Criteria

The assessment should include:

- Patient's ability to make informed decisions. A copy of the patients signed consent form for self / carer administration (see Appendix 1) must be kept in the patients notes
- Patient's willingness to self-administer their treatment at home
- Patient or carer's ability to cope with the practicalities of self-administration including:
  - Does the patient or carer administer their other own medication(s) at home?
  - Does the patient or carer understand the purpose of treatment, dose to take and when to take, possible side effects and how to report these?
  - Can the patient or carer open the packaging, manipulate the vial for withdrawal and able to self-inject?
  - Can the patient or carer understand and do they have the ability to complete a self-administration record card?
  - Is the patient or carer able to come to the hospital to collect their drug when needed?
  - Do they have access to a fridge?
  - Do they have access to a sink and adequate hand-washing facilities?

If the answer to all the questions is "Yes" then with the patient's consent, they should be referred by their clinical team for a specific teaching appointment by a member of the nursing team in the chemotherapy day unit to be shown how to self-administer and to be given all necessary patient information leaflets (See Appendix 1).

If the answer to any of the above questions is "No" then the patient is not suitable for this method of administration and this decision should be documented in the patient's electronic health record. In these cases, the patient should be referred to the usual place of treatment in the hospital setting, for administration by trained nursing staff as per standard procedures.

Exclusion Criteria

- Patients with concerning mental health problems/capacity issues that would preclude their ability to comply with treatment safely. Any concerns should be assessed using the Mental Capacity and Best Interest Checklist or similar.
- Patients with recent history of addiction or substance misuse
- Patients who do not have access to the required facilities at home including a secure fridge that permits safe storage of SACT and hand washing facilities
- Patients who are unable to completely perform tasks required for self-administration and have no carer to help
- Patients who have any concerns about the people who they live with interfering with their medication or treatment administration
- Patients who are unable to self–care

- Patients who are unable to, or have access to, use a phone to contact the hospital or come back to the hospital in the event of a problem
- Patients who have had previous reactions or adverse effects to denosumab (greater than grade 2 or any grade that has warranted withholding treatment)
- Patients who are pregnant or breastfeeding or have any other contraindications to denosumab as outlined in the denosumab SPC
- Patients who have experienced hypocalcaemia as a result of denosumab despite supplementation. If patient's corrected calcium is less than 2.2mmol/L then treatment should be withheld until hypocalcaemia has resolved
- Patients / patient carer who have failed to understand and meet the criteria, assessment and training outlined in Appendix 1.

If **any** exclusion criteria are present, the patient should be referred to the usual place of treatment in the hospital setting for administration by appropriately trained nursing staff as per standard procedures. (This is not an exhaustive list of exclusion criteria and each patient will need to be assessed individually by their medical team to ensure suitability for self / carer-administration of denosumab).

Assessment of patient / carer (Refer to Appendix 1)

If a patient has met the inclusion criteria for self-administration and has been identified by his/her consultant as appropriate for self-administration then the patient can be referred for an **assessment and education appointment** by a trained nurse. The patient and/or carer must be willing to receive training **and** be assessed as capable of manipulating all the required equipment in order to ensure safe administration of the drug (see Appendix 1).

When considering a patient's eligibility for carer / self-administration of subcutaneous denosumab, at least the first cycle of treatment should be administered in the usual setting (i.e. chemotherapy day unit) and at least one dose be administered by the patient / carer under direct healthcare professional supervision. Any deviation from this, where clinical need or individual patient circumstances warrant it, must be agreed with the patient and their medical consultant in advance and clearly documented in their health records.

The patient or named designated carer may only self-administer after successful completion of assessment and education by a trained nurse during this appointment.

(Note: The chemotherapy nurse consultant or equivalent will be responsible for maintaining a register of staff that are permitted to fulfil this role).

The following actions must be completed after a patient has successfully passed their self / carer administration assessment during the assessment and education appointment:

- The nurse should also complete Appendix 2 prior to the first cycle of self / carer administration: Patient information and checklist with the patient +/- carer and provide

them a copy of this. This should also be scanned onto the patient's electronic healthcare record.

- The standard consent form for the patient to start this therapy will also be completed with the patient by the prescribing doctor and scanned onto the patient's electronic health record.
- The dates for self-administration must be agreed with the patient / carer and the nurse on chemotherapy day unit when the patient attends clinic/is collecting their medication and prior to the patient going home. The nurse must then book the patient into the relevant nurse led toxicity assessment clinics on each day of administration
- A self-administration pack (which includes all equipment and printed information for patient/carer) must be supplied to the patient/carer

Frequency of clinic attendances and blood tests

Frequency of clinic attendance will be at the discretion of the treating clinician and will be dependent on the stability of the patient's disease. The clinician reviewing the patient in clinic will have the responsibility of prescribing the relevant number of denosumab prescriptions until the patient's next clinic appointment (maximum of 3 cycles after the 3rd dose) and indicate the number of cycles confirmed for self-administration.

Calcium levels should be monitored at baseline, two weeks after the initial dose and before the 2nd and 3rd dose. Following this, if calcium levels are stable and patients don't have risk factors for hypocalcaemia (e.g., severe renal impairment), then they can be monitored every 12 weeks. Patients must be informed by their treating team that they cannot collect their denosumab for self / carer administration until their bloods have been taken and reviewed. If corrected calcium levels are below or above the required threshold (<2.2 or >2.6 mmol/L) the prescribing clinician will be contacted to advise on supplementation if appropriate and continued dose. Dosing should be as per protocol and monthly monitoring should continue until calcium levels have normalised.

Bloods may be taken locally in some instances and in this case it is still a requirement for the treating clinician or pharmacist to review the bloods prior to release of denosumab and supportive care.

Prescribing and Dispensing

Prescribing

Local Trust processes for prescribing SACT should be followed, and the prescriber must be on the SACT prescribing register. All denosumab prescriptions must be prescribed on the relevant electronic prescribing system and supportive calcium and vitamin D will be prescribed and

dispensed as per local policy. All prescriptions must be prescribed a minimum of 72 hours in advance.

The prescriber may prescribe up to 3 months of denosumab at a time dependent on the frequency of blood monitoring (as per frequency of bloods tests outlined above). The prescriber must outline on the QCL to the screening pharmacist that the patient is now on the self / carer administration pathway and the number of cycles approved for collection/delivery. The prescriber should inform the patient which pharmacy to collect the prescription from.

Dispensing

Local Trust processes for dispensing SACT should be followed. Denosumab for self-administration will either be dispensed from the in-patient or out-patient pharmacy (dependent on individual hospital procedures).

Nursing staff must document on the electronic prescribing system, if any medication has been administered on the chemotherapy day unit and how many doses have been supplied to the patient, if any. If the denosumab has been supplied directly to patient by pharmacy then they must document that the denosumab has been handed out.

Collection and carriage of denosumab by patients / carers to home

During the initial assessment and training session delivered by a chemotherapy day unit nurse, the patient / carer will have been informed about the appropriate transportation of denosumab. Patients will be advised to bring a suitable plastic storage container with them upon collecting their medication.

When transporting denosumab home, the effects of temperature fluctuations should be minimized by:

- Not exposing the vials or container to direct sunlight
- Not leaving vials/containers in a parked car where the temperature may rise significantly for an extended period
- Not exposing the vials/containers to hot air blowers in cars/transport
- Not placing vials/containers in direct contact with heaters
- Denosumab requires refrigeration and it should be placed in the fridge as soon as the patient returns home.

The patient should be made aware of the expiry date of the medications and how and where to check this. If there are any outstanding doses there needs to be clear arrangement and documentation between nursing or pharmacy staff and the patient / carer as to when and where

these will be collected and the quantity of the outstanding doses to be collected if there are outstanding doses.

Courier

In some circumstances (e.g. during a pandemic) the pharmacy may agree to courier medicines wherever possible to the patient's residence to prevent hospital attendance. The pharmacy team will organise the appropriate courier for transportation of subcutaneous SACT medicines. An appropriate courier must be able to transport medicines via a trackable service, the courier must be authorised to take injectable cytotoxic and non-cytotoxic medicines, and if necessary will be supplied with appropriate cytotoxic spill kits for transportation. The courier must be able to maintain the safe transfer of medicines and maintain any storage requirements regarding temperature e.g. maintaining a cold chain if required and actively preventing any extreme fluctuations in temperature.

Storage at Home

Denosumab vials should be kept in the sealed bag supplied by the pharmacy and within a plastic container provided by the patient / carer where applicable. Vials/syringes should be stored inside their original packaging (i.e. the original cardboard packaging supplied by the manufacturer).

Denosumab needs to be stored in a fridge and it should be placed within the appropriate plastic storage container in a normal domestic refrigerator as soon as possible on return home and must not be frozen. The plastic container should not be placed against the back, sides or bottom of the refrigerator, and stored on a separate shelf to other consumables. It should be placed out of reach of children and pets. If for any reason the vials have been damaged, have expired or any other reason that they become unsuitable for use, the patient should contact either their CNS or an appropriate healthcare professional on the chemotherapy day unit to arrange a replacement dose as soon as possible. Any unused denosumab syringes or vials should be returned to pharmacy via the day unit/clinic at the patient's next hospital appointment for safe disposal.

In the event that a patients refrigerator is not functioning properly or where vials have been left out of the fridge, denosumab (if kept in its original packaging) can still be used if the temperature excursion has not exceeded 30 days and if was stored between 8oC and 30oC. If denosumab has been out of the refrigerator for longer than 30 days or outside of the temperature excursion limits then it should not be used and should be returned to the hospital for disposal.

Administration

Prior to administration

The patient / carer must ensure that they have all of the relevant equipment and information to support self-administration which is supplied to the patient when they attend the hospital for either a clinic appointment or for bloods etc.

Post administration

The patient / carer will record the date and time that they have administered their medication and record the site of injection in order to allow for rotation of injection site. See Appendix 3.

On the day of self-administration, a nurse from the chemotherapy day unit will call the patient (via the nurse led toxicity assessment clinic) to check that administration was uneventful and that the patient is well in themselves. This telephone consultation should be documented in the patient's electronic health record.

Equipment Required

The patient and/or carer **must** be supplied by the hospital with adequate quantities of equipment. This should include:

- **Vial containing the denosumab (Xgeva brand)**
- **Syringe**

Unused vials must be returned to the appropriate specialist unit and transported as above in a suitable plastic container.

If the Xgeva vials are being supplied then further patient education and training will need to be provided on how to draw up the drug from a vial for administration.

- **Needles**

The patient will require a minimum of 1 orange safety needle for each dose to be administered.

A red needle per dose will be supplied which is required for drawing up denosumab from the vial.

- **Alcohol and gauze swabs**
- **Gloves**
- **Apron (only required if administration by a carer)**
- **Sharp bins**

This should be a purple lid cytotoxic sharps disposal bin when supplying cytotoxics. Instructions should be given that the bin should not be over-filled, the lid must be closed when full and the patient must return it to the hospital when it is full or at the end of each cycle, whichever happens first.

Patients must also be supplied with the information outlined in support for patient / carer section below.

Support for the patient / carer

The patient should be informed of possible complications, how to problem solve and when and who to telephone for help and advice – this should be given verbally and supported by written information including:

- Patient information leaflet for the drug which is supplied in the denosumab vial pack
- A treatment diary if applicable
- A copy of appendix 3, 4 & 5
- The following link to a video explaining how to self-administer a subcutaneous injection: https://info.guyscanceracademy.co.uk/giving-yourself-an-injection/
- Amgen Patient Information Pack for self-administration

Support will be provided for patients through the nurse led toxicity assessment clinic which will be on the day of every self-administration. The frequency of these clinics may be reduced for patients who are stable on treatment and who have had and continue to have no issues with self / carer administration.

Managing spillage

Pre-filled syringes/vials with small volumes of liquid reduce the risk of spillage. Spillage guidelines (Appendix 5) will be supplied to all patients receiving denosumab at home.

The key points regarding a cytotoxic spill (including needle stick injury) are:

- If the carer is managing a spillage, and they are pregnant, or think that they may be pregnant or are breastfeeding, it is preferable that they do not handle cytotoxic drugs, or waste, unless absolutely necessary.
- If the medication comes into contact with the skin, or following a needle-stick incident, the area should be thoroughly washed with water.

- If the medicine enters the eyes, they should be thoroughly irrigated with water and medical advice sought.
- Always wear double gloves when dealing with spillages.
- Wipe up any spillage with the paper/kitchen towel, place in a bag and dispose of directly into cytotoxic sharps bin.

Any spillage incidents should be reported to the chemotherapy day unit.

Missed Doses

If a patient misses a dose for any reason they should contact their Clinical Nurse Specialist or the chemotherapy day unit for advice. Any reasons for the missed dose and advice given to the patient or action taken should be documented clearly in the patient's electronic notes.

Documentation

Documentation should be completed and filed in the patient's notes/EPR as a record of training, consent, patient acknowledgement, and confirmation that the appropriate patient specific information and training have been provided and supplies and deliveries have been arranged. This should also be documented as completed on the patient's SACT electronic navigator.

The patient must record administration of injections on the copy of the proforma supplied (See Appendix 3). This must be uploaded / scanned into the patient's electronic record on completion of the cycle, or at their next hospital attendance.

Each nurse led toxicity assessment clinic should be documented on the patient's electronic health record.

Scheduling, Monitoring and Recording

The scheduling of SACT treatments should follow normal processes. Patients should have administrations scheduled on EPR and booked on PiMs; however, day unit appointments should be annotated as "self-administration".

Patients should be regularly monitored whilst on self-administration of injectable SACT through continued clinic appointments with clinical team and through the nurse led toxicity assessment clinics. The clinical teams should use the scheduled appointment times to liaise with the patient on the day of administration. Any issues or deviations to treatment must be appropriately escalated.

Specific clinical monitoring requirements for each drug are outlined in the patient information leaflets and in the Denosumab protocol available on the intranet. Monitoring practices should not change from routine practice.

Stopping Self-Administration or Discontinuation of SACT

If at any time the patient who is self-administering denosumab has a change of mental capacity, changes their mind about self-administration or there are any reasons why self-administration becomes unsafe (e.g. clinical deterioration) then home self-administration must be stopped and the patient will restart having treatment on the appropriate day unit via nurse administration. This must be clearly documented on the patient's electronic health record.

Any unused denosumab syringes or vials must be returned to pharmacy, in a suitable plastic storage container, for reconciliation and safe disposal. Doctors are reminded to notify nursing/scheduling team and pharmacy if a patient's treatment is being amended or discontinued for any reason via a QCL or email.

References

Amgen (2021) Xgeva 120 mg solution for injection SmPC. Available at: https://www.medicines.org.uk/emc/product/4675/smpc#gref

King's College Hospital NHS Foundation Trust. 2020. Self-administration of Bortezomib by subcutaneous injection (Adult Haematology patients only).

National Institute for Health and Care Excellence (NICE) (2012). "Denosumab for the prevention of skeletal- related events in adults with bone metastases from solid tumours"Available at: https://www.nice.org.uk/guidance/ta265/documents/bone-metastases-from-solid-tumours-denosumab-final-appraisal-determination-guidance2 [Accessed 13 February 2022]

Royal Marsden NHS Foundation Trust Policy. 2020. Policy and procedures for patient/carer administration of subcutaneous SACT in the community.

NHS
South East London
Cancer Alliance

Appendix 1: SACT Self Administration Patient Assessment and Training and Consent Form

PATIENTS NAME: ……**Hosp No:** ……

Date of birth: ……..

AIM: The patient and/or carer will acquire the knowledge and skills necessary to safely and effectively administer subcutaneous injections. If at anytime there is concern the patient/carer will not be able to administer the medication safely at home, please refer back to the appropriate day unit for treatment and document reasons on the EPR. Any nurse supporting patients or their carers to administer a subcutaneous injection must have the relevant skills and knowledge to undertake this, acting within their competency at all times (https://www.nmc.org.uk/standards/code)

Assessment of ability to self-administer (to be completed by nurse and patient/carer)

Learning outcome to be achieved (delete as appropriate)	**Instructed (date/sign)** Mark where not applicable	**Observed (date/ sign)** if applicable	**Achieved** **(Patient and/or Nurse to date/sign)**
Able to understand principles of asepsis, non touch technique and good hand washing techniques			
Able to select appropriate site for injection			
Understands how to clean site prior to injection			
Denosumab and trastuzumab only: Can follow the instructions for drawing up of the injection			
Understands how to handle a pre-filled syringe and needle without contaminating it prior to injection (where required management of a vial & how to draw up contents into a syringe)			
Understands how to and is competent to inject contents of syringe correctly			

Knows how to correctly store medications (ensure patient has access to a domestic fridge if required for medication storage)			
Knows how to dispose of sharps and syringe safely			
Knows what to do if there is a problem and who to contact			
Knows how to access educational information			

Additional criteria to be met

	YES	NO	Name & Signature of Nurse	Date
Does the patient have the ability to understand the treatment and patient/carer able to safely self - administer SACT				
Does the patient/carer have sufficient manual dexterity to self- administer a subcutaneous injection?				
Has the patient signed a SACT consent form for this treatment?				
Has the patient received education on self-administration in both written and verbal format?				
If required, the relevant specialist pharmacist has been informed that equipment pack will be need to be sent with medication				

Has the patient been scheduled for nurse led toxicity assessment for ongoing treatment as per this policy?				
Ensure the patient / carer is aware how to document that they have administered their injection and the site of their injection				
Ensure the patient / carer is aware of the need to return cool boxes to the hospital if applicable				

Nurse & Patient / Carer Confirmation (compete whichever section applies):

Nurse assessing patient for self/carer administration SACT treatment

I …… (print name) deem patient/carer …..... is competent to administer subcutaneous …….. and confirm I have provided all of the relevant equipment and documentation.

Signed…….. Date……

If patient is to self-administer SACT treatment

I …… (print name) am competent to administer subcutaneous …….. and confirm I am willing to self-administer this treatment in the community.

Signed…….. Date……

If carer is to administer SACT treatment

I …… (print name) consent my carer …… (print name) to administer this treatment in the community.

I, the carer …… (print name) am competent to administer subcutaneous ……. and confirm I am willing to administer this treatment in the community.

Patient: Signed…….. Date……

Carer: Signed…….. Date……

Please file the completed copy of this form in the patient's electronic notes

Appendix 2: Checklist for initiating patient / carer on self-administration of subcutaneous injections pathway

PATIENTS NAME: ……**Hosp No:** ……

Date of Birth: ……

	Tick when complete	Instructions	Nurse Name & Signature	Date
Explain dose to patient/carer				
Demonstration of injection technique provided and understood		Refer to appendix 1		
Explain the frequency to patient/carer		Weekly or twice weekly/ every 3 weeks or daily (complete days/dates on the Subcutaneous injection Site Record Sheet)		
Explain all possible sites of administration		Rotation of injection site is necessary to minimise local irritation. Injection site choices: R & L abdomen or R & L thigh (refer to Subcutaneous injection Site Record Sheet)		
Safe storage + expiry check		Store injections in the fridge/ room temperature Allow to come to room temp before injecting to reduce discomfort of injection if the medication is stored in the fridge. Check expiry date on pharmacy label – do not use after this date		
Safe disposal		All sharps, needles and syringes must be disposed of in the sharps bin provided (purple lid). Once full – seal and return to clinic/chemotherapy day unit at your next hospital visit.		

Obtaining further supplies / new prescriptions / blood tests		Sharps bin to be supplied by pharmacy/chemotherapy day unit Blood tests to be done at date / time required by prescriber Medication and other ancillaries collected from chemotherapy day unit (during Mon-Fri).		
Contact details		Patient has contact details for the ward/unit and clinical nurse specialist		
Patient information provided		Patient information Leaflet Patient advised of where to access leaflets & film on s/c injections on the Trust website (see policy for details) Appendix 2 & 3 of this policy		
Consent signed				
Appendix 1 completed				

Please file the completed copy of this form in the patient's electronic notes within 24 hours of completing

Appendix 3: Subcutaneous Injection Site Record Sheet

(Please print and give a copy to the patient)

The nurse/pharmacist handing out the vials / syringes is responsible for checking (and uploading onto patient's electronic notes) the Subcutaneous Injection Site Record Sheet for the previous cycle and to complete the anticipated days and date of treatment for this cycle.

Cycle no.	Day	Injection Site*	Date

*E.g. Left or Right Abdomen, Left or Right Thigh.

Appendix 4: Patient Information Guide to Self-Administration

A nurse will have either shown you how to give yourself a subcutaneous (under the skin) injection or will have talked the process through with you over the telephone. The following steps will remind you how to do it.

You will need:

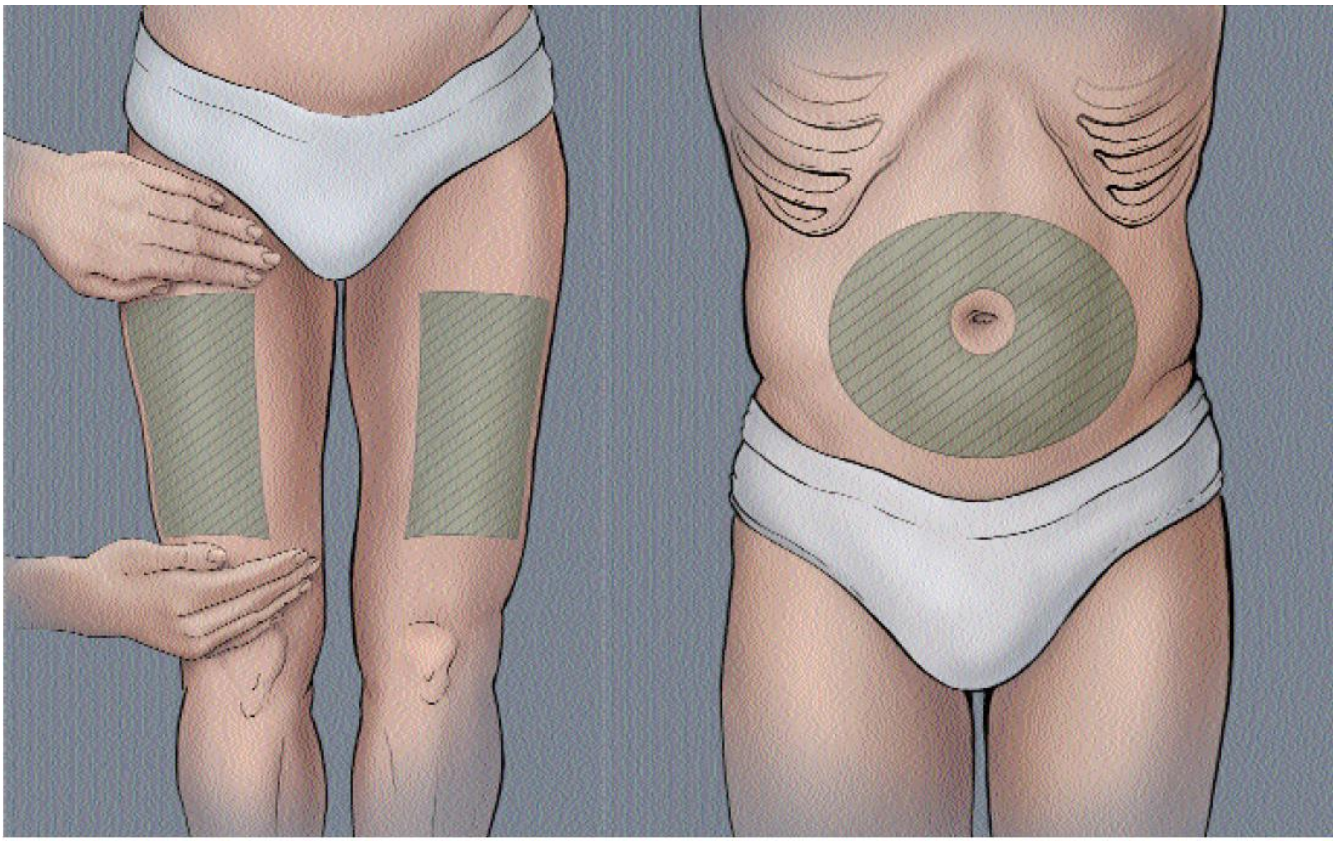
- 70% Alcohol swabs in packet
- Gauze swab
- Vial containing denosumab
- Syringe
- Injection needle
- Sharps bin
- Apron and gloves if applicable.

1. Remove the denosumab vial from the fridge and allow to come to room temperature before injecting to reduce discomfort of injection, usually this takes 15-30 minutes
2. Check the details on the label of the medication to ensure it has your name on it.
3. Check the syringe contents is clear and not discoloured and the volume matches the label
4. Check the vial contents has not passed the expiry date
5. Gather all your equipment and place on a clean surface
6. Wash your hands thoroughly and dry them.
7. Remove and open the packets containing the syringe and the gauze swabs.
8. Open the red needle and twist the red needle onto the syringe taking care not to touch the hub of the syringe (the top of the syringe)
9. Remove the protective cap from the denosumab vial and clean the rubber stopper with an alcohol wipe. Let this air dry before attempting to draw up the denosumab
10. Remove the cap that covers the red needle and pierce the rubber stopper on the vial
11. Turn the vial upside down. Slowly pull back the plunger, so that the full contents of the vial is drawn up.
12. Remove the needle and syringe from the vial. Place the vial straight into the sharps bin. Unscrew the red needle and put it into the sharps bin.

13. Twist the orange needle onto the syringe and take care not to touch the end of the syringe
14. If there are any air bubbles in the syringe, gently tap the side of the syringe with your finger, the bubbles should rise to the top. Very gently push the air out of the syringe.
15. Remove appropriate clothing to expose the area you will be using for the injection (e.g. your abdomen or thigh, see the diagram below). Remember to alternate between your left and right and abdomen and your right and left thigh (refer to Subcutaneous injection site record sheet).
16. Open an alcohol swab packet and take out the swab
17. If a carer is administering the medication then they should put on an apron and gloves
18. Use the alcohol swab to clean the skin where you are going to inject yourself and allow to dry for 15-30 seconds
19. Take the plastic cover off the needle and hold the syringe between the thumb and forefinger of your dominant hand as if holding a dart.
20. With your free hand gently pinch the skin of the area chosen for injection to elevate the subcutaneous tissue and if you can grasp 2 inches then inject at 90 degrees. If you can only pinch 1 inch then insert the needle at an angle (45 degrees).
21. When the needle is completely inserted, slowly push the plunger down as far as it will go. The entire contents of the vial should be injected.
22. Withdraw the needle and apply gentle pressure on the injection site with a gauze swab. Do not massage the area.
23. Cover the injection site with a plaster if necessary.
24. Do not put the needle back into the needle cover.
25. Put the used needle and syringe into the sharps container. When this is filled to the line on the bin, close the lid and bring it back to hospital at your next visit or contact your local council to arrange collection

Sites for subcutaneous injections

NHS South East London Cancer Alliance



Appendix 5: Cytotoxic Spillage Procedure

(please print and give a copy to the patient)

If you are the carer, and are pregnant, think you may be pregnant or are breast feeding, it is preferable that you do not handle cytotoxic drugs, or waste, unless absolutely necessary.

PROCEDURES TO FOLLOW IN THE EVENT OF A SPILLAGE

1. Put on two pairs of disposable gloves
2. Soak up the spill using kitchen towel for small spills by working from the outside of the spill inwards, placing the absorbent towel gently over the spill to avoid splashing
3. Place the kitchen towel and any sharp material into a bag and then into the cytotoxic sharps bin
4. Take off the top pair of gloves and clean the floor or work surface with warm soapy water (i.e. washing up liquid) and kitchen towel
5. After cleaning put the kitchen towel and gloves into a bag and then into the cytotoxic sharps bin
6. Wash hands thoroughly
7. Contact the Nurse in Charge (NiC) on the chemotherapy day unit to inform them of the spillage and to arrange replacement medication if required

PROCEDURES TO FOLLOW IN THE EVENT OF A CYTOTOXIC SPILL ONTO SKIN OR MUCOUS MEMBRANES*

(* *For example, at the nostrils, mouth, lips, eyelids or ears)*

In the event of accidental contact with cytotoxic medication, the following procedures should be adopted immediately:

1. Wash the area thoroughly with soapy water as soon as possible. For large spillages/splashes, remove contaminated clothing (and wash separately from other clothes), shower and put on a clean set of clothes
2. In the event of a cytotoxic splash to the eye, irrigate thoroughly with tap water for approximately 20 minutes
3. Immediately report the incident to your clinical nurse specialist or the nurse in charge at the chemotherapy day unit