Guidance for Handling the Spillage of Systemic Anti-Cancer Therapy (SACT) Drugs

West Midlands Cancer Alliance
Expert Advisory Group for Systemic Anti-Cancer Therapy (SACT)

West Midlands Cancer Alliance

This sheet is to accompany all documentation agreed by the West Midlands Cancer Alliance Expert Advisory Groups. This will assist the Cancer Alliance to endorse the documentation and request implementation.

EAG name	West Midlands Cancer Alliance Systemic Anticancer Treatment (SACT) Expert Advisory Group	
Document Title	Network Guidance for Handling the Spillage of Cytotoxic and Anti-Cancer Drug	
Published date	March 2023	
Document Purpose	The purpose of this guideline is to provide specific guidance on how to handle spillage of cytotoxic and other systemic anti-cancer drug therapies including monoclonal antibodies. Details are given for spillages on hard surfaces, fabrics including clothing and skin or eyes. The guideline also lists personal protective equipment and safety equipment which is available in spillage kits, how to use this equipment and the location of these kits.	
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Approval Signatures:	**EAG Chair** Sam Toland Date: 18/4/23	**Cancer Alliance Clinical Director** Lydia Fresco Date: 20/04/2023

Key Amendments to Document

Version	Date	Amendment	By
Draft 0.1	July 2017	Based on Coventry and Warwickshire Updated Foundation Trust policy updated for West Midlands Clinical Network Expert Advisory Group for Systemic Anti-cancer Therapy (SACT)	S.Toland
V1	September 2017	Changes agreed by EAG meeting	S.Toland
V2	September 2020	Changes agreed by SACT EAG	S. Toland
V3	March 2023	Changes agreed by SACT EAG	S. Toland

Contents

1. Introduction

The toxicity of cytotoxic and other systemic anti-cancer drug therapies used within SACT means that they can present significant risks to those who handle them. Occupational exposure can occur when control measures are inadequate. Exposure may be through skin contact, skin absorption, inhalation of aerosols and drug particles, ingestion and needle stick injuries resulting from the following activities:

- drug preparation
- drug administration
- handling patient waste
- transport and waste disposal, or
- cleaning spills.

Inadequate control measures could lead to;

- Abdominal pain, hair loss, nasal sores, vomiting, and liver damage
- Contact dermatitis and local allergic reactions.
- Foetal loss in pregnant women and malformations in the children of pregnant women
- Alterations to normal blood cell count
- Abnormal formation of cells and mutagenic activity or mutations forming

Anyone working with patients receiving cytotoxic drugs is at risk of exposure. This therefore includes pharmacists, pharmacy technicians, medical and nursing staff, laboratory staff, and others. Appropriate control measures must be in place to protect them all. (HSE, 2014)

This guideline has been devised to give specific guidance on how to handle spillage of Systemic anti-cancer therapies (SACT). Details are given for spillages on hard surfaces, fabrics including clothing and skin or eyes. The guideline also lists personal protective equipment (PPE) and safety equipment which is available in spillage kits, how to use this equipment and the location of these kits.

2. Scope of this document

This policy covers the handling of spillage of all SACT drugs on all surfaces.

3. Responsibility and Duties

- All nursing staff who administer SACT
- All medical staff who administer SACT
- All pharmacy staff who handle SACT
- Porters / people authorised to transport SACT
- All members of staff who work in the vicinity of where SACT and patient waste are handled

There should be access to a cytotoxic spillage kit in all areas where cytotoxic drugs are handled.

4. Policy Detail

4.1 Suggested contents of the spillage kit

ITEM	QUANTITY
Filtered face piece respirator (FFP2 or FFP3)	2
Absorbent towel	1
Absorbent pad (50x40cm)	2
Nitrile gloves (non-sterile) (large)	8 (4 pairs)
Chemoprotect gown	2
Overshoes	4
Safety glasses (BS EN 166)	2
Plastic tweezers	1
Plastic aprons	2
Armlets	4
Cytotoxic waste bag (yellow and purple)	2
Sodium Bicarbonate 8.4% 250 ml	2
Bottle sterile water 1 litre	1
Cytotoxic waste container (purple lid) (Large)	1
Cytotoxic spillage sign	1
Spillage policy	1

4.2 General points

- Do not delegate cleaning of a spill to domestic staff.
- After using a spill kit contact the pharmacy department or pharmacist on call as soon as possible for a replacement.
- COSHH data sheets for all cytotoxic products are held within pharmacy departments.
- NOTE there is currently no evidence to support the use of specific decontamination agents to denature cytotoxic drugs.

4.3 Procedure for Cleaning up a Liquid spill

1. Call for assistance and warn others
2. Cordon off the area to avoid spreading – evacuate all non-essential personnel and patients / carers where possible – especially any staff / visitors that may be pregnant
3. DO NOT LEAVE THE SPILL UNGUARDED.
4. Obtain the cytotoxic spillage kit.
5. Put the cytotoxic spill sign in place to warn others.
6. From the kit put on:
    - Respirator mask
    - Two pairs of nitrile gloves
    - Safety Glasses
    - Overshoes
    - Chemoprotect gown
    - Armlets
7. Soak up the spill using absorbent towel for small spills OR absorbent pad for large spills by working from the outside of the spill to the inside the spill, placing the absorbent towel or pad gently over the spill to avoid splashing.
8. Pick up any broken or sharp material with tweezers.
9. Place the absorbent towel or pad and any sharp material in the cytotoxic waste container.
10. Dilute the area with water, then using absorbent towel, clean the spill area with water at least three times, drying the area after each dilution. Use a new section of absorbent towel for each clean and place into the cytotoxic waste container.
11. Remove personal protective equipment in the following order:
    - Outer gloves
    - Mask and goggles
    - Gown and armlets
    - Shoe covers
    - Inner gloves
12. Treat all waste and personal protective equipment used as cytotoxic.
13. Place all waste into cytotoxic waste container or cytotoxic waste bag.
14. Complete printed label section details on waste bag or waste container used.
15. Use bag ties to seal waste bag.
16. Wash hands thoroughly.
17. Dispose of waste following normal cytotoxic waste procedures.
18. Complete an incident report to include all standard information required and also
    - Drug spilt
    - Approximate volume
    - Liquid/powder
19. Inform Occupational Health

See Appendix 1 for a flow chart of procedure

4.4 Powder spill

1. Call for assistance and warn others
2. Cordon off the area to avoid spreading
3. DO NOT LEAVE THE SPILL UNGUARDED.
4. Obtain the cytotoxic spillage kit.
5. Put the cytotoxic spill sign in place to warn others.
6. From the kit put on:
    - Respirator mask
    - Two pairs of nitrile gloves
    - Safety Glasses
    - Overshoes
    - Chemoprotect gown
7. Use water to moisten the absorbent towel.
8. Gently place over the powder and scoop up the powder inside the absorbent towel.
9. Work from the outside of the spill to the inside the spill.
10. Pick up any broken or sharp material with tweezers.
11. Place the absorbent towel or pad and any sharp material in the cytotoxic waste container.
12. Using absorbent towel, clean the spill area with detergent and water at least three times. Use a new section of absorbent towel for each clean and place into the cytotoxic waste container.
13. Treat all waste and personal protective equipment used as cytotoxic.
14. Place all waste into cytotoxic waste container or cytotoxic waste bag.
15. Complete printed label section details on waste bag or waste bin used.
16. Use bag ties to seal waste bag.
17. Wash hands thoroughly.
18. Dispose of waste following normal cytotoxic waste procedures.
19. Complete an incident report to include all standard information required and also
    - Drug spilt
    - Approximate volume
    - Liquid/powder
20. Inform Occupational Health

4.5 Spillage on bed linen

1. Put all contaminated bed linen into a cytotoxic waste bag.
2. Complete printed label section details on waste bag
3. Use bag ties to seal waste bag.
4. Dispose of waste following normal cytotoxic waste procedures.
5. Complete an incident report to include all standard information required and also
    - Drug spilt
    - Approximate volume
    - Liquid/powder
6. Inform Occupational Health

4.6 Spillage on clothes

1. Change immediately from contaminated clothes
2. Put all contaminated clothes into a cytotoxic waste bag.
3. Complete printed label section details on waste bag.
4. Use bag ties to seal waste bag.
5. Dispose of waste following normal cytotoxic waste procedures
6. If this is not possible, the clothes must be washed individually several times with copious amounts of hot soapy water, followed by an empty wash cycle to ensure washing machine is cleaned
7. Complete an incident report to include all standard information required and also
    - Drug spilt
    - Approximate volume
    - Liquid/powder
8. Inform Occupational Health

4.7 Skin contamination

1. **MITOMYCIN-** Rinse the skin thoroughly with copious amounts of soap and water or Sodium Bicarbonate 8.4% solution where available followed by soap and water.

2. **ALL OTHER CYTOTOXIC PRODUCTS-** Rinse thoroughly with copious amounts of water and then soap and water for 15minutes.

3. Seek medical advice if irritation occurs.

4. Complete an incident report to include all standard information required and also
    - Drug spilt
    - Liquid/powder
5. For hospital staff, contact the occupational health department.

4.8 Eye contamination

1. **MITOMYCIN-** Rinse the eye thoroughly with copious amounts of Sodium Chloride 0.9% or Sodium Bicarbonate 8.4% solution where available followed by water.

2. **ALL OTHER CYTOTOXIC PRODUCTS-** Rinse thoroughly with copious amounts of 0.9% sodium chloride for 15minutes, holding the eye open. This can be done by running the 0.9% sodium chloride through an administration set and ensuring the head is tilted to the side of the affected eye. Seek medical advice immediately.

3. Complete an incident report to include all standard information required and also
    a. Drug spilt
    b. Liquid/powder

4. For hospital staff, contact the occupational health department.

5. Dissemination

Copy of a policy should be available within all spill kits

6. Training and awareness

Pharmacy department- as part of staff training plan to include staff transporting cytotoxic drugs

Nursing Staff - as part of unit induction and as part of annual update of competency for all nursing staff.

7. References

COSHH data sheets (multiple manufacturers)

Health and Safety Executive (2014) Safe Handling of Cytotoxic Drugs in the Workplace

The Oncology Nurses Society Toolkit for Safe Handling of Hazardous Drugs (HD's) for Nurses in Oncology (2019)

Appendix 1

Flow chart detailing spillage clean up procedure – adapted from The Oncology Nurses Society Toolkit for Safe Handling of Hazardous Drugs (HD's) for Nurses in Oncology (2019)