

**Standard Operating Procedure (SOP) Number: GENM/SOP/176**

**SOP Title: Therapeutic Venesections for Registered Nurses or Healthcare Assistants Band 3**

<b>Classification :</b>	Standard Operating Procedure		
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### SOP Statement

To develop a Standard Operating Procedure (SOP) for Registered Nurse and Health Care Assistants (HCA) Band 3 working within the Day Care Cancer Centre setting, who have been assessed as competent, to perform venesection procedures as part of their duties for haematology patients. The procedure will be carried out after instruction from the day unit registered nurses. (RN) The HCA will be supervised and supported as necessary by RN.

The purpose of this SOP is to provide procedure for the assessment and delivery of therapeutic venesection, and to improve personal care for the patient and reduce the risks associated with poor venesection care, additionally to free up time for RN who are Systemic Anti-Cancer Therapy (SACT) trained enabling them to provide further SACT slots for patients due to this increase in patient attendance for SACT.

### Executive Summary

Therapeutic venesection involves removing a set amount of blood volume from patients in the haematology setting.

Therapeutic venesection of 450mls from adults may be required in the following circumstances:

- Control of Polycythaemia
- Management of Haemochromatosis.

- Treatment of transfusion related iron overload.

## Definition of Terms

**Polycythaemia Vera** is an acquired disorder of the bone marrow that causes the over production of red blood cells. It is a rare disease that occurs more frequently in men than women, and rarely in patients under 40 years old. It is not known what causes polycythaemia vera.

**Haemochromatosis** is a genetic disorder of iron metabolism very common in those of Celtic, Anglo and Northern European descent. Absorption of iron through the intestine is uncontrolled even when the body saturation levels have been reached. The excess iron is very toxic to body organs. The consequence does not occur until this has been happening for several years.

**Transfusion related iron overload**-For previously heavily transfused patients who as a result have an elevated ferritin level which could affect long term health. This group must now have normal bone marrow function: e.g., post Bone Marrow Transplantation or intensive treatment for Acute Leukaemia.

## Indications

**Polycythaemia**- venesection is used to lower the haematocrit levels, (see Consultant notes for target levels for individual patients), and to reduce the risk of thrombosis. Initially this may necessitate weekly venesections to bring the haematocrit down to a safe level. Subsequently less frequent venesections will maintain a satisfactory haematocrit. Progress is monitored with a blood count prior to each procedure unless otherwise indicated by patient's Consultant.

There are two main types of Polycythaemias, primary and secondary:

- **Primary Polycythaemia** (also known as Polycythaemia Vera or PV) is a genetic condition. Patients may be described as JAK2+ if they possess the JAK2 mutation. These patients will usually have a target haematocrit of <0.45
- **Secondary Polycythaemia** is usually caused by lifestyle factors such as drinking and smoking. These patients will usually have a target haematocrit of <0.55 as per BSH guidelines, unless otherwise stated by patient's consultant.

Target haematocrit and frequency of venesection is documented in the medical notes. Most patients will also know this information.

**Haemochromatosis**- venesection is used to reduce excessive iron levels. Normal iron levels are dependent on the patient, some patients target range is a ferritin of below 50ng/ml and others between 50-100ng/ml. Patient Consultant letters should be consulted as to target level of individual patients. It may take weekly venesections for up to 2 years to reduce the levels to normal. Progress is monitored with a blood count or Ferritin prior to each procedure, (unless

otherwise indicated by consultant) when the Ferritin is stable the levels can be checked every 3 months.

**Transfusion related iron overload** -the frequency of venesections and target ferritin level will be determined on an individual basis by the consultant managing the patient.

## 1.0 Roles and Responsibilities:

### Scope

This Standard Operating Procedure (SOP) relates to the following staff groups who may be involved in the assessment and delivery of Therapeutic venesection on the day unit:

- Registered Nurses
- Healthcare Assistants Band 3

Once the RN and HCA have undergone formal training and have been assessed as competent to undertake the procedure. Staff undertaking this procedure must be able to demonstrate continued competence.

## 2.0 Implementation and dissemination of document

The SOP on Therapeutic venesections will be implemented in the day unit Cancer Centre. This document will be published on the Trust Intranet. It will be disseminated to all staff working within Cancer Centre/Haematology department.

## 3.0 Processes and procedures

### 3.1 Equipment

Venesection pack -Compoflex

Medi swabs

Sphygmomanometer

Weighing scales

Dressing pack

Bandage

Tape

Necessary blood bottles if required to take sample post venesection.

Sharps bin.

### 3.2 Procedure

This procedure may be performed by Registered Nurses and Healthcare Assistants Band 3 who have undertaken the venepuncture competency and who are performing within their competency level.

Review patient notes on ECARE or red set from previous out- patient clinic to find the consultants/Registrars request for venesection and request for frequency of venesections and what target levels are required.

Confirm patients' haemoglobin level is above 120 as per venesection Oxford guidelines and patient is well to go ahead. Seek medical advice if haemoglobin is under 12 prior to proceeding.

Assess the condition of the patient, any previous reactions during venesection as they may need fluid replacement during and/or after the procedure.

Provide information and obtain consent from patient.

Check patients' identity against notes.

Position patient on the bed with their arm extended straight and supported by a pillow. Record patients' vital signs as a baseline.

Onto a clean procedure trolley open a dressing pack.

Open venesection pack/Medi swabs and place on the dressing pack.

If a cannula is required, then select an appropriate vein and cannula and open the cannula onto the trolley. (Registered nurses only for Isovolaemic venesections).

Apply the sphygmomanometer cuff to patients arm which will be used and inflate to 40/60mm/Hg.

Select large stable vein suitable for 16g needle generally the median basilica or cephalic veins in the antecubital fossa.

Clean the area using Medi wipe and allow to dry. Insert the needle and secure to the patients arm in 2 places with tape. The tape must not be covering the entry site or touching the needle. It must be placed on the plastic but of the 16g needle. When using the 16g needle blood flow is often best if the needle is rotated immediately after insertion, so that the bevel faces down.

Failed venepuncture -the wide bore needle requires good access, a relaxed patient and nurse, a comfortable extended arm and distended vein. A warm pack may help to distend the vein if needed.

When using a cannula (if this is needed for poor venous access patients) if blood flow is slow or stops 20ml syringes can be used to collect and discard the blood. 50ml syringes must not be used as they can cause wrist and hand injuries.

The bag should be lowered to 30-60cms below the patients arm this will allow the blood to

flow using gravity. The procedure should take about 10 minutes. The bag should be placed on the weighing scales to accurately assess the flow of blood letting. Also, to measure the amount of blood removed.

If taking blood samples- break the seal above the white clamp open the blue clamp and allow sufficient blood flow into the specimen pouch, then close the blue clamp.

Slow blood flow- check the needles siting (revolving the needle so the bevel is not lodged on the inner surface of the vein is effective) Check the sphygmomanometer cuff is still inflated. If no flow checks the clamps on the tube and, check that the valve is broken to the specimen pouch. Blood flow may also be hindered by valves in the vein, pulling the needle slightly may restart the blood flow.

Monitor the flow and the patient as peripheral flow can sometimes be painful for patients. The procedure should take no longer than 20 minutes, after 20 minutes the procedure should be stopped, and the patient brought back on a different day.

Maintain the pressure of the cuff at 46-60mmHg to maintain good flow. Blood from patients with Polycythaemia may be more viscous than normal blood and therefore slower to flow and more likely to clot.

When the bag is filled with approximately 450mls of blood using the Salter weighing scales the bag is then clamped, the sphygmomanometer cuff is deflated, and the needle is removed, and light but constant pressure is applied to the venepuncture site using gauze.

Patient may feel faint during or after the procedure-always carry out the procedure with the patient on a bed or couch, occasionally the volume of blood removed with each venesection may need to be reduced, the patient may require intravenous fluid replacement during the procedure and/or a more prolonged rest period post procedure.

The needle is pulled back into the light blue guard from which it cannot be removed to prevent needle stick injury. The cannula should be removed while the bag is attached, unless the patient is experiencing problems, then the cannula must stay in situ and the bag removed. All must be placed into a yellow lidded sharps bin as soon as removed.

The patient should remain on the bed for up to 5-10 minutes following the procedure their vital signs recorded again with any changes acted upon as needed. Patient should be offered a hot/soft drink +/- biscuits to ensure full recovery post procedure.

Observations should be recorded in the patients notes which have been taken prior to the procedure and following the procedure, along with venepuncture site, volume of blood removed and any ill effects. This must be documented in E-CARE.

Dispose of all equipment as per Trust policy, label blood product bottles accordingly and arrange next appointment as appropriate.

Check the venepuncture site for signs of bleeding: a large bore needle and much used veins

can lead to bleeding.

The patient should be allowed home only when the nursing staff are satisfied that there are no aftereffects e/g feeling faint.

The patients should be advised against strenuous activity and alcohol intake for the rest for the day. Advise patient to stay well hydrated throughout the rest of the day.

#### **4.0 Potential problems**

If the patient faints during the procedure terminate the venesection and call for help, tip the head of the bed or couch down until symptoms subside. Record a full set of vital signs. Contact the medical team to review.

Slow blood flow, ensure the patient has had plenty to drink prior to the procedure as this will help to increase blood flow. If after 3 attempts the procedure was not a success the patient should be brought back after a week to allow for bruising to heal, to try again. Advise patient to drink plenty of fluids in the time leading up to the venesections.

#### **5.0 Statement of evidence/references**

##### **Statement of evidence:**

##### **Background Reading**

Assi, TB and Baz, E (2014) Current applications of therapeutic phlebotomy. Blood Transfusion. 12, Supplement 1, s75-83.

British Society of Haematology-Guidelines  
{accessed May 2022} on <https://b-s-h.org.uk/guidelines>

Fitzsimons EJ, et al. (2018). "Diagnosis and therapy of genetic haemochromatosis (review and 2017 update)." British Journal of Haematology 181: 293-303.

Francis, Y and Mortimore, G (2020) Haemochromatosis UK Venesection Best Practice Guidelines.

The Haemochromatosis Society (now HUK) (2017) The Haemochromatosis Handbook, 5th Ed. HUK. Rugby.

Hui Lin Lim and Wai Khoon Ho (2017). "Performing venesection in a doctor's surgery." Australian Family Physician 46(3): 98-102.

Nursing and Midwifery Council (2018) The Code: Professional standards of practice and behaviour for nurses and midwives, London: NMC. [www.nmc.org.uk/globalassets/sitedocuments/nmc-publications/nmc-code.pdf](http://www.nmc.org.uk/globalassets/sitedocuments/nmc-publications/nmc-code.pdf) (Accessed 10th April 2022)

RCN (2017) Essential Practice for Infection Prevention and Control: Guidance for Nursing Staff. Royal College of Nursing. London.

**References:**

Baxter Healthcare [www.baxterhealthcare.co.uk](http://www.baxterhealthcare.co.uk) {accessed 13/04/2022}

Medline plus [www.nlm.nih.gov](http://www.nlm.nih.gov) {accessed 11/04/2022}

Net doctor [www.netdoctor.co.uk](http://www.netdoctor.co.uk) {accessed 13/04/2022}

Phillips, S, Dougherty, L De Verteuil, A and Collins M, (2008) ‘Venepuncture and Cannulation Structure Learning Programme’ NHS Vascular Access Network

**External weblinks:**

[www.haemochromotosis.org.uk](http://www.haemochromotosis.org.uk)

[www.lrf.org.uk](http://www.lrf.org.uk)

**6.0 Governance**

**6.1 Document review history**

Version number	Review date	Reviewed by	Changes made
1			New document

## 6.2 Consultation History

Stakeholders Name/Board	Area of Expertise	Date Sent	Date Received	Comments	Endorsed Yes/No
M	Haematologist	28/04/2022	Nil		
	Haematologist	29/04/2022	28/05/2022	Yes	Yes
	Haematologist	28/04/2022	28/05/2022	Yes	Yes
	Haematologist	28/04/2022	Nil		
	Haematology ANP	28/04/22	23/05/2022	Yes	Yes
	Macmillan Senior Sister	27/04/22	27/05/2022	Yes	Yes
	Macmillan Senior Sister	27/04/22	Nil		
	Macmillan Sister	27/04/22	27/04/2022	Yes	Yes
	Macmillan Sister	27/04/22	Nil		
	Macmillan Sister	27/04/22	11/05/2022	Yes	Yes
	Macmillan Sister	27/04/22	Nil		
	Macmillan Sister	27/04/22	Nil		
	Macmillan Sister	27/04/22	28/04/22	yes	Yes

## Appendix 1 - Patient fainting escalation

**The patient shows signs/symptoms of:**

- Dizziness
- Cold Skin and sweating
- Slurred speech
- Feeling sick
- Vision changes



**Terminate the venesection**



Call for help from a registered member of the team.

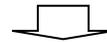
If alone call the emergency bell.

**DO NOT LEAVE THE PATIENT**



**Take a full set of vital signs**

- Blood pressure
- Pulse rate
- Respiratory rate
- Temperature.



Ask Haematology Registrar to review the patient



Do not let the patient leave until a senior member of the team has reviewed the patient and stated they are fit to go.

## Appendix 2 Venesection Competency Form

### Venesection Competency Form

#### Procedure for Therapeutic venesection

Aim and Objective	The practitioner to be able to demonstrate supporting knowledge, understanding and has been observed as competent at undertaking the procedure for Therapeutic Venesection
Training prerequisites	Prior to this assessment, the practitioner has successfully completed the following: Read and understood SOP for Therapeutic Venesection. Adequate shadowing of competency assessed practitioner (minimum of 10 patients.) Competency in venepuncture. Undertaken MKUH Venepuncture training day.
Your responsibility	All staff should ensure that they keep their knowledge and skills up to date by accessing up to date information through local policies, standard operating procedures, and guidance. It is the responsibility of the individual to work within their own sphere of competence relevant to their job role and to follow their Code of Conduct/Standards of Proficiency
Employer Signature and print name	..... .....
Date	Date.....

Documents to have been read in conjunction with SOP for Therapeutic venesections.

- MKUH Infection Control Manual
- MKUH Waste Management Policy
- MKUH Sharps Management
- MKUH Needlestick Injury
- Aseptic Touch Technique-Royal Marsden Manual

## Supervised Practice Assessments – Venesection

Self-assessment: demonstrating competency progression under supervision

This form is a self-assessment tool, but the practitioner will be able to discuss the rationale for each of the actions and demonstrate competency in the practical application of these skills as applicable										
Skill required	Achieved = tick					Not achieved = cross				
	1	2	3	4	5	6	7	8	9	10
Washes Hands										
Correct identification of patient with open questions										
Prepares patient appropriately										
Appropriate and safe use of equipment										
Aware of own safety and that of others										
Correct identification of appropriate vein										
Aware of venous dilation methods										
Able to use local anaesthesia if required										
Explains procedure to patient										
Applies sphygo-manometer correctly to a pressure of approximately 100mm										
Palpates the ante-cubital area to select venesection site										
Properly cleanses venesection site										
Stabilises the vein										
Inserts needles bevel up										
Smoothly places the venesection needle/pack without changing needle position										
Adjusts needle if necessary to obtain flow										
Reduce pressure in the sphygo-manometer to 40-60mm										
Places venesection pack on the scales										
Once 450mls is achieved on the scales, reduce pressure in sphygo-manometer to zero, clamp the venesection line.										
Remove BP cuff, and remove the venesection needle, and place some pressure on the site of removal.										
Disposes of sharps safely										
Checks the site to ensure bleeding has stopped										
Apply a bandage to the site –advise the patient										

to keep in situ for 4 hours.										
Ensure patient remains on the unit for 15minutes, +/- a hot or cold drink										
Completes documentation as per Trust Policy										
<b>Initials of Practice Supervisor</b>										
<b>Initials of Practitioner</b>										
<b>Date</b>										

## Final Assessment Competency Statement

The practitioner has been observed as competent in the task of an undertaking a Therapeutic Venesection on the date/s recorded below: Essential skills, demonstrating competence for independent practice

Name	Date		Date		Date	
<b>Observed practice</b>	<b>Pass</b>	<b>Refer</b>	<b>Pass</b>	<b>Refer</b>	<b>Pass</b>	<b>Refer</b>
Correct identification of patient with open questions						
Appropriate communication with patient						
Correct positioning of patient and preparation of environment						
Chooses appropriate vein and site for venesection						
Provides local anaesthesia as required						
Aseptic non touch technique demonstrated						
Completes venesection correctly and safely						
Disposes of sharps and equipment correctly and safely						
Demonstrates competency with equipment						
Demonstrates safe technique throughout						
Appropriate aftercare of venesection site						
Completes documentation in line with Trust policy						
<b>Outcome</b> Circle as appropriate	<b>Pass</b>	<b>Refer</b>	<b>Pass</b>	<b>Refer</b>	<b>Pass</b>	<b>Refer</b>
Outcome Agreed						
Date	Practitioner		Practice Supervisor			
	Sign		Sign			
	Print		Print			

## Completion Checklist

The Practitioner has successfully completed a number of observed venepunctures, can discuss the rationale for and display competency in the skills listed below

Skills required	Achieved	Date
Identified need for clinical skill in their clinical area		
Preliminary discussion with line manager to personal development plan		
Read guidelines appropriate to your profession. E.G NMC		
Attended a study (where applicable)		
Familiarised self with equipment		
Observed clinical skill and practice		
Completed a period of supervised practice, and completed the assessment sheet		
Reflect on your experience and development		

Competency agreed for Venepuncture  
 I agree to maintain my clinical competency in Venepuncture

Date	Practitioner	Skill assessor
	Sign	Sign
	Print	Print

Senior Sister of Clinical Department

I am satisfied that the above person has attended the necessary training and has completed the related competency programme.

Sign.....Print.....Date.....