

Morphology workflow and Overview

A guide to morphology
standardisation of workflow

Workflow – Why is it important?

- **The workflow in morphology is just as important as the morphology itself.**
- Priority and Urgent Films should progress quickly to morphology
- The workflow should be system based ie consistent and transparent to all and not varied, day by day, by staff complement or personal preferences.
- *Doing a film that doesn't transmit, transmits incorrectly or fails to archive is ineffective and inefficient.*
- If the workflow is not monitored and managed then **priority samples might not get expedited.**
- If the workflow is not monitored and managed then “completed” **samples might not transmit to the host.**
- If the workflow is not monitored and managed then “completed” **samples might not archive.**
- If priority samples and archiving are not progressing correctly then delta checking may create **additional unnecessary blood films.**

Availability of slides and workflow



Slides are to be readily accessible for ALL staff from both sides of the morph bay.

Red and Green trays should be expedited and/or vetted before blue trays.

The red tray should be shared by all staff, processed first and then ongoing.

The green tray should be shared by all staff, processed second and then ongoing.

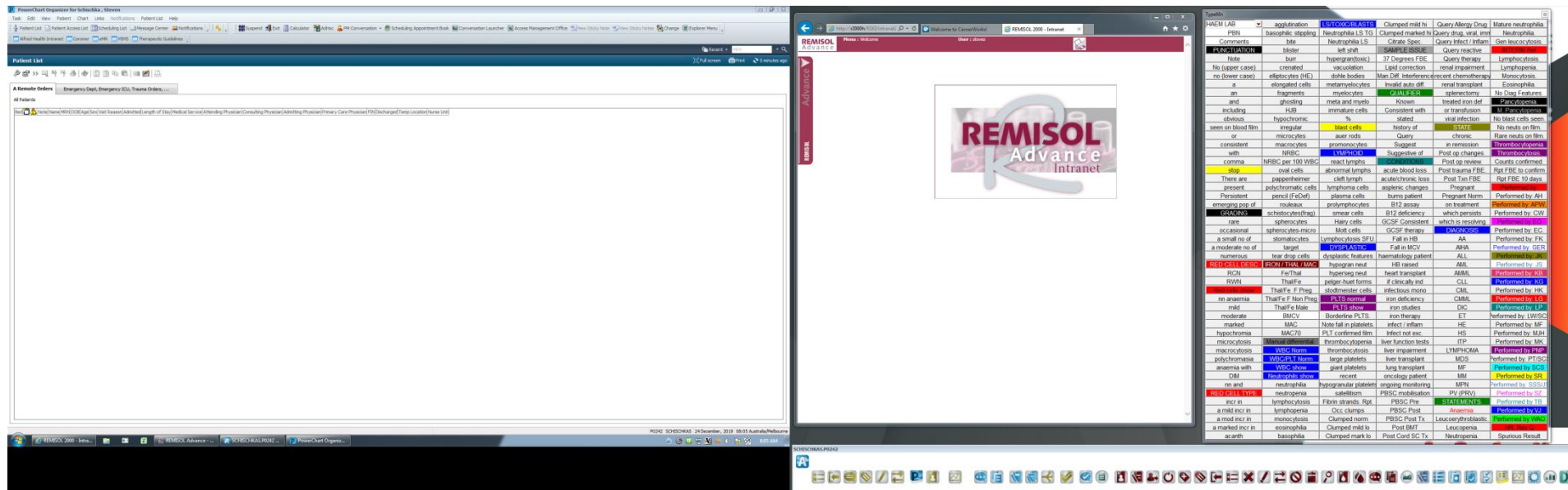
Blue trays are then done next by all staff (typically in date order) and filed in levels by day if we are behind.

Slides have been prioritised by our systems – they do not require 2nd scanning and reprioritisation.

Trays are to be stored in the orientation pictured so all staff can easily access them from both sides of the slide holder from all four morphology workstations.

Slides are not to be sequestered in piles beside a microscope – they are to be available for all.

Ideal Screen Layout – Left and Right screens



The ideal screen lay out is to use dual screen extended desk top.

This enables

- quick copy and paste of the UR number from remisol into powerchart
- visualisation of both current and historic information at the same time
- **ALL films should have a cerner powerchart enquiry – never assume. Numerous comments go out querying a known condition or for example suggesting thalassaemia in a historically normal patient who is now iron deficient.**

Quick view to pathology

AMES MENZIES
- Discharge date->
NSAIDs, cefaclor, ceftazidime, Other

DOB:12-04-2001
Med Service:ARenal Unit
Alerts:Transplant Recipient

Age:18 years
Weight:48 kg

Results

Diagnostic: Encounter Only Last 48 Hours Patient Assessment

Flowsheet: All Results Flowsheet Level: ALLRESULTSECT Table Group List

24 December, 2014 08:06 - 24 Decembe

Showing results from (18-09-2019 - 23-12-2019) Show more results

Results	23-12-2019 15:00	17-12-2019 17:21	17-12-2019 17:14	17-12-2019 17:13
General Assessments				
Functional Assessment				
ADLs				
Admission Alerts				
Pregnancy Status				
<input type="checkbox"/> AKPS Score				
Pain Assessment				
Pain Present				
Preferred Pain Tool				
<input type="checkbox"/> Numeric Rating at Rest				
<input type="checkbox"/> Numeric Rating With Activity				
FAS Score				
Sedation Score				
Cardiovascular Assessment				
Heart Rhythm				
Surgical Drains/Tubes (#10 Redivac Knee Left)				
Activity				
Tube Care				
Site Condition				
Dressing Condition				
Dressing Activity				
Dressing Type				
<input type="checkbox"/> Drainage Level				
<input type="checkbox"/> Drainage Amount				
Drainage Description				
Discharge Planning Assessment				
Ambulation & Mental Status				Oriented with S
Discharge Date/Time				17-12-2019 17:
Discharge Personnel				Osborne, Nata
Discharge Score				

If powerchart opens to "All results" (high lit in blue) press "P" "P" to get to pathology view quickly.

Quick view to Haematology

MR ANGUS JAMES MENZIES DOB:12-04-2001 Age
2019 12:41-<No - Discharge date> Med Service:ARenal Unit Wel
D, moxifloxacin, NSAIDs, cefaclor, ceftazidime, Other Alerts:Transplant Recipient

Results

Diagnostic Encounter Only Last 48 Hours Patient Assessment

Flowsheet: Pathology View Level: Haematology Table

Navigator

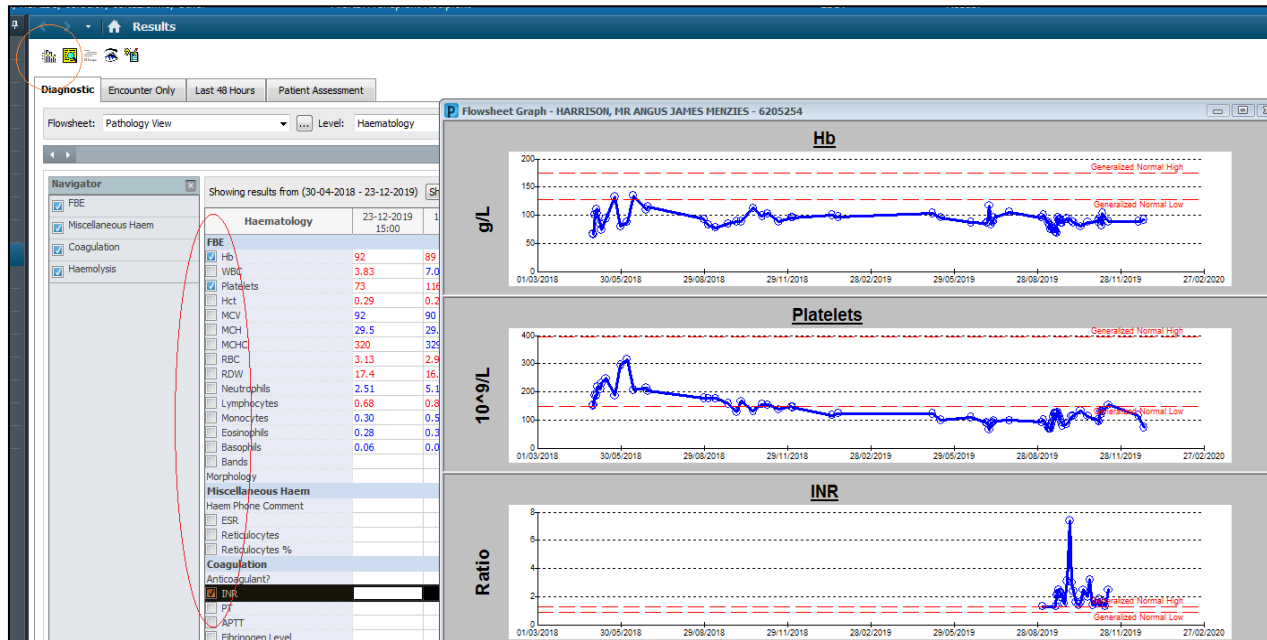
- FBE
- Miscellaneous Haem
- Coagulation
- Haemolysis

Showing results from (30-04-2018)

Haematology			
<input type="checkbox"/> FBE			
<input type="checkbox"/> Hb			
<input type="checkbox"/> WBC			
<input type="checkbox"/> Platelets			
<input type="checkbox"/> Hct			
<input type="checkbox"/> MCV	92	90	89
<input type="checkbox"/> MCH	29.5	29.7	30.0
<input type="checkbox"/> MCHC	320	329	336
<input type="checkbox"/> RBC	3.13	2.98	2.97
<input type="checkbox"/> RDW	17.4	16.6	14.1
<input type="checkbox"/> Neutrophils	2.51	5.16	3.92
<input type="checkbox"/> Lymphocytes	0.68	0.89	0.67
<input type="checkbox"/> Monocytes	0.30	0.55	0.54
<input type="checkbox"/> Eosinophils	0.28	0.39	0.19
<input type="checkbox"/> Basophils	0.06	0.07	0.03

From pathology view click on the drop down then “H” will take you to haem, “B” will take you to biochem etc

Reviewing results



All blood films should have a powerchart enquiry done to make sure you know the full context of why you are doing a film.

You can also see other outstanding films or results, repeats which confirm/reject a result, rejected biochemistry or dubious coagulation results.

You can click on the items in the red oblong and then click on the icon in the red circle to quickly view a graph of historic trends.

This can be very helpful for eg Iron/Thal or thrombocytopenia, neutropenia, blasts or abnormal cells/history. **You can double-click on graph points to see the results too.**

Default view - setup

The screenshot shows a medical software interface with a patient's lab results and a 'Flowsheet Properties' dialog box. The patient information includes: IES, DOB:12-04-2001, Age:18 years, Gender:Male, Med Service:ARenal Unit, Weight:48 kg, Loc:Renal Clinic, Alerts:Transplant Recipient, EDD:, and Resus:.

The 'Flowsheet Properties' dialog box is open to the 'Defaults' tab. It contains the following settings:

- Default Retrieval Type: Clinical range, Posting range, Result count, New results, Admission date to current date
- Default Range Offsets: Forward: 1, Back: 5, Units: Years
- Default Result Count: Results: 1,000, Years: 5
- Number of Hours Previous to the Admit Date: 0
- Filter by selected encounter:
- Re-apply defaults for each new chart:
- Adjustment Increments: 10 Years or 999 Results

The dialog box also includes 'Save', 'OK', and 'Cancel' buttons.

Go to “Options” “Properties” “Defaults” and change your clinical or posting defaults to years, +/- the number of years you want.

- Change your default result count to 1000 (result count tab).
- Click save, then close and then re-open powerchart.
- Your defaults will now be permanent.

Orders and Referrals

Menu Orders & Referrals

Adverse Reaction & Patient Alerts
Chart Summary
Clinical Notes
Document Viewing
Form Browser
Orders & Referrals + Add
Patient Information
Patient Schedule
Problems & Diagnoses
Results
Patient Summary
Summary - Anatomical Pathology
Summary - Microbiology
Summary - General Medical
Summary - Psychiatry
Summary - Referral
Summary - Transfusion
Task List

View

Orders for Signature
Orders

- Non Categorised
- Admit/Transfer/Discharge/Status
- Goals of Care
- Patient Care
- Medications
- IV Solutions
- Laboratory
- Diagnostic Tests
- Referrals
- Consults
- Diet
- Surgery
- System Orders
- Medical
- Communication Orders
- Medical Supplies
- Medication History Snapshot

Displayed: All Active Orders | Inactive Orders Since 18-10-2019 | All Orders (All Statuses)

Order Name	Status	Details
Non Categorised		
<input checked="" type="checkbox"/> Pedicle Flap	Ordered	Gool, Julian H. :Melbourne/The Alfred, CTHR, General ETT, 180, 0, 30
Admit/Transfer/Discharge/Status		
<input type="checkbox"/> Decision to Admit	Discontinued	ALung Transplantation, 03/11/19 15:38:00
Patient Care		
<input type="checkbox"/> Admission History Adult	Discontinued	17/12/19 13:33:28, Stop date 17/12/19 13:33:28
<input type="checkbox"/> Adult Systems Assessment	Discontinued	17/12/19 13:33:28, Stop date 17/12/19 13:33:28
<input type="checkbox"/> Basic Admission Information Adult	Discontinued	17/12/19 13:33:28, Stop date 17/12/19 13:33:28
<input type="checkbox"/> Braden Assessment	Discontinued	17/12/19 13:33:28, Stop date 17/12/19 13:33:28
<input type="checkbox"/> Delirium & Cognition 4AT	Discontinued	17/12/19 13:33:28, Stop date 17/12/19 13:33:28
<input type="checkbox"/> FRASS	Discontinued	17/12/19 13:33:28, Stop date 17/12/19 13:33:28
<input type="checkbox"/> Nutrition MUST	Discontinued	17/12/19 13:33:28, Stop date 17/12/19 13:33:28
Medications		
<input checked="" type="checkbox"/> clindamycin (clindamycin 150 mg oral capsule)	Prescribed	300 mg = 2 cap(s), Oral, THREE times a day, Qty: 60 cap(s), 0 Repeat(s), Authority - PBS
<input checked="" type="checkbox"/> enoxaparin (enoxaparin 80 mg/0.8 mL injectable solution)	Prescribed	70 mg, Subcutaneous, daily, Qty: 10 syringe(s), 1 Repeat(s), PBS
<input checked="" type="checkbox"/> esomeprazole (esomeprazole 20 mg oral enteric capsule)	Prescribed	20 mg = 1 cap(s), Oral, night, Qty: 30 cap(s), 5 Repeat(s), Streamlined - PBS
<input type="checkbox"/> freetext medication	Documented	1, Infusion, IV, daily, 0 Repeat(s), TPN as per patient's own supply
<input type="checkbox"/> heparin	Completed	5,000 Units = 0.2 mL, Injection, IV, ONCE only, NOW, start: 17/12/19 16:55:00, stop: 17/12/19 16:55:00, Indication: E...
<input type="checkbox"/> heparin	Completed	100 Units, Injection, IV lock, ONCE only, start: 17/12/19 16:55:00, PRN for heparin lock, Heplock used at home is 1000U...
<input type="checkbox"/> heparin	Completed	100 Units, Injection, IV, ONCE only, NOW, start: 17/12/19 16:54:00, stop: 17/12/19 16:54:00, Nuclear Medicine
<input type="checkbox"/> heparinised saline 50 units/ 5mL	Discontinued	1 flush/lock, Injection, IV lock, As indicated, start: 17/12/19 15:20:00, PRN for heparin lock, 100units
<input type="checkbox"/> immunoglobulin intravenous (Intragam-10 intravenous solution)	Documented	30 g = 300 mL, IV, ONCE only, 0 Repeat(s), volume is 0.1 g/mL
<input type="checkbox"/> immunoglobulin intravenous (Intragam 10 (immunoglobulin))	Completed	40 g = 400 mL, Injection, IV, ONCE only, NOW, start: 17/12/19 14:00:00, stop: 17/12/19 14:00:00, volume is 0.1 g/mL
<input type="checkbox"/> immunoglobulin intravenous (Intragam 10 (immunoglobulin))	Discontinued	30 g = 300 mL, Injection, IV, ONCE only, NOW, start: 08/11/19 10:53:00, stop: 08/11/19 10:53:00, volume is 0.1 g/mL
<input checked="" type="checkbox"/> irbesartan (irbesartan 150 mg oral tablet)	Prescribed	150 mg = 1 tab(s), Oral, daily, Qty: 30 tab(s), 5 Repeat(s), PBS
<input checked="" type="checkbox"/> ivabradine (ivabradine 5 mg oral tablet)	Prescribed	2.5 mg = 0.5 tab(s), Oral, TWICE a day (with or after food), Qty: 56 tab(s), 2 Repeat(s), Non PBS
<input type="checkbox"/> loperamide (loperamide 2 mg oral capsule)	Documented	2 mg = 1 cap(s), Oral, daily, PRN for diarrhoea, cap(s), 0 Repeat(s), Indication: Diarrhoea
<input type="checkbox"/> ondansetron	Discontinued	8 mg = 1 EA, Tablet, Oral, 8 hourly, start: 03/11/19 23:09:00, PRN for nausea/vomiting, Indication: Antiemetic agent
<input type="checkbox"/> ondansetron (ondansetron 8 mg oral disintegrating tablet)	Documented	8 mg = 1 EA, Oral, 8 hourly, PRN for nausea/vomiting, EA, 0 Repeat(s), Indication: Antiemetic agent
<input type="checkbox"/> oxycodone (Endone (oxycodone) 5 mg oral tablet)	Documented	2.5 mg = 0.5 EA, Oral, 4 hourly, PRN, for pain, EA, 0 Repeat(s)
<input type="checkbox"/> oxycodone (Endone (oxycodone))	Discontinued	2.5 mg = 0.5 EA, Tablet, Oral, 4 hourly, start: 03/11/19 21:47:00, PRN for pain
<input checked="" type="checkbox"/> pancreatic extract (Creon (pancreatic extract) 25,000 oral enteric capsule)	Prescribed	900 mg = 3 cap(s), Oral, THREE times a day (with or after food), PRN for other: see order comments, Qty: 200 cap(s), ...
<input type="checkbox"/> paracetamol	Discontinued	500 mg = 1 EA, Tablet, Oral, FOUR times a day, start: 03/11/19 22:00:00
<input type="checkbox"/> paracetamol (paracetamol 500 mg oral tablet)	Documented	500 mg =, Oral, FOUR times a day, PRN, EA, 0 Repeat(s)
<input checked="" type="checkbox"/> prazosin (prazosin 1 mg oral tablet)	Prescribed	1 mg = 1 tab(s), Oral, TWICE a day, Qty: 100 tab(s), 5 Repeat(s), PBS
<input checked="" type="checkbox"/> SERTRALine (SERTRALine 50 mg oral tablet)	Prescribed	25 mg = 0.5 tab(s), Oral, daily, Qty: 30 tab(s), 5 Repeat(s), Restricted - PBS
<input checked="" type="checkbox"/> sulfamethoxazole-trimETHOPRIM (Bactrim DS 800 mg-160 mg oral tablet)	Prescribed	480 mg = 0.5 tab(s), Oral, THREE times a week (Mon, Wed and Fri), compounded by HealthSmart pharmacy, Qty: 30 ta...
<input type="checkbox"/> testosterone (Testosterone-1000 intramuscular solution)	Documented	1 g IM every 12 weeks - val(s), 0 Repeat(s) last had 17/6/2019

Can give you a quick view as to why tests are being asked for.

Document viewing

The screenshot displays a medical document viewing interface. On the left is a navigation menu with options like 'Adverse Reaction & Patient Alerts', 'Chart Summary', 'Clinical Notes', 'Document Viewing', 'Form Browser', 'Orders & Referrals', 'Patient Information', 'Patient Schedule', 'Problems & Diagnoses', 'Results', 'Patient Summary', and various summary types. The main area is titled 'Document Viewing' and includes a toolbar with actions like 'Add', 'Sign', 'Forward', 'Provider Letter', 'Modify', 'In Error', and 'Preview'. Below the toolbar is a 'List' section with a 'Display' dropdown set to 'All'. A table lists documents with columns for 'Arranged By: Date', 'Newest At Top', and document details. The selected document is a 'Discharge Summary' from 08/11/2019. To the right of the list is a detailed view of the document, including 'Result type: Discharge Summary', 'Result date: 08 November, 2019 17:00 Australia/Melbourne', 'Result status: Auth (Verified)', 'Result title: Medical Discharge Summary', 'Performed by: Lai, Vivien W. :Melbourne/The Alfred on 08 November, 2019 13:13 Australia/Melbourne', 'Verified by: Lai, Vivien W. :Melbourne/The Alfred on 08 November, 2019 16:23 Australia/Melbourne', and 'Encounter info: E11842248, The Alfred, Inpatient, 03-11-2019 - 08-11-2019'. The document content includes a section for '* Final Report *' and 'Medical Discharge Summary', followed by 'Key GP Information' with a note to the patient, recipients (GP, OP clinic), clinical unit (RES1), consultant (Dr. H Whitford), registrar (Dr. C Tan, Dr. K Wiltshire), and person completing the summary (Dr. V Lai, Dr. Maher, #6492). It also includes a 'Presenting Complaint' (18M w/ BSLTx for CF bronchiectasis presents with left knee septic arthritis), a 'Discharge PLAN' (1/ Complete course of clindamycin 300mg tds - to complete total 2/52 antibiotics (including IV), 2/ Weight bear as tolerated, 3/ Follow-up at next schedule lung transplant outpatient clinic), a 'Principal Diagnosis' (Septic arthritis), and a 'Discharge Plan' (No qualifying data available).

Arranged By: Date	Newest At Top	
Discharge Checklist	17/12/2019 17:21:00	Australi...
Discharge Checklist		Osborne, Natalie
Admission Nursing	17/12/2019 14:33:00	Australi...
Admission History Adult		Osborne, Natalie
Pathology Results External	20/11/2019 15:40:00	Australi...
Pathology Results External		
Physiotherapy OP Progress N...	13/11/2019 14:27:00	Australi...
OP contact		Tarrant, Ben
Discharge Summary	08/11/2019 17:00:00	Australi...
Medical Discharge Summary		Lai, Vivien W. :Melbourne/The Alf...
Physiotherapy IP Progress No...	08/11/2019 10:01:00	Australi...
Physiotherapy Inpatient Progress ...		Tarrant, Ben
Medical IP Progress Note	08/11/2019 08:46:00	Australi...
ID ICH CWR		Langham, Freya :Melbourne/The ...
Medical IP Progress Note	08/11/2019 08:44:00	Australi...
RES1 Progress		Lai, Vivien W. :Melbourne/The Alf...
Medical IP Progress Note	08/11/2019 06:38:00	Australi...
Ortho Fri WR		Kennedy, Rogan E. :Melbourne/T...
Medical IP Progress Note	07/11/2019 16:53:00	Australi...
RES 1 Blood transfusion consent		Maher, Dominic :Melbourne/The A...
Physiotherapy IP Progress No...	07/11/2019 16:10:00	Australi...
Physiotherapy Inpatient Progress ...		Chai, Yee Cheng; Tarrant, Ben
Medical IP Progress Note	07/11/2019 13:32:00	Australi...
RES 1 photophoresis		Maher, Dominic :Melbourne/The A...
Pharmacy IP Progress Note	07/11/2019 11:17:00	Australi...
Vancomycin TDM		Shaw, Grace
Dialysis Progress Note	07/11/2019 10:01:00	Australi...
		Campbell, Rachel
Medical IP Progress Note	07/11/2019 09:24:00	Australi...

*** Final Report ***
Medical Discharge Summary

Key GP Information
Note to Patient: This discharge summary is intended as communication between your treating health professionals. If you require an explanation...

Recipients: GP, OP clinic
Clinical Unit: RES1
Consultant: Dr. H Whitford
Registrar: Dr. C Tan, Dr. K Wiltshire
Person Completing this Summary and Pager: Dr. V Lai, Dr. Maher, #6492

Presenting Complaint
18M w/ BSLTx for CF bronchiectasis presents with left knee septic arthritis.

Discharge PLAN
1/ Complete course of clindamycin 300mg tds - to complete total 2/52 antibiotics (including IV)
2/ Weight bear as tolerated
3/ Follow-up at next schedule lung transplant outpatient clinic

Principal Diagnosis
Septic arthritis

Discharge Plan
Discharge Destination
No qualifying data available.

Will give you a quick view as to why the person is in hospital or what treatment they have had.

Summary – Transfusion.

Blood Bank Overview

Blood Group	A POS
Antibodies	No antibodies on file
Transfusion Requirements	See RBC Support
Patient Phenotype	No phenotype on file
Specimen Availability	No Current Specimen Available

Product Availability

Product Number	Product Name	Product Group	Qty	Date/Time
▶ Assigned (0)				
▶ Crossmatched (0)				
▶ Dispensed (0)				
▲ Transfused (Last 3 Months) (4)				
3790600356	Intragam 10 20g		2	17/12/2019 15:04
3316388	Red Cells LD	A POS		07/11/2019 18:35
3790550324	Intragam 10 10g		1	21/10/2019 15:38
3790600332	Intragam 10 20g		1	21/10/2019 15:38
▶ Complete Transfusion History (165)				

Will give you a quick view as to what products the patient has received.

eg Blood, Platelets, or Anti-A from IVIG causing spherocytes.

This will also help confirm aberrant HB's where there is a quite recovery in HB with no transfusion.

Monitoring Films workflow

- Staff annotated on the roster as “M” are rostered to work in morphology.
- The staff member annotated on the roster as “MW” is rostered in morphology and tasked with monitoring morphology workflow and alerting a managing scientist of any serious issues or concerns.
- Remisol advance should be monitored to look for films that have fallen behind, not transmitted or have failed to archive as these create further flow on workflow issues.
- Blood film Workflow is a 24/7 expectation and applies to all staff on all shifts
 - All Priority films (red tray) should be examined or vetted as a priority in our workflow
 - All ASAP films (green tray) should be examined or vetted urgently in our workflow
 - Routine films should be examined or vetted routinely in our workflow
- Vetting only requires “M” on films to be done – no other instruction is required on the film. Films are prioritised by algorithm and list not by Dr, Diff, MCV etc.
- *Any blood film that is not tagged as found should be followed up after 90 minutes from last activity – and tagged appropriately, eg sample back on SMS, or staining or other information so that other people are not duplicating work*
- Any vetting should be from blood films only so that other people do not have to waste time following up discard slides that were vetted from the lists

Remisol Advance

Message List (*) (87)

Alfred Only (87) | Sandringham Only (0) | All (89)

Date	Sample Id	Message
23/12/2019 11:08:41	193571270B	Diff R flagged. Check Diff scatter plot. Troubleshoot analyser if required.
23/12/2019 11:08:41	193571270B	SDMH sample, send to The Alfred for film
23/12/2019 11:10:09	193571225B	SDMH sample, send to The Alfred for film
23/12/2019 11:16:22	193571270B	SDMH sample, send to The Alfred for film
23/12/2019 12:47:18	193571493B	SDMH sample, send to The Alfred for film
23/12/2019 12:50:26	193571418B	SDMH sample, send to The Alfred for film
23/12/2019 13:20:49	193571551C	Diff R flagged. Check Diff scatter plot. Troubleshoot analyser if required.
23/12/2019 14:00:47	193571608B	SDMH sample, send to The Alfred for film
23/12/2019 14:56:03	193571743A	MCV Delta fail, Confirm ID, Check Glucose, Check clinical history and Blood
23/12/2019 14:56:03	193571743A	SDMH sample, send to The Alfred for film
23/12/2019 16:59:27	193572103B	Confirm PLTs on DIFFQUICK
23/12/2019 16:59:27	193572103B	Check for clots.
23/12/2019 17:27:10	193572137A	Confirm PLTs on DIFFQUICK
23/12/2019 17:27:10	193572137A	Check for clots.
23/12/2019 18:35:30	193572215B	Automatic rerun for Invalid MCV/MCHC ratio, review and validate.
23/12/2019 18:48:51	193572279B	PLT R Flag. Confirm count on FILM
23/12/2019 19:15:11	193572275B	Confirm PLTs on DIFFQUICK
23/12/2019 19:15:11	193572275B	1st time low Pit count. Check Powerchart for previous.
23/12/2019 19:15:11	193572275B	Check for clots.
23/12/2019 19:15:11	193572275B	**HB=61, PHONE result to DOCTOR
23/12/2019 19:15:11	193572275B	**HB=61, PHONE result to Haematologist
23/12/2019 19:18:42	193572286B	Automatic rerun for Invalid MCV/MCHC ratio, review and validate.
23/12/2019 21:42:36	193572321C	Confirm PLTs on DIFFQUICK
23/12/2019 21:42:36	193572321C	1st time low Pit count. Check Powerchart for previous.
23/12/2019 21:42:36	193572321C	Check for clots.
23/12/2019 22:56:05	193572522B	**WBC=69.55, PHONED1 result to DOCTOR
23/12/2019 23:13:49	193572501B	MCV Delta fail, Confirm ID, Check Glucose, Check clinical history and Blood
23/12/2019 23:22:42	193572501B	MCV Delta fail, Confirm ID, Check Glucose, Check clinical history and Blood
24/12/2019 00:19:31	193572592B	Check for clots. Confirm count on FILM
24/12/2019 00:41:19	193580089B	MCV Delta fail, Confirm ID, Check Glucose, Check clinical history and Blood
24/12/2019 00:53:49	193580048B	Diff R flagged. Check Diff scatter plot. Troubleshoot analyser if required.
24/12/2019 01:02:09	193580042B	Check for clots.
24/12/2019 01:04:41	193580016B	Check for clots.
24/12/2019 01:21:02	193580089B	Check for clots. Confirm count on FILM
24/12/2019 01:21:02	193580089B	MCV Delta fail, Confirm ID, Check Glucose, Check clinical history and Blood
24/12/2019 01:21:02	193580089B	MCHC=462. Investigate for Cold Aggs/Lipaemia prior to other messages.
24/12/2019 01:34:59	193580015B	Confirm PLTs on DIFFQUICK
24/12/2019 01:34:59	193580015B	Check for clots.
24/12/2019 01:34:59	193580015B	**NE#=0.01 (R), PHONE result to DOCTOR
24/12/2019 01:34:59	193580015B	**NE#=0.01 (R), PHONE result to DOCTOR
24/12/2019 01:34:59	193580015B	Diff R flagged. Check Diff scatter plot. Troubleshoot analyser if required.
24/12/2019 01:37:44	193580013B	**HB=54, PHONE result to DOCTOR
24/12/2019 01:37:44	193580013B	Hb/Pt fluctuation. Mix and Rerun sample. Review rerun and manually validate
24/12/2019 01:48:41	193580013B	**HB=54, PHONE result to DOCTOR
24/12/2019 01:48:41	193580013B	Hb/Pt fluctuation. Mix and Rerun sample. Review rerun and manually validate
24/12/2019 01:54:19	193580013B	Hb/Pt fluctuation. Mix and Rerun sample. Review rerun and manually validate
24/12/2019 01:54:55	193580013B	Hb/Pt fluctuation. Mix and Rerun sample. Review rerun and manually validate

Samples List (*) (21)

All (138) | Pending (48) | StatSMS (2) | STATFilm (21) | URGFilm (18) | GENFilm (62) | SMS (8) | ALL Films (109) | DiffDR (0)

Flags	Sample Id	Last name	First name	Last run	Instrument	Tag
T--R-	193572103B	HARRISON	ANGUS	23/12/2019 17:38:13	DiffpadSTAT	Film Found
T--R-	193572275B	SLATTERY	THOMAS	23/12/2019 20:21:17	DiffpadSTAT	Film Found
T--R-	193572279B	PIGHIN	ANDREW	23/12/2019 20:21:18	DiffpadSTAT	Film Found
T--R-	193572321C	MURRAY	KATHLEEN	23/12/2019 22:20:21	DiffpadSTAT	Film Found
T--R-	193572522B	MCDUGALL	JOHN	23/12/2019 23:34:45	DiffpadSTAT	Film Found
T--R-	193572592B	DODSON	ANDREW	24/12/2019 01:32:25	DiffpadSTAT	Film Found
T--R-	193580042B	DESAI	SHALINKUMAR	24/12/2019 01:32:25	DiffpadSTAT	Film Found
T--R-	193580016B	VO	TRONG	24/12/2019 01:44:20	DiffpadSTAT	Film Found
T--R-	193580015B	MAYES	NICHOLAS	24/12/2019 02:15:37	DiffpadSTAT	Film Found
?--P-	193580195B	MINEHAN	TRACIE	24/12/2019 02:47:18	DiffpadSTAT	Film Found
T--R-	193580013B	CLEELAND	COURTNEY	24/12/2019 02:54:52	DiffpadSTAT	Film Found
T--R-	193580211C	HAUSNER	OTTO	24/12/2019 03:29:40	DiffpadSTAT	Film Found
T--R-	193572577B	KNELL	ROBERT	24/12/2019 06:15:04	DiffpadSTAT	Film Found
T--R-	193580020B	STEEL	JOHN	24/12/2019 06:15:06	DiffpadSTAT	Film Found
T--R-	193580166B	LUHN	RENATE	24/12/2019 06:15:07	DiffpadSTAT	Film Found
T--R-	193580098B	STRIPP	GEOFFREY	24/12/2019 06:15:07	DiffpadSTAT	Film Found
?--P-	193580268B	SLATTERY	THOMAS	24/12/2019 06:21:22	DiffpadSTAT	Film Found
T--R-	193580168B	SARTORI	MIA	24/12/2019 06:48:12	DiffpadSTAT	Film Found
T--R-	193580162B	CAIRNES	COLIN	24/12/2019 06:48:12	DiffpadSTAT	Film Found
T--R-	193580230B	BISHOP	SCOTT	24/12/2019 06:48:13	DiffpadSTAT	Film Found
T--R-	193580620C	CANNINGTON	GEOFFREY	24/12/2019 07:03:52	DiffpadSTAT	Film Found

Request List (*) (21)

HOST F (0) | Pending (47) | Validated (18) | SMS (8) | SandySlides (0) | To Validate (2) | In Process (3) | STATFilm (21) | URGFilm (18) | GENFilm (62) | StatSMS (2) | ALLFILM (0)

Flags	Patient	Patient ID	Sample Id	Department
●-OP-----	MINEHAN TRACIE	000016189578	193580195B	13087 - ICU
●-OP-----	LUHN RENATE	000016611110	193580166B	13087 - ICU
●-OP-----	BISHOP SCOTT	000016007607	193580230B	13087 - ICU
●--P-----	SARTORI MIA	000016263077	193580168B	13087 - ICU
●-OP-----	CAIRNES COLIN	000017213539	193580162B	13087 - ICU
●-OP-----	STRIPP GEOFFREY	000017217105	193580098B	13088 - Ward 7 East
●-P-----	DESAI SHALINKUMAR	000017244532	193580042B	13088 - Ward 7 East
●--P-----	VO TRONG	000017213764	193580016B	13088 - Ward 7 East
●-OP-I-----	CLEELAND COURTNEY	000017243841	193580013B	13088 - Ward 7 East
●--P-----	MAYES NICHOLAS	000017174278	193580015B	13088 - Ward 7 East
●--P-----	STEEL JOHN	000017223711	193580020B	13088 - Ward 7 East
●-OP-----	SLATTERY THOMAS	sarah0000172...	193572275B	13090 - Emergency Dept
●-OP-----	MCDUGALL JOHN	000010533888	193572522B	13090 - Emergency Dept

Message list – Shows all the messages until a sample is archived.

Samples list – Shows tracking of blood films.

Request list – Shows location and completion indicator ie Green Pie

Remisol Advance

Message List (*) (87)

Alfred Only (87) | Sandringham Only (0) | All (89)

Date	Sample Id	Message
24/12/2019 01:37:44	193580013B	**HB-54, PHONE result to DOCTOR
24/12/2019 01:46:41	193580013B	**HB-54, PHONE result to DOCTOR
24/12/2019 02:49:39	193580195B	**HB-56, PHONE result to DOCTOR
23/12/2019 19:15:11	193572275B	**HB-61, PHONE result to DOCTOR
24/12/2019 06:23:43	193580288B	**HB-61, PHONE result to DOCTOR
24/12/2019 06:23:43	193580288B	**HB-61, PHONE result to Haematologist
23/12/2019 19:15:11	193572275B	**HB-61, PHONE result to Haematologist
24/12/2019 05:42:47	193580230B	**HB-67, PHONE result to DOCTOR
24/12/2019 05:44:33	193580283B	**HB-69, PHONE result to DOCTOR
24/12/2019 01:34:59	193580015B	**NE-0.01 (R), PHONE result to DOCTOR
24/12/2019 01:34:59	193580015B	**NE-0.01 (R), PHONE result to DOCTOR
24/12/2019 05:36:59	193580050B	**NE-0.69, PHONE result to DOCTOR
23/12/2019 22:56:05	193572522B	**WBC=69.55, PHONED1 result to DOCTOR
24/12/2019 03:43:36	193580245A	**WBC=87.39, PHONED1 result to DOCTOR
24/12/2019 03:43:36	193580245A	1st time low Pit count. Check Powerchart for previous.
23/12/2019 21:42:36	193572321C	1st time low Pit count. Check Powerchart for previous.
24/12/2019 06:23:43	193580288B	1st time low Pit count. Check Powerchart for previous.
24/12/2019 02:52:22	193572587B	1st time low Pit count. Check Powerchart for previous.
23/12/2019 19:15:11	193572275B	1st time low Pit count. Check Powerchart for previous.
23/12/2019 19:18:42	193572286B	Automatic rerun for Invalid MCV/MCHC ratio, review and validate.
23/12/2019 18:35:30	193572115B	Automatic rerun for Invalid MCV/MCHC ratio, review and validate.
24/12/2019 06:53:36	193580164B	Automatic rerun for Invalid MCV/MCHC ratio, review and validate.
24/12/2019 06:23:43	193580288B	Check for clots.
23/12/2019 21:42:36	193572321C	Check for clots.
23/12/2019 16:59:27	193572103B	Check for clots.
23/12/2019 17:27:10	193572137A	Check for clots.
24/12/2019 03:43:36	193580245A	Check for clots.
24/12/2019 02:49:39	193580195B	Check for clots.
24/12/2019 01:34:59	193580015B	Check for clots.
23/12/2019 19:15:11	193572275B	Check for clots.
24/12/2019 01:02:09	193580042B	Check for clots.
24/12/2019 01:04:41	193580016B	Check for clots.
24/12/2019 02:52:22	193572587B	Check for clots.
24/12/2019 03:49:31	193580166B	Check for clots.
24/12/2019 05:39:04	193580216A	Check for clots.
24/12/2019 05:40:57	193580162B	Check for clots.
24/12/2019 05:41:43	193580168B	Check for clots.
24/12/2019 03:47:09	193580020B	Check for clots.
24/12/2019 04:22:51	193572577B	Check for clots. Confirm count on FILM
24/12/2019 06:28:14	193580620C	Check for clots. Confirm count on FILM
24/12/2019 03:14:12	193580211C	Check for clots. Confirm count on FILM
24/12/2019 01:21:02	193580089B	Check for clots. Confirm count on FILM
24/12/2019 00:19:31	193572592B	Check for clots. Confirm count on FILM
24/12/2019 01:34:59	193580015B	Confirm PLTs on DIFFQUICK
24/12/2019 02:49:39	193580195B	Confirm PLTs on DIFFQUICK
24/12/2019 03:43:36	193580245A	Confirm PLTs on DIFFQUICK
24/12/2019 03:47:09	193580020B	Confirm PLTs on DIFFQUICK
23/12/2019 17:27:10	193572137A	Confirm PLTs on DIFFQUICK
23/12/2019 21:42:36	193572321C	Confirm PLTs on DIFFQUICK
23/12/2019 16:59:27	193572103B	Confirm PLTs on DIFFQUICK
23/12/2019 19:15:11	193572275B	Confirm PLTs on DIFFQUICK
24/12/2019 03:49:31	193580166B	Confirm PLTs on DIFFQUICK
24/12/2019 02:52:21	193572587B	Confirm PLTs on DIFFQUICK
24/12/2019 06:23:43	193580288B	Confirm PLTs on DIFFQUICK

Samples List (*) (109)

All (138) | Pending (48) | StatSMS (2) | STATFilm (21) | URGFilm (18) | GENFilm (62) | SMS (6) | ALL Films (109) | DiffDR (0)

Flags	Sample Id	Instrument	Last name	First name	Last run	Tag
T-R--	193570061B	DIFFPAD	CULPH	GAYLE	22/12/2019 16:19:57	Film Found
T-R--	193570802B	DIFFPAD	BUCKLEY	MARCOOT	24/12/2019 10:26:06	Film Found
T-R--	193570858B	DIFFPAD	BANKS	ROBIN	23/12/2019 13:44:30	Film Found
T-R--	193571551C	DIFFPAD	JENNER	HENRY	23/12/2019 14:09:02	Film Found
T-R--	193571572B	DIFFPAD	MARCHESI	KIM	23/12/2019 14:09:02	Film Found
T-R--	193571226B	DIFFPAD	WERT	WILLIAM	23/12/2019 14:09:03	Film Found
T-R--	193571270B	DIFFPAD	SIMMANCE-FREEM...	RORY	23/12/2019 14:09:04	Film Found
T-R--	193571814B	DIFFPAD	TYLER	CARL	23/12/2019 16:33:59	Film Found
T-R--	193571608B	DIFFPAD	HADDAD	FADWA	23/12/2019 16:34	Film Found
T-R--	193571493B	DIFFPAD	DUKER	JACQUELINE	23/12/2019 16:34:01	Film Found
T-R--	193571418B	DIFFPAD	HARRIS	JEAN	23/12/2019 16:34:01	Film Found
T-R--	193571971B	DIFFPAD	MYERS	JUSTIN	23/12/2019 17:11:52	Film Found
T-R--	193571924A	DIFFPAD	BOYLE	EMILY	23/12/2019 17:11:52	Film Found
T-R--	193571966B	DIFFPAD	OLEARY	NICHOLAS	23/12/2019 17:11:52	Film Found
T-R--	193571973B	DIFFPAD	TOTOS	STAN	23/12/2019 17:11:53	Film Found
T-R--	193572024A	DIFFPAD	SPENCER	AARON	23/12/2019 17:38:12	Film Found
T-R--	193572027B	DIFFPAD	KC	PARAS	23/12/2019 17:38:12	Film Found
T-R--	193572102B	DiffpadASAP	GOSLAND	JOHN	23/12/2019 17:38:13	Film Found
T-R--	193572103B	DiffpadSTAT	HARRISON	ANGUS	23/12/2019 17:38:13	Film Found
T-R--	193572125A	DiffpadASAP	DREW	NOEL	23/12/2019 17:50:08	Film Found
T-R--	193572111B	DIFFPAD	STEVENS	DEBRA	23/12/2019 17:50:08	Film Found
T-R--	193572138B	DiffpadASAP	MINEA	GAYNOR	23/12/2019 18:02:06	Film Found
T-R--	193571743A	DIFFPAD	WIGGETT	MARIE	23/12/2019 18:02:06	Film Found
T-R--	193572073C	DIFFPAD	HUGHES	PAUL	23/12/2019 18:02:07	Film Found
T-R--	193572151B	DiffpadASAP	TADROS	JEREMY	23/12/2019 18:23:26	Film Found
T-R--	193572184D	DiffpadASAP	O'NEILL	LAVINIA	23/12/2019 18:36:43	Film Found
T-R--	193572189B	DiffpadASAP	FAKASH	TAREK	23/12/2019 18:36:44	Film Found

Request List (*) (20)

HOSTF (0) | Pending (47) | Validated (18) | SMS (8) | SandySlides (0) | To Validate (2) | In Process (3) | STATFilm (21) | URGFilm (18) | GENFilm (62) | StatSMS (2) | ALLFilms (101) | ALL (138) | Completed (20) | DiffDR (0)

Flags	Patient	Patient ID	Sample Id	Department
---P-----	JENKINS SARAH	000017158146	193580056B	13088 - Ward 7 East
---P-----	LEWIS JACK	000017273357	193580051B	13088 - Ward 7 East
---CR--V-H	MANSERGH DANIEL	000017272707	193580714B	16455 - Ward 3 East
---CR--V-H	TILLEY ALEXANDER	000017246155	193580680C	16455 - Ward 3 East
---CR--V-H	WADEY ASHLEE	000017140109	193580425B	13335 - Alfred Dialysis
---CR--V-H	MARCELLO FLORI	000010439244	193580343B	13272 - Ward 2 East
---CR--V-H	CROMBIE PHILIPPA	000017100876	193580492B	13300 - Ward 6 East
---C---V-H	MASTROMANNO QUIRINO	000014706229	193580342B	13272 - Ward 2 East
---CR--V-H	WOODWARD ABBEY	000017274251	193580338B	13272 - Ward 2 East
---CR--V-H	VARELA ALFRED	000017265654	193580470B	13208 - Ward 5 East
---CR--V-H	BURKE TERENCE	000016245571	193580467B	13208 - Ward 5 East
---CR--V-H	WOODS GLENIS	000010786973	193580468B	13208 - Ward 5 East
---CR--V-H	SMALLMAN JOHN	000010705109	193580465B	13208 - Ward 5 East
---CR--V-H	HOFF ROSALDA	000016238625	193580464C	13208 - Ward 5 East
---CR--V-H	KATSEMBENIS RAWI	000010489704	193580377B	16455 - Ward 3 East
---CR--V-H	BRIQGS JOHN	000017271159	193580375B	16455 - Ward 3 East
---CR--V-H	TAMIL HATEM	000017148068	193580130B	16455 - Ward 3 East
---CR--V-H	KERLEY JACK	000017040122	193580071B	13272 - Ward 2 East
---OC-----	BUCELLO MARY	000017243078	193572215B	13087 - ICU
---OC-----	MATERAZZO PAUL	000017067054	193572137A	13120 - HOC Same Day

- From this screen I can see 4 areas to “follow-up” - Sort message tab by “message”.
- Abnormal telephoned results which aren’t finished or archived yet – watch their timestamp.
 - 1 blood film out of sync – 1 film from the 22nd.
 - 2 completed results which aren’t complete – pie still contains red.
 - 2 completed results which haven’t transmitted to host and archived – green pie no “V” “H”.

Tagging Blood Films

The screenshot displays a software interface for managing blood film samples. At the top, there's a 'Samples List (*) (1)' window with a filter bar showing counts for various categories: All (2), Pending (0), StatSMS (0), STATFilm (0), URGFilm (0), GENFilm (0), SMS (1), ALL Films (1), and DiffDR (0). Below this is a table with columns: Flags, Sample Id, Instrument, Last name, First name, Last run, and Tag. A row is selected with the following data: T--P-, 193591141B, AT45031, KIRITAK, ZOFIA, 25/12/2019 20:17:21. A context menu is open over this row, listing actions like Filters, Stat, Tag, Detail, Assign Samples, Assign+Download, Download, Play Upload Rules, Set to Pending Status, Tube History, and Merge. The 'Tag' option is selected, opening a sub-menu with the following options: Default, Child Film Found, Film Found, Film Coming, Sample on SMS, RESET from found, Aerospray Film, Manual Film, 37 Degree film coming, Followup with Sandy, Film Staining SMS, Malaria Films, Film being remade, Malaria Film Found, Off-Line Film, Film Found Duplicate, In Priority Tray, and In Urgent Tray. Below the main window, a 'Request List (*) (0)' window is partially visible, showing filter counts for HOST F (0), Pending (0), Validated (1), SMS (1), SandySlides (0), and To Validate (0). It has columns for Flags, Patient, Patient ID, and Sample.

Tag films to indicate the **most useful text** for the next person eg
In Priority tray, In Urgent tray, Film being re-made or back on SMS or 37 degree film coming or Malaria film (in malaria tray) are far more helpful than just “Film Found”.

Film found is most appropriate for a routine sample progressing normally through the system.
Film found duplicate can be really helpful when sorting lists which can be sorted by “tag”

Duplicate Blood Films

Flags	Sample Id	Instrument	Last name	First name	Last run	Tag
?--R-	193642040B	DiffpadSTAT	LAWLESS	YVONNE	30/12/2019 19:52:29	In Urgent Tray
T--R-	193650116B	DiffpadSTAT	LAWLESS	YVONNE	31/12/2019 04:51:54	In Priority Tray
T--R-	193641789B	DiffpadASAP	MARCUM	GWENNETH	30/12/2019 18:37:45	In Urgent Tray
T--R-	193641970B	DiffpadSTAT	MIHOS	KONSTANTINOS	30/12/2019 18:18:05	In Priority Tray
T--R-	200010001B	DIFFPAD	MILTON	STEPHEN	30/12/2019 21:12:02	Film Found
T-RR-	193650352B	DiffpadASAP	NETTLETON	JUDITH	31/12/2019 06:37:45	In Urgent Tray
T--R-	193650053B	DiffpadASAP	NEWMAN	RUSSELL	30/12/2019 23:41:34	In Urgent Tray
T--R-	193641995C	DiffpadASAP	NGUYEN	KIM	30/12/2019 18:18:03	In Urgent Tray
T--R-	193642224C	DiffpadASAP	NGUYEN	KIM	30/12/2019 22:06:33	In Urgent Tray
T-RR-	193650021B	DiffpadASAP	NGUYEN	KIM	31/12/2019 03:19:17	In Urgent Tray
T-RR-	193650363C	DiffpadASAP	NGUYEN	KIM	31/12/2019 06:37:45	In Urgent Tray
T--R-	193650022B	DiffpadASAP	PETERSEN	COLIN	31/12/2019 01:38:14	In Urgent Tray
T-RR-	193650037B	DIFFPAD	PRAZZA	ATTILIO	31/12/2019 06:37:46	Film Found
T-RR-	193650239C	DIFFPAD	Quinlan	Laura	31/12/2019 02:37:56	Film Found
T--R-	193642048B	DiffpadASAP	RAJABI	JABER	30/12/2019 19:06:17	In Urgent Tray
?--P-	193642302B	DiffpadASAP	SALFATE	FERNANDO	30/12/2019 23:11:34	In Urgent Tray
T-RR-	193650256B	DIFFPAD	SARTORI	MIA	31/12/2019 04:49:20	Film Found
T-RR-	193650008B	DIFFPAD	SEVER	BRIAN	31/12/2019 04:49:38	Film Found
T--R-	193642149C	DIFFPAD	SHALE	JEANETTE	30/12/2019 21:12:01	Film Found
?--R-	193641842A	DIFFPAD	Sharma	Ritu	30/12/2019 18:37:45	Film Found
T--R-	193650048B	DiffpadASAP	STEEL	JOHN	31/12/2019 01:24:34	In Urgent Tray
T-RP-	193650673D	AT4501	TILLEY	DAVID	31/12/2019 06:46:31	
?--R-	193641715B	DiffpadSTAT	VOSE	AMALA	30/12/2019 18:37:43	In Priority Tray
T--R-	193641912B	DIFFPAD	WALKER	MARK	30/12/2019 17:42:17	Film Found
T-RR-	193650069B	DIFFPAD	WALSH	HELEN	31/12/2019 06:37:44	Film Found
T--R-	193641893B	DiffpadASAP	WATKINSON	JEFFREY	30/12/2019 22:06:32	In Urgent Tray
T-RR-	193650324C	DIFFPAD	WHELAN	PAMELA	31/12/2019 04:49:18	Film Found
T-RR-	193650260C	DIFFPAD	WILLIAMS	GRANT	31/12/2019 04:49:21	Film Found
T--R-	193641862A	DiffpadSTAT	WONDIM	ASGEDOM	30/12/2019 19:52:31	In Priority Tray
T-RR-	193650223A	DIFFPAD	WONDIM	ASGEDOM	31/12/2019 04:49:37	Film Found
?--R-	193650197C	DiffpadASAP	WYATT	WAYNE	31/12/2019 02:02:04	In Urgent Tray
T--R-	193650050B	DiffpadASAP	XUEREB	PHILLIP	31/12/2019 01:24:35	In Urgent Tray

Sorting the films by name will also show you the duplicate films in process.

Find the duplicate films and either

- 1) Vet one or more films and file
- 2) Move all multiple film patients into the urgent tray for “mass vetting” or examination

Problem Solving

	23/12 20:49	23/12 20:42	23/12 18:33	23/12 18:26	Prev. Res.	
HGB			88	v_DH 88	_D_ 84	23/12/2019
RBC			2.44	v_DH 2.43	_D_ 2.29	23/12/2019
HCT			0.29	v_DH 0.29	_D_ 0.28	23/12/2019
MCV			120	v_DH 120	_D_ 121	23/12/2019
MCH			36.1	v_H 36.3		23/12/2019
MCHC			301	v_H 301		23/12/2019
RDW			38.0	v_H 38.3		23/12/2019
NRBC%		326	vM_H 228	V_H 233	V 255	23/12/2019
NRBC#		62.4	vM_H 78.0 (R)	V_H 78.1 (R)	V 65.3	23/12/2019
UWBC			81.53 (R)	82.83 (R)	68.00 (R)	23/12/2019
WBC		19.14	vM_H 34.13 (R)	33.56 (R)	25.62 (R)	23/12/2019
NE#		17.80	vM_H 26.03 (R)	27.71 (R)	22.30	23/12/2019
LY#		0.19	vM_H 5.80 (R)	3.98 (R)	0.00	23/12/2019
MO#		0.38	vM_H 1.09 (R)	1.49 (R)	0.00	23/12/2019
EO#		0.00	vM_H 0.01 (R)	0.26 (R)	0.00	23/12/2019
BA#		0.00	vM_H 0.60 (R)	0.11 (R)	0.00	23/12/2019
BAND#		0.19	vM_H		1.79	23/12/2019
MYELO#		0.19	vM_H		1.02	23/12/2019
META#		0.19	vM_H		0.51	23/12/2019
PROMYELO#		0.19	vM_H			
NE%		93.0	vMXH 78.0	_X_ 82.6	_X_ 87.0	23/12/2019
LY%		1.0	vM_H 17.0	11.9	0.0	23/12/2019
MO%		2.0	vM_H 3.2	4.4	0.0	23/12/2019
EO%		0.0	vM_H 0.0	0.8	0.0	23/12/2019
BA%		0.0	vM_H 1.8	0.3	0.0	23/12/2019
BAND%		1.0	vM_H		7.0	23/12/2019
MYELO%		1.0	vM_H		4.0	23/12/2019
META%		1.0	vM_H		2.0	23/12/2019
PROMYELO%		1.0	vM_H			
PLT			239	v_DH 235	_D_ 230	23/12/2019
MPV			9.3	v_H 9.4		23/12/2019
FILMREQ			YES	VC_H	YES	23/12/2019
ImmGrans			YES	VC_H	YES	23/12/2019
Vetted	100	vM_H			100	01/12/2019
DONE	YES	VC_H			YES	23/12/2019

Held up and not archived due to UWBC.

Future delta checking not working.

Delete or verify the UWBC line.

Problem solving

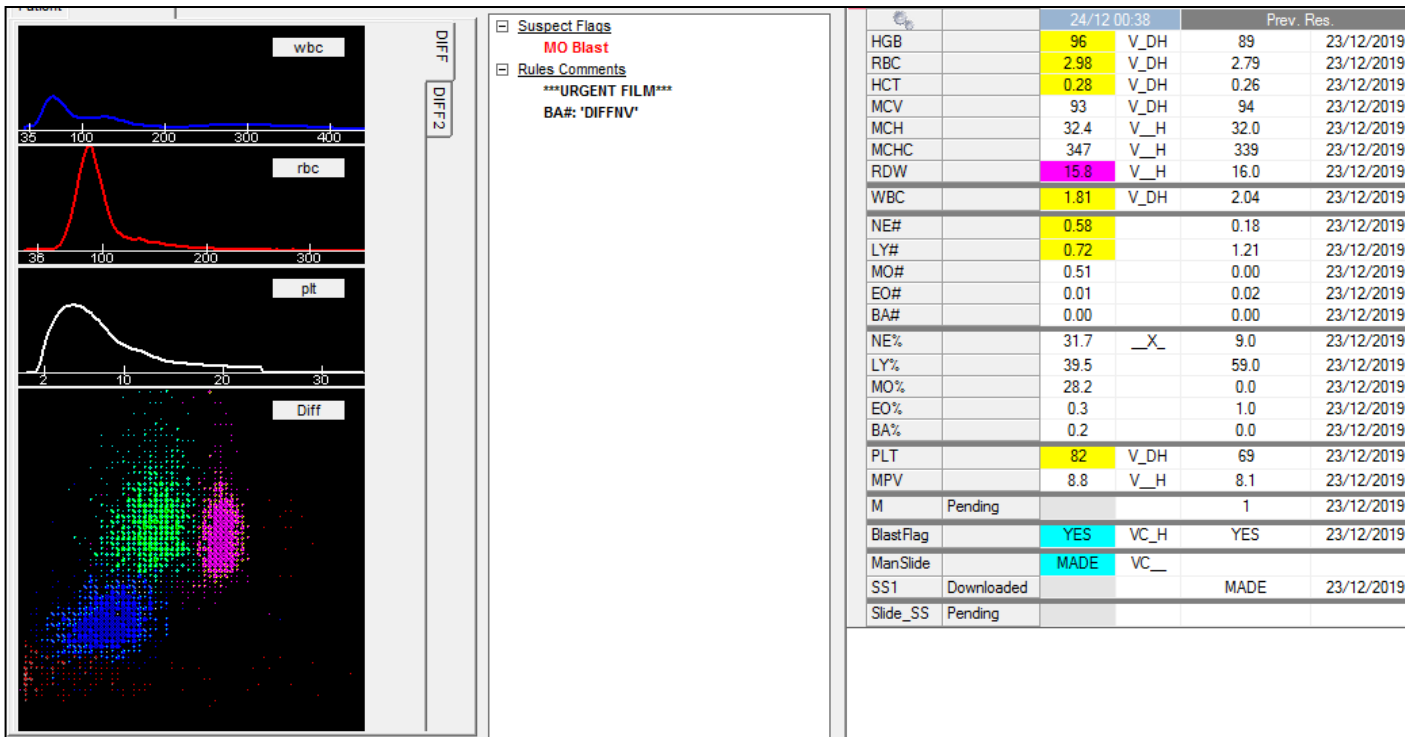
	23/12 18:02	23/12 17:41	23/12 17:24	Prev. Res.		
HGB			117	v_DH	128	23/12/2019
RBC			3.66	v_DH	4.06	23/12/2019
HCT			0.35	v_DH	0.39	23/12/2019
MCV			95	v_DH	96	23/12/2019
MCH			32.1	v_H	31.5	23/12/2019
MCHC			337	v_H	328	23/12/2019
RDW			14.2	v_H	14.2	23/12/2019
NRBC%			0	V_H	0	23/12/2019
NRBC#			0.1	V_H	0.1	23/12/2019
WBC			32.14	_D_	33.82	23/12/2019
NE#			5.89	V_H	11.84	23/12/2019
LY#			0.73	V_H	0.34	23/12/2019
MO#			25.34	V_H	1.69	23/12/2019
EO#			0.13	V_H	0.34	23/12/2019
BA#			0.05	V_H	0.00	23/12/2019
NE%			18.3	V_XH	35.0	23/12/2019
LY%			2.3	V_H	1.0	23/12/2019
MO%			78.8	V_H	5.0	23/12/2019
EO%			0.4	V_H	1.0	23/12/2019
BA%			0.2	V_H	0.0	23/12/2019
PLT			95	v_XH	149	23/12/2019
MPV			8.4	v_H	8.7	23/12/2019
FILMREQ			YES	VC_H	YES	23/12/2019
ImmGrans			YES	VC_H	YES	23/12/2019
BlastFlag			YES	VC_H	YES	23/12/2019
SS1	MADE	VC_H			MADE	23/12/2019
Vetted		100	vM_H			
DONE	YES	VC_H	YES	VC_H	YES	23/12/2019

Unusual workflow. WBC manually entered via ARE but WBC not verified in remisol and therefore not archiving.

Delta checking not working.

Validate the WBC.

Problem solving



Incomplete sample in the complete remisol tab ? Accidental assignment to complete tab.

- Not in the appropriate morphology tab ie priority due to blast flag.
- At risk of falling behind or being missed.
- Move to priority film tab and delete the "Slide_SS" pending and "SS1" (man slide made)

Problem Solving

Rules Comments		24/12 11:41	24/12 11:40	24/12 09:55	24/12 09:06	Prev. Res.
Morph requested					111 V_DH	136 17/12/2019
Doctor Ordered Film					3.55 V_DH	4.43 17/12/2019
					0.31 V_XH	0.39 17/12/2019
					87 V_DH	89 17/12/2019
					31.1 V_H	30.7 17/12/2019
					357 V_H	345 17/12/2019
					14.4 V_H	15.6 17/12/2019
					5.43 V_H	0.15 17/12/2019
					3.66 V_H	0.01 (R) 17/12/2019
					0.50 V_H	0.09 (R) 17/12/2019
					1.27 V_H	0.04 (R) 17/12/2019
					0.00 V_H	0.00 (R) 17/12/2019
					0.01 V_H	0.00 (R) 17/12/2019
					67.4 V_H	9.0 (R) 17/12/2019
					9.1 V_H	61.2 (R) 17/12/2019
					23.3 V_H	27.4 (R) 17/12/2019
					0.0 V_H	2.5 (R) 17/12/2019
					0.2 V_H	0.0 (R) 17/12/2019
					25 V_XH	10 17/12/2019
					8.3 V_H	8.8 17/12/2019
M			100 vM_H			100 17/12/2019
FILMREQ					YES VC_H	YES 17/12/2019
ImmGrans					YES VC_H	YES 19/12/2019
Dimorphic	100 VC_H	100 VC_H				
SS1				MADE VC_H		MADE 19/12/2019
DONE	YES VC_H	YES VC_H				YES 17/12/2019
FILM	Pending					
HR	100 vM_H					

The Dr Ordered Film rules is broken.
 We have to remove "FILM" manually at the moment.
 Awaiting Coulter feedback on this.

Problem Solving

Rules Comments		24/12 12:16	24/12 12:16	24/12 00:51
Morph requested				92 V_DH
Doctor Ordered Film				3.29 V_DH
Technical Comments				0.27 V_DH
Bone Marrow Peripheral Blood Film.				83 V_DH
Doctor Ordered Film.				28.0 V_H
				339 V_H
				13.7 V_H
				0.05 (-) V_H
				0.04 (-) V_H
				0.00 (R) V_H
				0.04 (R) V_H
				0.00 (R) V_H
				0.00 (R) V_H
				0.00 (R) V_H
				0.0 (R) V_H
				85.7 (R) V_H
				8.2 (R) V_H
				6.1 (R) V_H
				0.0 (R) V_H
				36 V_DH
				7.6 V_H
			100 vM_H	
				YES VC_H
Dimorphic	Pending			
SS1	Downloaded			
DONE		YES VC_H	YES VC_H	
FILM	Pending			
HR		100 vM_H		
Slide_SS	Pending			

4 lines to delete that are holding up archiving

Problem Solving

Differentials with Abnormal Lymphocytes will not auto verify – go to “ARE” and verify.

Always check cerner powerchart after completing a film with abnormal cells in the differential.

BE care full when diffing abnormal cells – as per below the abnormal lymphocytes were diffed into the atypical lymphocyte key by accident.

This will require result entry into abnormal lymphs and error correction to atypical lymphocytes. **Ask for atypical lymphs to be deleted from your key pad if they are still active.**

Phosphate Lvl	<input type="checkbox"/>	2.20	H	Autoverified	0.75 - 1.50	1.73	H
Magnesium Lvl	<input type="checkbox"/>	0.85		Autoverified	0.70 - 1.10	0.80	
Corr Calcium	<input type="checkbox"/>	2.19		Verified	2.10 - 2.60	2.24	
Neutrophils	<input checked="" type="checkbox"/>	9.28	H	Performed	1.90 - 8.00	5.04	
Lymphocytes	<input checked="" type="checkbox"/>	17.48	H	Performed	0.90 - 3.30	22.70	H
Monocytes	<input checked="" type="checkbox"/>	0.00	L	Performed	0.30 - 1.10	0.00	L
Eosinophils	<input checked="" type="checkbox"/>	0.00		Performed	0.00 - 0.50	0.00	
Basophils	<input checked="" type="checkbox"/>	0.71	H	Performed	0.00 - 0.20	0.00	
Bands	<input checked="" type="checkbox"/>	1.07		Performed		2.10	
Metamyelocytes	<input checked="" type="checkbox"/>	1.43		Performed		1.26	
Myelocytes	<input type="checkbox"/>					2.10	
Promyelocytes	<input type="checkbox"/>						
Blasts	<input type="checkbox"/>						
Reactive Lymphocytes	<input type="checkbox"/>						
Abnormal Lymphocytes	<input checked="" type="checkbox"/>	5.71		Performed		24.80	
Plasma Cells	<input type="checkbox"/>						
Hairy Cells	<input type="checkbox"/>						
Atyp Lymphs	<input type="checkbox"/>					8.82	
Smear Cells	<input type="checkbox"/>						
Prolymphocytes	<input type="checkbox"/>						
Promonocytes	<input type="checkbox"/>						
Lymphoma Cells	<input type="checkbox"/>						
NRBC Absolute	<input type="checkbox"/>				0.00 - 0.00		
NRBC per WBC	<input type="checkbox"/>				0 - 0		
Morphology	<input checked="" type="checkbox"/>	Comment	f	Performed			Comment
Haem Review	<input type="checkbox"/>						Yes *
Film Req	<input type="checkbox"/>						
Film Vet	<input type="checkbox"/>						Yes
Blast Flag	<input type="checkbox"/>						

Haematology	27-12-2019 00:40	26-12-2019 21:16	26-12-2019 15:34	26-12-2019 00:31
FBE				
<input type="checkbox"/> Hb	82	84	92	84
<input type="checkbox"/> WBC	37.07	35.68	42.02	118.10
<input type="checkbox"/> Platelets	36	36	8	81
<input type="checkbox"/> Hct	0.26	0.27	0.29	0.27
<input type="checkbox"/> MCV	82	83	83	84
<input type="checkbox"/> MCH	26.3	26.2	26.6	26.1
<input type="checkbox"/> MCHC	320	315	319	313
<input type="checkbox"/> RBC	3.11	3.20	3.44	3.21
<input type="checkbox"/> RDW	16.3	16.1	16.0	16.0
<input type="checkbox"/> Neutrophils	8.16	9.28	5.04	21.26
<input type="checkbox"/> Lymphocytes	17.05	17.48	22.70	62.59
<input type="checkbox"/> Monocytes	0.37	0.00	0.00	7.09
<input type="checkbox"/> Eosinophils	1.11	0.00	0.00	1.18
<input type="checkbox"/> Basophils	0.00	0.71	0.00	0.00
<input type="checkbox"/> Bands	1.11	1.07	2.10	
<input type="checkbox"/> Metamyelocytes	0.74	1.43	1.26	
<input type="checkbox"/> Myelocytes	0.37		2.10	1.18
<input type="checkbox"/> Abnormal Lymphocytes	8.16	5.71		24.80
<input type="checkbox"/> Atypical Lymphocytes			8.82	
Morphology	* Comment	* Comment	* Comment	* Comment
FBE Phone Comment				

Type it in

TypeItIn	nn and	MAC	hypogran neut	B12 assay	in remission	No Diag Features.
HAEM LAB	nn and	MAC	hypogran neut	B12 assay	in remission	No Diag Features.
PBN	RED CELL TYPE	MAC70	hyperseg neut	B12 deficiency	Post op changes.	Pancytopenia
Comments	incr in	Manual differential	pelger-huet forms	GCSF Consistent	Post op review.	M. Pancytopenia
PUNCTUATION	a mild incr in	WBC Norm	stodmeister cells	GCSF therapy	Post trauma FBE.	No blast cells seen.
Note	a mod incr in	WBC/PLT Norm	PLTS normal	Fall in HB	Post Txn FBE	No neut on film.
No (upper case)	a marked incr in	WBC show	PLTS show	Fall in MCV	Pregnant	Rare neut on film.
no (lower case)	acanth	Neutrophils show	Borderline PLTS.	haematology patient	Pregnant Norm	Thrombocytopenia.
a	agglutination	neutrophilia	Note fall in platelets.	HB raised	on treatment	Thrombocytosis.
an	basophilic stippling	neutropenia	PLT confirmed film.	heart transplant	which persists	Counts confirmed.
and	bite	lymphocytosis	thrombocytopenia	if clinically ind	which is resolving	Rpt FBE to confirm
including	blister	lymphopenia	thrombocytosis	infectious mono	DIAGNOSIS	Rpt FBE 10 days
obvious	burr	monocytosis	large platelets	iron deficiency	AA	Performed by:
seen on blood film	crenated	eosinophilia	giant platelets	iron studies	AIHA	Performed by: AH
or	elliptocytes (HE)	basophilia	recent	iron therapy	ALL	Performed by: APW
consistent	elongated cells	LS/TOXIC/BLASTS	hypogranular platelets	infect / inflam	AML	Performed by: CW
with	fragments	Neutrophilia LS TG	satellitism	Infect not exc.	AMML	Performed by: EO
comma	ghosting	Neutrophilia LS	Fibrin strands. Rpt.	liver function tests	CLL	Performed by: EC
stop	HJB	left shift	Occ clumps	liver impairment	CML	Performed by: FK
There are	hypochromic	hypergran(toxic)	Clumped norm	liver transplant	CMML	Performed by: GER
present	irregular	vacuolation	Clumped mild lo	lung transplant	DIC	Performed by: JK
Persistent	microcytes	dohle bodies	Clumped mark lo	oncology patient	ET	Performed by: JS
emerging pop of	macrocytes	metamyelocytes	Clumped mild hi	ongoing monitoring	HE	Performed by: KB
GRADING	NRBC	myelocytes	Clumped marked hi	PBSC mobilisation	HS	Performed by: KG
rare	NRBC per 100 WBC	meta and myelo	Citrate Spec.	PBSC Pre	ITP	Performed by: HK
occasional	oval cells	immature cells	SAMPLE ISSUE	PBSC Post	LYMPHOMA	Performed by: LG
a small no of	pappenheimer	%	37 Degrees FBE	PBSC Post Tx	MDS	Performed by: LP
a moderate no of	polychromatic cells	blast cells	Lipid correction	Post BMT	MF	Performed by: LW/SC
numerous	pencil (FeDef)	auer rods	Man.Diff. Interference	Post Cord SC Tx	MM	Performed by: MF
RED CELL DESC	rouleaux	promonocytes	Invalid auto diff.	Query Allergy Drug	MPN	Performed by: MJH
RCN	schistocytes(frag)	LYMPHOID	QUALIFIER	Query drug, viral, imm	PV (PRV)	Performed by: MK
RWN	spherocytes	react lymphs	Known	Query Infect / Inflam	STATEMENTS.	Performed by: PNP
Red cells show	spherocytes-micro	abnormal lymphs	Consistent with	Query reactive	Anaemia	Performed by: PT/SCS
nn anaemia	stomatocytes	cleft lymph	stated	Query therapy	Leucoerythroblastic.	Performed by: SCS
mild	target	lymphoma cells	history of	renal impairment	Leucopenia.	Performed by: SR
moderate	tear drop cells	plasma cells	Query	recent chemotherapy	Neutropenia.	Performed by: SSS/JS
marked	IRON / THAL / MAC	prolymphocytes	Suggest	renal transplant	Mature neutrophilia.	Performed by: SZ
hypochromia	Fe/Thal	smear cells	Suggestive of	splenectomy	Neutrophilia.	Performed by: TB
microcytosis	Thal/Fe	Hairy cells	CONDITIONS	treated iron def	Gen leucocytosis.	Performed by: VJ
macrocytosis	Thal/Fe F Preg	Mott cells	acute blood loss	or transfusion	Lymphocytosis.	Performed by: WAO
polychromasia	Thal/Fe F Non Preg	Lymphocytosis SFU	acute/chronic loss	viral infection	Lymphopenia.	INTERIM Ref
anaemia with	Thal/Fe Male	DYSPLASTIC	asplenic changes	STATE	Monocytosis.	HR_Rev Q
DIM	BMCV	dysplastic features	burns patient	chronic	Eosinophilia.	Spurious Result

Type it in is our quick entry typing system.

“Most” commenting is covered by these keys.

Staff “should” only use type it in commenting and then limited free-text as required.

Type-it-in has been created so complete sentences can be constructed – please review your comment for punctuation and spelling before hitting send.

Suggestions for key improvements are always welcome.

Red cell comments start with “M” to transmit to cerner. If you want to start with a different comment – select “Comments” at top left.

Comment on all three cell lineages and include a diagnosis if known.

Type it in

TypeItIn			
Malaria Blast	fine pigment	The blast cells are	indistinct.
No parasites	heavy pigment	small	prominent.
There is	haemozoin	intermediate	The cytoplasm is
There are	Maurer's	large	lightly
present	Schnuffner's	pleomorphic	moderately
with	gametocytes	in size with a	strongly
rare	crescent gamet	high	basophilic.
a small number	trophozoites	low	Cytoplasmic
an increased number	Suggestive of	N:C ratio.	granules
and	Consistent with	The nucleus is	auer rods
ring forms	P. vivax	round	are present.
multiple ring	P. falciparum	irregular	r sometimes present.
accolae	P. ovale	folded	are absent.
double dot	P. malariae	bi-lobed	Vacuolation
show	P. knowlesi	and the	is absent.
schizonts	Non falciparum	chromatin pattern is	is present.
merozoites	VIDRL	smooth.	
band forms	Performed by:	immature.	
amoeboid	Ref	Nucleoli are	

Type it in is our quick entry typing system.

“Most” malaria and blast commenting is covered by these keys.

Staff “should” use the blast cell descriptors and structure as a guide [to make sure all components are commented on.](#)

Suggestions for key improvements are always welcome.

Keyboard Diff layout options

- Now that we have wireless keyboards you can manually diff from either side of the microscope.
- Keyboard diffing should be utilised for expediency and to reduce the chance of transcription errors.
- Suggestions
 - For left hand – neuts start at J (raised key)
 - For right hand – neuts start at F (raised key)
 - Either – numeric keyboard option
 - Other – what ever suits you
- Atypical or variant lymphs are classified as reactive lymphocytes
- Other abnormal lymphs are counted as such or commented on in the film comment.
- All NRBC of $\geq 1/100$ WBC are to be reported via “ARE” – record both absolute and number per 100 WBC.

Q	W	E Meta	R Myelo	T ProM	Y	U	I	O	P	[]	
A AbnL	S Smear	D Band	F– Neut	G Lymph	H Mono	J– Eos	K Baso	L	;	'	<CR>	
Z HairyL	X Plasma	C Blast	V NRBC	B Lympho	N ProLym	M Morph	,	.	/	Shift		

Right hand suggestion

Left hand suggestion

Q	W	E	R	T	Y ProM	U Myelo	I Meta	O	P	[]	
A AbnL	S Smear	D Baso	F– Eos	G Mono	H Lymph	J– Neut	K Band	L	;	'	<CR>	
Z HairyL	X Plasma	C Lympho	V ProLym	B ReactL	N Blast	M Morph	,	.	/	Shift		

Numeric Keyboard based

Q	W	E	R ReactL	T	Y	U ProLym	I	O	P Plasma	[]	
	A AbnL	S Smear	D	F-	G	H HairyL	J-	K	L Lympho	;	'	<CR>
	Z	X	C	V	B Blasts	N NRBC	M Morph	,	.	/	Shift	

7 Meta	8 Myelo	9 ProM
4	5 Eos	6 Baso
1 Neut	2 Lymph	3 Mono
0 Bands		.