Metro North Hospital and Health Service *Putting people first*

General Practice Liaison Officer Program

GP Education Session

Malignant Haematology

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14th February 2018

phn BRISBANE NORTH

An Australian Government Initiative

Queensland Government

“Doctor, I’m tired”

- A 47 year old female, sees you on a Saturday morning. She usually sees another doctor at your practice.
- She complains of fatigue and daytime somnolence
- She has an elevated BMI, Type II DM diagnosed in last 18 months. No known micro or macrovascular complications
- She also complains of vague aches and pains and admits to being variably compliant with her diabetic diet
- Her last HbA1c is overdue

Mrs RN

- You order some investigations including the outstanding HbA1c, TFT's, FBC, Iron studies and E/LFT
- HbA1C is 7.6%, TFT's normal
- Hb 135 Plt 267 WCC 12.8, neut 9.8, lymph 3.5 There is no comment about morphological abnormality, just the automatically generated comment from the pathology provider

What next?

A. Ignore the FBC result – perform a focussed intervention based on lifestyle factors including diet and exercise

B. Repeat the FBC in 6 weeks

C. Refer Haematology

Version 2

- Her FBC shows Hb 115 Plt 157 WCC 31.5, neut 22.8, Band forms 1.6, lymphocytes 4.7, Monocytes 2.1, Eosinophils 0.3

- Does this change your decision?

Reactive Neutrophilia

- Patients with high neutrophilia and with high fever/sweats are likely to have an infective cause and urgent referral to DEM should be considered.
- **Most cases of neutrophilia are reactive and not associated with haematological malignancy**.
- **Isolated** mild neutrophilia (Neut 8-15 x 10^9/L) may commonly be seen in chronic smokers, patients receiving corticosteroids and during pregnancy and if **non-progressive** and not associated with splenomegaly, or clonality (BCR ABL and JAK2 negative) then may be safely followed up in primary care 3-6 monthly.

Reactive Neutrophilia

- Splenomegaly
- Leucoerythroblastic film
- Associated basophilia, polycythaemia or thrombocytosis → myeloproliferative neoplasm (PRV, ET etc)
- Co-existing persistent, non-reactive monocytosis (monocytes >1.0 x10^9/L) →chronic myelomonocytic leukaemia (CMML)

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Welcome to Royal Brisbane and Women's Hospital

Queensland's largest teaching and research hospital

How can we help you?

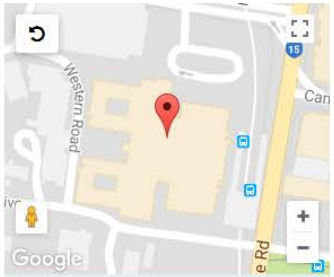
Latest news

A common sense approach to cannulas in the emergency department

6 February 2018

Royal Brisbane and Women's Hospital (RBWH) has seen a 10 per cent reduction in unnecessary placement of cannulas in the Emergency & Trauma Centre (ETC) through research into a common-sense multi-modal intervention.

Read More >



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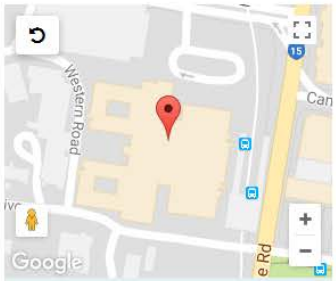

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Refer your patient

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Referral guidelines are changing across Metro North. Make sure you're familiar with the latest criteria when referring patients.

Specialist outpatient services

Search speciality

or search by condition

Enquiry hotlin

Community, indigenous and subacute services

Select a service

Enquiry hotline:

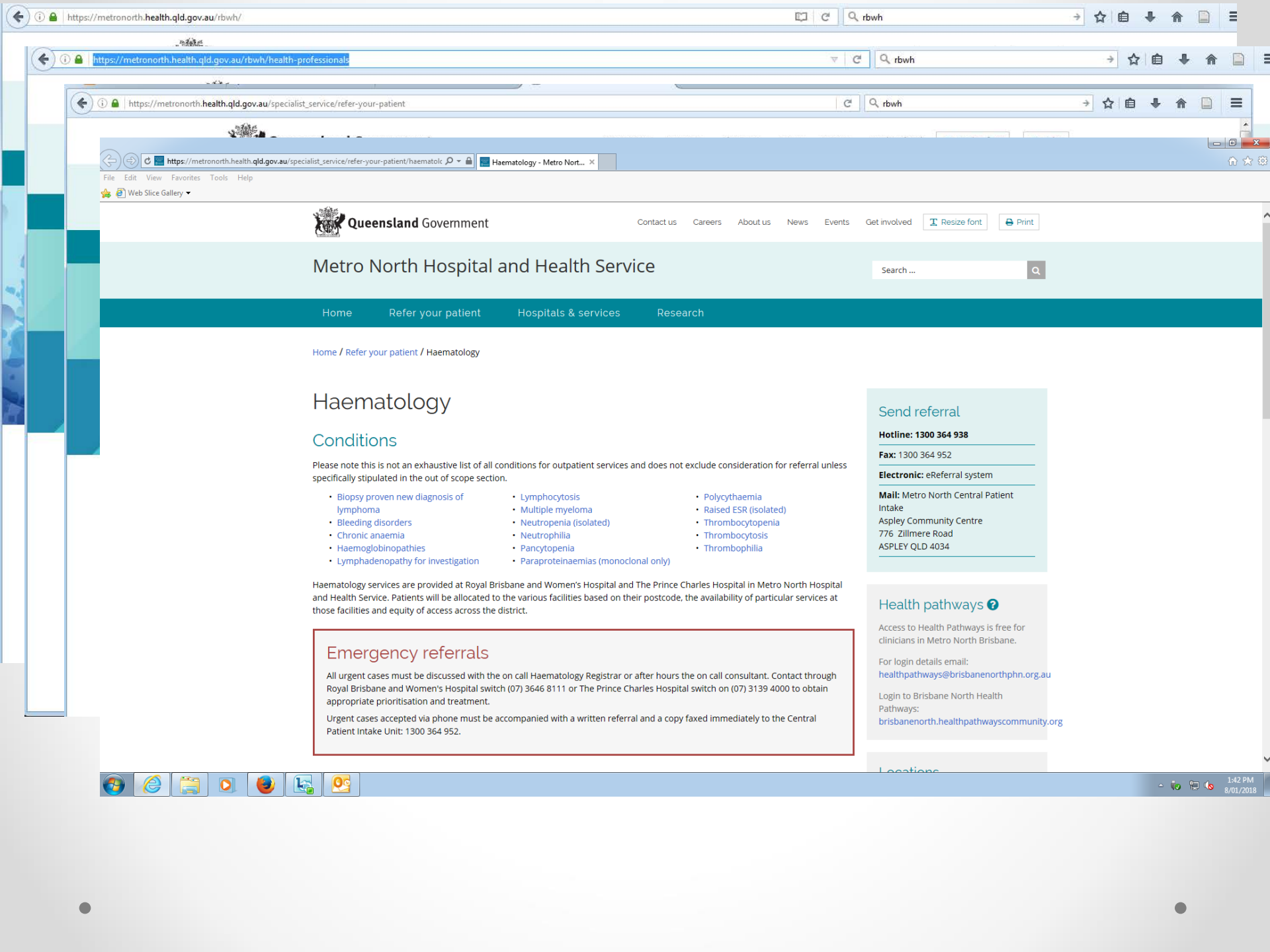
Oral Health services

Referral hotline:

1300 300 850

Fax: (07) 5433 8577

- Specialists list
- Update GP practice details
- GP Liaison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Haematology
Conditions
Please note this is not an exhaustive list of all conditions for outpatient services and does not exclude consideration for referral unless specifically stipulated in the out of scope section.
Biopsy proven new diagnosis of lymphoma
Bleeding disorders
Chronic anaemia
Haemoglobinopathies
Lymphadenopathy for investigation
Lymphocytosis
Multiple myeloma
Neutropenia (isolated)
Neutrophilia
Pancytopenia
Paraproteinaemias (monoclonal only)
Polycythaemia
Raised ESR (isolated)
Thrombocytopenia
Thrombocytosis
Thrombophilia
Haematology services are provided at Royal Brisbane and Women's Hospital and The Prince Charles Hospital in Metro North Hospital and Health Service. Patients will be allocated to the various facilities based on their postcode, the availability of particular services at those facilities and equity of access across the district.
Emergency referrals
All urgent cases must be discussed with the on call Haematology Registrar or after hours the on call consultant. Contact through Royal Brisbane and Women's Hospital switch (07) 3646 8111 or The Prince Charles Hospital switch on (07) 3139 4000 to obtain appropriate prioritisation and treatment.
Urgent cases accepted via phone must be accompanied with a written referral and a copy faxed immediately to the Central Patient Intake Unit: 1300 364 952.
Send referral
Hotline: 1300 364 938
Fax: 1300 364 952
Electronic: eReferral system
Mail: Metro North Central Patient Intake
Aspley Community Centre
776 Zillmere Road
ASPLEY QLD 4034
Health pathways
Access to Health Pathways is free for clinicians in Metro North Brisbane.
For login details email:
healthpathways@brisbanenorthphn.org.au
Login to Brisbane North Health Pathways:
brisbanenorth.healthpathwayscommunity.org
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8/01/2018

Neutrophilia; Referral Criteria

Category 1 (30 days)

- Newly diagnosed CML (BCR ABL +ve)
- Neutrophilia with basophilia (leucoerythroblastic film)

Category 2 (90 days)

- Neutrophil count >30 X 10^9/l
- JAK2 mutation detected

Category 3 (365 days)

- Neutrophil count <30 X 10^9/l

Essential referral information

- Presence of any **red flags**
- General referral information
- Serial FBC
- ESR, CRP
- E/LFT
- BCR ABL & JAK2 V617F testing

“I need some antibiotics”

- A 63 year old man, consults you because he has been unwell with coryzal symptoms and “needs antibiotics to get better faster“
- He’s says he’s been hot but has not measured his temperature and has had a non-productive cough
- On examination he has prominent cervical lymph nodes

Mr MB

- You request a FBC & E/LFT

- His FBC shows Hb 137 Plt 332 WCC 12.8 Neut 5.5 and Lymph 6.3
  A comment about reactive lymphocytes as been added and flow cytometry has been suggested by the pathology laboratory

- You choose to repeat the tests when he is well after explaining the role for antibiotics in viral URTI's

Mr MB

- His symptoms have resolved, as has his lymphadenopathy

- Repeat lymphocyte count is now numerically normal however the flow cytometry is positive for a clonal B cell population constituting 66% of lymphocytes
  CD 5+/19+/23+ and reported as ‘typical CLL phenotype’

What next?

A. Inform him he has leukaemia and start end of life care planning

B. Repeat the FBC in 3 months

C. Refer Haematology

Version 2

- Repeat lymphocyte count remains elevated at 6.7 however the flow cytometry is positive for a clonal B cell population
  CD 5+/19+/23+ and reported as ‘CLL phenotype’

- His cervical lymph nodes are now more prominent

Lymphocytosis

- A polyclonal lymphocytosis seldom has a haematological cause and other causes (esp. infective) should be excluded before referring to haematology
- **Monoclonal B lymphocytosis** is a common cause of persistent mild/borderline lymphocytosis and does not usually require haematology referral as this rarely progresses to CLL and is suitable for monitoring in primary care. This is characterised by:
  A clonal B cell population of CLL immunophenotype [CD5+, CD19+, CD20 (weak), CD23+, restricted light chain (weak)] in peripheral blood of $<5 \times 10^9$/l B cells
  AND
  No other signs of a lymphoproliferative disorder (splenomegaly, lymphadenopathy by CT imaging)

Lymphocytosis

- HIV
- Positive hepatitis screen
- Autoimmune disease

Lymphocytosis; Referral Criteria

Category 1 (30 days)

- High lymphocyte count associated with any cytopenias (including autoimmune haemolytic anaemia – AIHA)
  Weight loss >10%
  Night sweats
  Bulky (>2cm) lymphadenopathy

Category 2 (90 days)

- Chronic lymphocytic leukaemia
- Aberrant T cell lymphocytosis including T-LGL (T-cell large granular lymphocyte leukaemia)

Category 3 (365 days)

- Monoclonal B lymphocytosis (MBL)

Lymphadenopathy

- Suspect spinal cord compression, superior vena cava syndrome (SVC), high calcium (>3.0mmol/L), febrile neutropenia need to be referred to the Emergency Department urgently
- Haematology Department accepts referrals of patients with clinically abnormal lymph nodes **without** a biopsy
- For clinically stable small – volume lymph nodes and in a well patient with normal blood work suggest:
  - Clinical monitoring recommended
  - Consider biopsy
  - For isolated neck lymphadenopathy, fine needle aspiration is usually the first investigation to exclude head and neck squamous cell cancer. Excisional biopsy of isolated neck lymph nodes should only be undertaken once squamous cell cancer has been excluded.

Lymphadenopathy; Referral Criteria

Category 1 (30 days)

- Abnormal lymph node detected clinically or via imaging – and **not** biopsied (or inconclusive biopsy). For optimum care, patient should be seen within 2 weeks if any of the following are present
  - symptomatic lymphadenopathy
  - raised LDH
  - bulky disease (> 7cm diameter of LN mass)
  - presence of fever, night sweats, weight loss or new onset pruritus
  - concurrent recent onset cytopenias (e.g. anaemia, thrombocytopenia)
  - extranodal masses
  - clinical history of rapid growth

Lymphadenopathy

- Reassuring features
  - asymptomatic or minimally symptomatic lymphadenopathy
  - normal FBC and stable creatinine and liver function
  - clinical history of slow growth
  - non bulky disease
  - clinically well (absence of the following – fever, night sweats, weight loss or pruritus)

Renal Screen

- A 67 yo female consults you after a routine insurance medical has shown an elevated creatinine

- You repeat the E/LFT in addition to a FBC, EPPS, ANA/ENA, Urine M/C/S and Protein:Creatinine and Albumin:Creatinine

Mrs PG

- Repeat renal indices return to normal and the urine examination is unremarkable but there is an abnormal serum electrophoresis result

- A polyclonal increase in γ globulins is demonstrated

What next?

A. Ignore the EPP result; Refer renal

B. Repeat the EPP in 6 weeks

C. Refer Haematology

Version 2

- Repeat Creatinine improves but remains somewhat elevated and corrected calcium is now elevated beyond the ULN

- A *monoclonal* protein band is discovered

Paraproteinaemia

- Polyclonal paraproteinaemias are common and seldom have a haematological cause. Only refer ***monoclonal*** paraproteinaemias to Haematology

- Any patient with a monoclonal paraproteinamia and acute renal impairment or hypercalcaemia should be urgently referral to DEM

Paraproteinaemia

- Haemolytic anaemia
- Any evidence of pancytopenia (Hb <100g/L, Neut <1.0, PLT <50)
- Abnormal blood film
- New unexplained back pain
- Hypercalcaemia
- Weight loss
- Splenomegaly
- Lymphadenopathy
- Fevers/night sweats
- Presence of a monoclonal protein or abnormal serum free light chain ratio

Paraproteinaemia; Referral criteria

Category 1 (30 days)

- Monoclonal paraprotein and any of
  - Anaemia
  - Bone pain
  - Lytic bone lesions on skeletal survey X Rays
  - Hypercalcaemia
  - New renal impairment

Category 2 (90 days)

- All monoclonal paraproteins > 10g/L

Category 3 (365 days)

- Monoclonal protein <10g/L and no red flags

Myeloma

- If any life threatening symptoms present (new hypercalcaemia) or severe or life threatening symptoms present (e.g. spinal cord compression, SVC compression, ureteric compression, airway compromise etc.) – then contact the haematologist on call, or send direct to the Emergency Department.
- Bone scans are usually negative for the lytic lesions seen in myeloma. Plain film skeletal survey is recommended.
- IgM monoclonal protein is exceedingly rare in myeloma and is more commonly seen in low grade lymphomas.

Myeloma; Referral Criteria

Category 1 (30 days) **ONE OF**

- Abnormal serum protein electrophoresis
- Abnormal free light chains
- Bence Jones protein in urine

AND

- Recent onset unexplained anaemia
- Lytic bone lesions
- Recent unexplained mild to moderate renal impairment

Myeloma; Referral Criteria

Category 2 (90 days) **ONE OF**

- Abnormal serum protein electrophoresis
- Abnormal free light chains
- Bence Jones protein in urine

AND ALL of :

- Well, asymptomatic patient
- Normal FBC and chemistry
- No history of bone pain or new unexplained back pain

Categorisation depends on subtype and amount of monoclonal protein

Useful Resources

- RBWH Referral portal https://metronorth.health.qld.gov.au/specialist_service/refer-your-patient/haematology

- RBWH On call services;
  In hours → Registrar → Haematologist
  Out of hours → Haematologist

- Patient information; Leukaemia Foundation