Te Whatu Ora
Health New Zealand
Capital, Coast, Hutt Valley and Wairarapa

Pharmacist Prescriber Myeloma Clinic

Heena Solanki

Background:

- NZ qualified and registered pharmacist –University of Otago
- UK trained and registered pharmacist
- Community Pharmacist
- Private and NHS Hospitals
- Rotational –various specialties e.g. cardiology and cardiothoracic, neurology and neurosurgery, ICU, gastro and liver, women's health, mental health, general medicine, elderly care, surgical, medicines information, renal, oncology and haematology, NICU, etc.
- Oncology/Haematology > 10yrs experience
- Registered life and health coach –holistic approach to healthcare
- Certificate in creative writing -children’s storybooks.

UK prescribing pathway

GPhC (General Pharmaceutical Council)
BOPA (British Oncology Pharmacists Association)

Prescribing Course
90 hours supervised practice
6-12 months
NHS England Funding
MPharm

UK Prescribing Experience

- UK independent non-medical prescriber course **2014**
- **Post-transplant clinics**
- **Oral anticancer medications clinic**s e.g. renal carcinoma, breast, colorectal, ovarian, cervical, glioblastoma, liver.
- **Myeloma** clinics
- **Inpatient wards** including **admission unit**
- **Discharges**
- **Outpatient Rxs**
- **Patient counselling**
- **Compliance**
- **Monitoring side effects**

NZ prescribing pathway

University of Otago and Auckland School of Pharmacy

Two 30-point papers (part-time or full time)

300 hours of supervised practice

12 months

Pharmacy Council of New Zealand

Eligibility:
Registered pharmacists with **at least two years** of post-registration patient-focused experience in a hospital, community or a primary care setting.

Support of a **designated medical practitioner** (DMP)

Completed **PGCertPharm** or **PGDipClinPharm**.

An appropriate **practice-based learning environment** in a prescribing setting that can offer **appropriate clinical support.**

NZ pharmacist prescribers

2024 Survey
74 prescriber pharmacists

Primary Care
Hospital
Oncology-**Caroline Aberhart** (Marlborough)
Haematology –**Timothy Vincent** (Christchurch)
Haematology-**Heena Solanki** (Wellington)

Wellington Hospital

Nikola Orozov –ICU
Heena Solanki-Haematology
Abby Calder –NICU and TPN
Quang-Te –General Medicine and Diabetes

Coordinators for NZ Hospital Pharmacist Prescribers SIG

History

Sarah Newbury 1844

- Treated at Barts Hospital, London.
- Given wine, arrowroot, mutton chop and pint of porter daily.
- Hospitalised with multiple fractures of clavicles, right humerus, and radius.
- Also treated with rhubarb pill, infusion of orange peel and an opiate.
- Died suddenly, autopsy revealed that the sternum was replaced by a blood-red substance.

History

The Peculiar Case of Thomas Alexander McBean

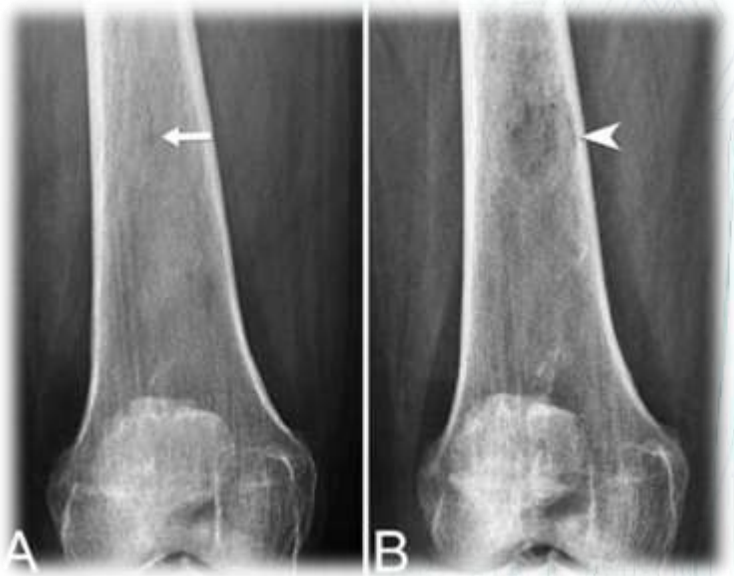
Saturday, Nov. 1st, 1845
Dear Dr. Jones,
The tube contains urine of very high specific gravity. When boiled, it becomes slightly opaque. On the addition of nitric acid, it effervesces, assumes a reddish hue, and becomes quite clear; but as it cools, assumes the consistence and appearance which you see. Heat re-liquifies it. What is it?"

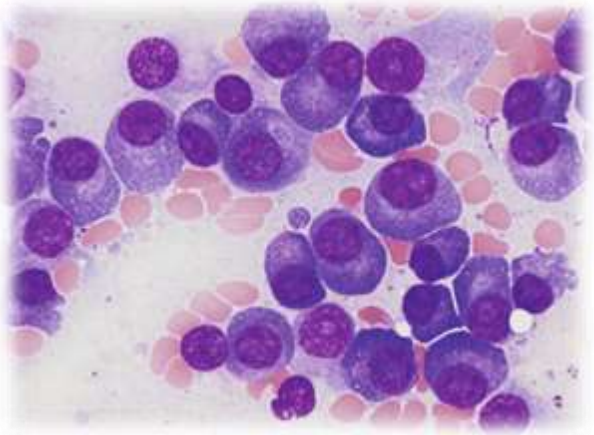
History

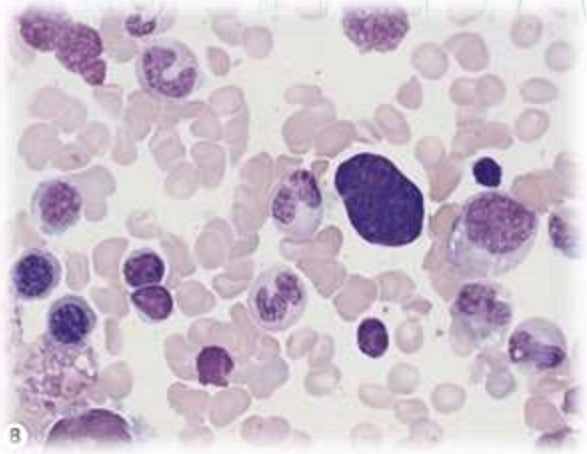
- This cryptic note and a urine sample were sent by a leading London general practitioner, Dr Thomas Watson, to Dr Henry Bence Jones, a 31 yr old physician at St. George's Hospital who already established a reputation as a skilled chemical pathologist.
- Mr McBean died in 1846. Death certificate listed cause of death as ''atrophy from albuminuria''.
- Post-mortem examination revealed ribs which crumbled (soft, brittle, readily broken and easily cut by the knife. Sternum, soft and fragile and snapped when lifted. Similar gelatinous blood-red substance found in Sarah Newbury. Thoracic and lumbar vertebrae, same degenerative changes as found in ribs and sternum.

What is Myeloma?

- **Second most common blood cancer** after leukaemia
- Multiple myeloma (MM) or plasma cell myeloma
- Cancer of **plasma cells** which is a type of white blood cell responsible for producing immunoglobulins (antibodies) which help fight infections as part of the immune system. Abnormal immunoglobulin called **paraprotein** –detected in blood or urine.
- Abnormal plasma cells build up in the bone marrow overcrowding healthy cells, preventing normal production of **red blood cells**, **white blood cells** and **platelets.**
- Accumulate on other bony parts of the body. Stimulate osteoclasts and make **bones weaker**, **brittle** and **break** more easily.
- Incurable
- Older patients
- Males



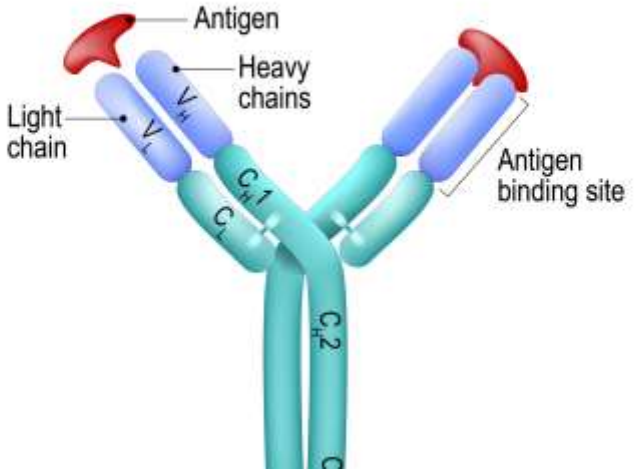


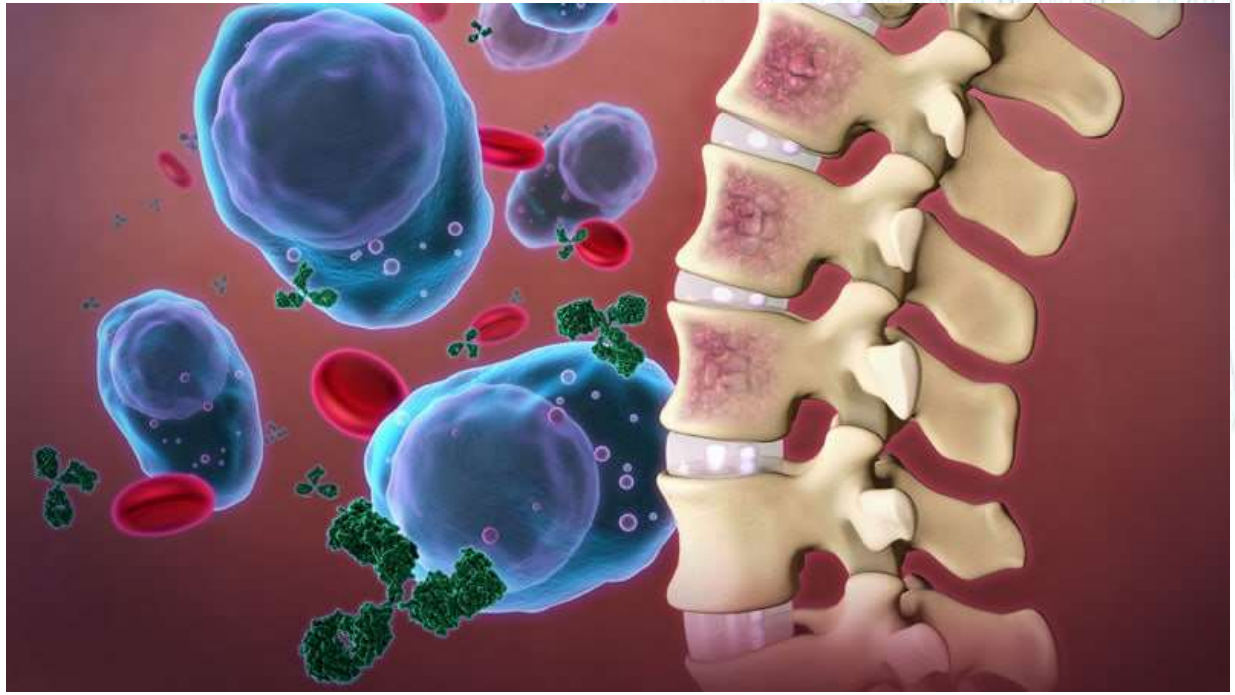


Types of Myeloma

Sub classified according to:

- Heavy chains i.e. IgG, IgA, IgM and rarely IgD or IgE
- Light chains i.e. kappa and lambda





Signs and Symptoms

C High calcium

R Renal impairment

A Anaemia

B Bone problems

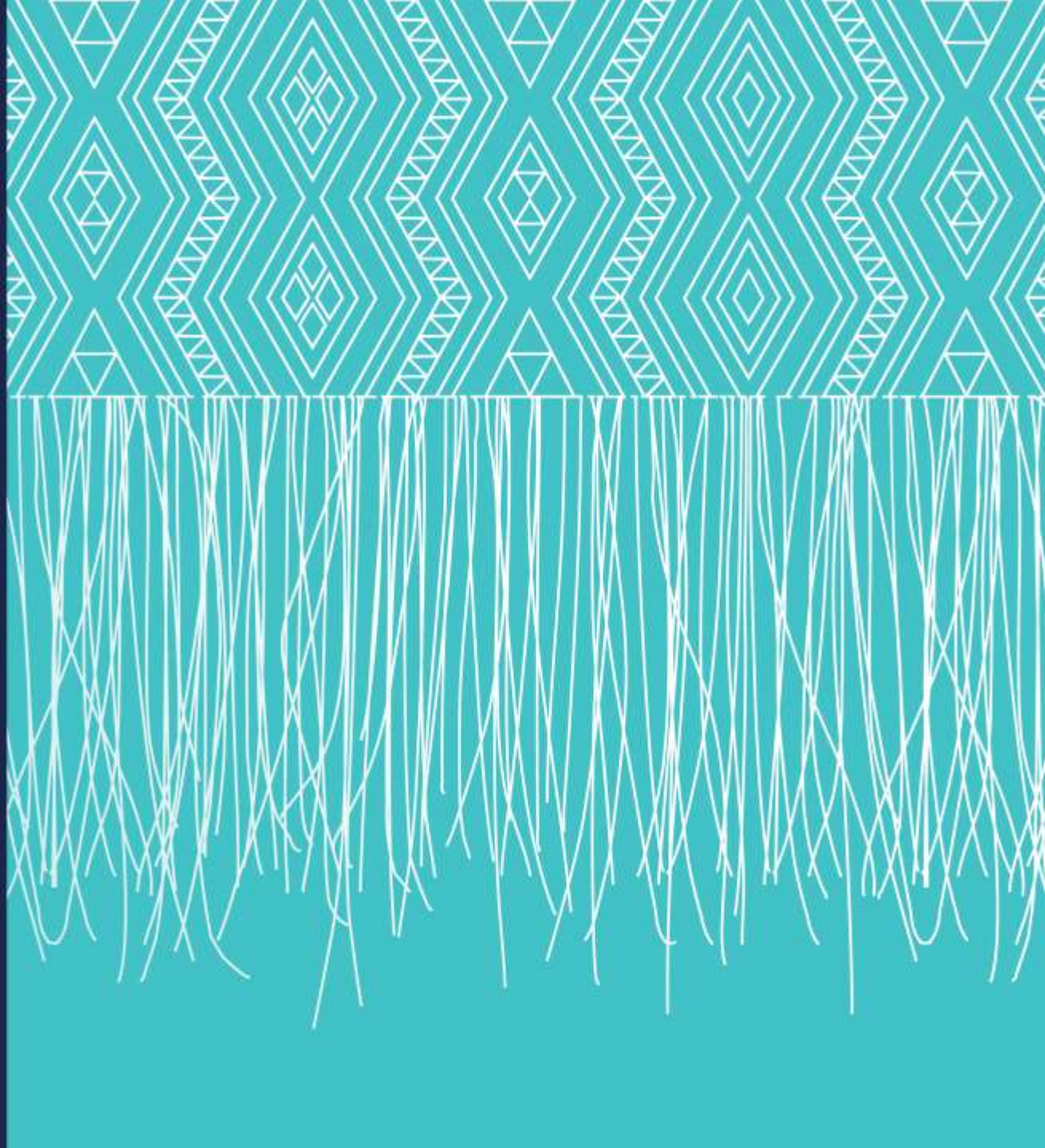
- **Symptoms may include:**
- Feeling sick
- Loss of appetite/weight loss
- Constipation
- Tiredness or fatigue
- Feeling thirsty
- Confusion
- Shortness of Breath
- Bone pain
- Frequent infections

Monitoring

Paraprotein
Calcium
Renal function
Full blood count including haemoglobin
Light chains etc.

Treatments:

Active monitoring
Steroids
Anti emetics
Chemotherapy
Radiotherapy
Novel therapies e.g. IMiDs, Bortezomib
Anticoagulants
Bone health e.g. bisphosphonates
Stem cell transplant



Myeloma Clinic at Wellington Hospital

Scope of Practice

Initiation
Consenting
Maintenance
Continuation/Discontinuation
Prescribing
De-prescribing
Dose changes
Triaging
Consulting
Counselling incl. medicines, diet, physical exercise and self care.

Weekly meeting with CNS
Weekly handovers to consultants

Limited Scope:

IMiDs i.e. thalidomide, lenalidomide and pomalidomide (challenge)

Supportive care medications e.g. laxatives, anti-emetics, vit D3.

Steroids e.g. dexamethasone

Anticoagulants e.g. aspirin and rivaroxaban

Antivirals e.g. valaciclovir

Scope of Practice

Future

- VRD regimens to include Bortezomib
- MOSAIQ care plans
- Diagnostics e.g. bone marrow results, PET/CT scan, chest x-ray, echo, obs, etc.
- Post-transplant
- Other areas including oncology

Challenges

- Transition
- Viatris
- Indici
- MOSAIQ
- Win scribe access
- Single clinical portal
- Clinic room allocation
- Patient bookings
- New model of care patient information leaflet
- Liaising with community pharmacies
- Education and training
- Gatekeeper

99%

Operational

Other Challenges

- Three different consultants
- Patients expecting to see consultant
- Overlap in patient time slots
- Time delays
- Community pharmacies
- Pharmac funding

Good News

- Support Haem Team
- Support Pharmacy Team
- Support Cancer Services at Wellington Hospital
- Most patients are open to seeing a pharmacist
- More prescriber pharmacists on horizon

Case Study 1

Mr SO

- 68 yr. old
- Male
- Maori ethnicity
- Post auto-transplant
- Maintenance: Ongoing remission
- Stable disease
- Lenalidomide 10mg OD for 21 days
- Aspirin 100mg OD

- Marathon runner
- Can’t anymore as he has put on weight

Case Study 1

Mr SO

April 2025

Presented with rash –pimple like (front torso and back, both legs and arms). Visible blood blisters and scabs on both legs.

On last week of Lenalidomide. Week off next week.

Has noticed it since change of brand from Revlimid to Viatris.

Revlimid –no longer funded, NPPA

No other changes i.e. body wash, laundry detergent, etc.

Scabies? No signs and symptoms on examination

No other family members with similar rash

Plan?

Stop Lenalidomide for a month to see if it is the new brand

Consider reducing dose to 5mg OD ?

Antihistamine and Calamine Lotion for itch from pharmacy

Telephone follow up in 4-6 weeks

Case Study 1

Mr SO

May 2025

Telephone follow up

Rash still there

Between his fingers

Other family members have it

Asked to go see GP

Scabies?

Case Study 1

Mr SO

June 2025

Telephone Follow up

Off lenalidomide for about 2 months now

His rash has almost cleared up now

He did go see a GP who prescribed him some hydrocortisone 0.1% lotion. GP ruled out scabies

Asked him to re-start his Lenalidomide

We will see him in 4 weeks

New set of bloods requested

Case Study 1

Mr SO

July 2025

Clinic follow up

- No recurrence of rash after restarting Lenalidomide at 10mg OD
- Only concern is dry skin –use body moisturiser
- Has been cycling –danger of falling over
- Advice on diet and weight reduction i.e. reducing bread intake
- Continue 3 monthly bloods
- FU in 6 months

Case Study 2

Mr CA

Presented in clinic with SOB

Had chest infection >5 weeks

Presented initially with a cold and cough

Nose and covid swab in Day Unit

Chest X-ray

Blood test

Prescribed antibiotics

Treatment deferred

Presented to GP two weeks ago still feeling unwell

BP was high –prescribed Losartan

He mentioned X-rays and bloods were clear.

Feels wheezy especially in the mornings and SOB when lying down in bed at night.

He is only able to walk only short distances.

No pain on breathing

No pitting oedema on legs

Case Study 2

Mr CA

Medications:

Lenalidomide 15mg daily on days 1-21 for 35-day cycle

Dexamethasone 12mg once weekly

Bortezomib 1.3mg/m^2 weekly

Valaciclovir 500mg daily

Rivaroxaban 10mg daily (VTE prophylaxis with lenalidomide)

M-Eslon 20mg BD – tapering down

Pregabalin 25mg BD

Paracetamol 1g QID

Cholecalciferol 1.25mg monthly

Metformin 500mg BD

Atorvastatin 20mg OD

Laxsol 2 BD

Omeprazole 20mg OD (alongside dexamethasone)

Zoledronic acid 4mg every four weeks for 6 months - then every 3 months

Case Study 2

Mr CA

Commenced VRd-Lite (bortezomib, lenalidomide and dexamethasone) as inpatient, October 2024 – good initial response after one cycle of treatment

VGPR following four cycles of VRd-Lite -IgG kappa paraprotein less than 1.0g/L

Treatment withheld in May 2025 due to symptoms suggestive of cardiac failure with subsequent echocardiogram (ECHO) on 30 May 2025 showing reduced left ejection fraction (LVEF) of 30% and LV thickness suggesting suspicion of amyloidosis ?

Baseline ECHO Oct’24: Normal LV size and systolic function, however, some abnormal findings. BNP only 69.

Case Study 2

Mr CA

Questions for MDM:

1. Do we think that Mr CA is very likely to have Cardiac Amyloidosis based on recent Echo findings? Case has been discussed with Cardiology - suspect AL amyloid, but factors against include BNP only 133 and IgG Kappa paraprotein reduced to <1g/L.
2. Cardiac MRI pending, NM DPD Amyloidosis -due 7/7. Has commenced heart failure medications. Differential bortezomib induced cardiomyopathy - rare but LV dysfunction reported and can be reversible?
3. Should we re-challenge with Len/Dex or Len/Bor/Dex?
4. If this is AL Cardiac amyloid, should we discuss self funded daratumumab now (not sure this would be option)?

Case Study 2

Mr CA

New Medications:

Spironolactone 25mg OD

Bisoprolol 1.25mg OD

Losartan 12.5mg OD

Empagliflozin 10mg OD

Case Study 2

Mr CA

Cardiac MRI –non ischaemic cardiomyopathy (symptoms of HF)

Initial **bone marrow** has been re-reviewed and may show AL Amyloid –TBC

DPD scan suggestive of ATTR cardiac amyloid

Waiting further Investigation i.e. **Cardiac Biopsy**

(recommendation from Tim Sutton -Cardiologist with special interest in amyloidosis from Middlemore

Case Study 2

Mr CA

Cardiology report:

Suggestive of **ATTR cardiac amyloid** with significant **cardiomyopathy.**

Tafamidis is not funded in New Zealand, which is the specific and disease modifying treatment for ATTR amyloid.

Continue current medications

FU in six months' time, with an ECHO

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Questions?