

## **Laboratory Testing for Multiple Myeloma**

**South Sector** 

Multiple myeloma is a malignancy of plasma cells which typically presents with bone pain, renal impairment, anaemia, hypercalcaemia or recurrent infections. In most myeloma patients there is production of monoclonal immunoglobulin's (paraproteins) but in 20% this is detectable only in urine as Bence Jones Protein. A recent audit within the department found that urine for BJP is only obtained in a proportion of people being investigated.



Sample Type	Tests performed
Blood (Ochre topped tube)	Protein electrophoresis, urea & electrolytes, calcium
Urine (White topped plain universal container)	Urine Bence Jones protein
Early morning urine preferable	

Please request either Protein Electrophoresis and Urine Bence Jones Protein or use the myeloma screen test collection in ICE. *Note protein electrophoresis test automatically includes immunoglobulins therefore these do not require to be requested separately*.

Further guidance on appropriate requesting of these tests is provided in the Tumour marker "bookmark", produced by the Scottish Clinical Biochemistry Network (SCBN), which contains guidance about the appropriate use of commonly requested serum tumour markers, including paraproteins. The bookmark has the support of the Royal College of Pathologists, and the Realistic Medicine programme. The guidance has also been referenced in the recently updated Scottish Referral Guidelines for Suspected Cancer.

#### **Useful links**

https://www.nhsggc.org.uk/media/250428/tumourmarker bookmark web version-july-2018.pdf http://www.healthcareimprovementscotland.org/our work/cancer care improvement/programme resources/scotlish referral guidelines.aspx

## Audit of CEA testing in Primary Care within GGC (2017)

An audit of primary CEA requesting was carried out over a period of 1 year across all practices in NHSGGC. CEA measurement is only recommended for monitoring of patients with known colorectal cancer (CRC) following treatment. This is largely due to its lack of specificity and sensitivity:

- CEA may be elevated for a variety of reasons the test is not specific for CRC leading to diagnostic confusion and unnecessary further investigation.
- CEA lacks sensitivity for early stage CRC potentially leading to false reassurance of the patient.

#### Aim

The aim of the audit was to determine the frequency of CEA requesting in primary care and whether these requests are made in line with recommended guidelines.

#### **Main findings**

- 1634 CEA requests were received from 200 GP practices across NHSGGC in 1 year.
- There was significant variation in the number of CEA requests made by each practice, ranging from 1 to 121 (figure 1).
- In addition, there was significant variation in CEA requesting between GPs within individual practices (figure 2).
- The majority of requests (92.6%) were not based on valid reasons for CEA testing. Most patients did not have a previous diagnosis of CRC. A variety of other reasons were given for requesting including "screening" and investigating changes in bowel habit.
- Cost implications cost of CEA request = £3-50. There were 1513 inappropriate requests in period studied suggesting a potential cost saving of £5296 per annum.

The full audit report can be accessed on the NHSGGC Biochemistry website:

http://www.nhsggc.org.uk/about-us/professional-support-sites/biochemistry/nhsggc-specialist-endocrine-laboratory/tumour-markers/



# Lab@ratory News



Please circulate to all members of staff within the practice

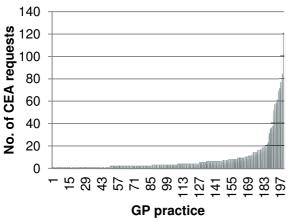


Figure 1. Variation in CEA requesting by GP practice across NHSGGC

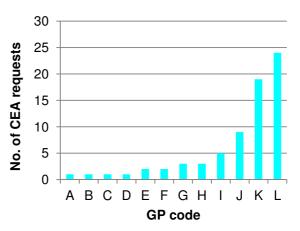


Figure 2. Variation in CEA requesting by GP within a single GP practice

#### **Related Guidelines**

- Scottish Cancer Referral Guidelines website: <a href="http://www.cancerreferral.scot.nhs.uk/">http://www.cancerreferral.scot.nhs.uk/</a>
- SIGN 126: Diagnosis and management of colorectal cancer (2011; revised Aug 2016)

### **Poor Barcode Labels**

We continue to have issues with some of the labels on the GP ICE requests due to "faded" labels (see image).

When labels are faded, we must manually type in the request into our computer system. As much as we try to ensure the correct information is input, any system that requires manual transcription is more likely to lead to errors.



It is possible to obtain a **thermal printhead cleaning pen** from your IT department. You simply swip the pen across the printer roller. This has significantly improved the quality of printed labels from a number of practices and reduced the requirement to change printer paper so frequently.

## **Immunology - Cardiolipin Requests**

We are making some changes to the cardiolipin service in GG&C and there are some important changes that you need to be aware of. From **25th July 2019** all cardiolipin work will be carried out by the Haemostasis laboratory at Glasgow Royal Infirmary.

Please note there is a change of sample type associated - 3.5 ml SODIUM CITRATE sample is required.

It will not be possible for the Immunology lab to process cardiolipin requests after 25th July 2019; nor will we be able to forward samples for testing as the haematology test requires a different sample type.'

We would be delighted with your feedback on issues that you would like us to address in the newsletter. We are also keen to reach as large an audience in primary care as possible. Do you have suggestions how we can widen distribution better?

Comments or suggestions can be sent to: