

**Please read this section first**

The HPCSA and the Med Tech Society have confirmed that this clinical case study, plus your routine review of your EQA reports from Thistle QA, should be documented as a "Journal Club" activity. This means that you must record those attending for CEU purposes. Thistle will **not** issue a certificate to cover these activities, nor send out "correct" answers to the CEU questions at the end of this case study.

The Thistle QA CEU No is: **MT-11/00142**.

Each attendee should claim **THREE** CEU points for completing this Quality Control Journal Club exercise, and retain a copy of the relevant Thistle QA Participation Certificate as proof of registration on a Thistle QA EQA.

## DIFFERENTIAL SLIDES LEGEND

### CYCLE 40 SLIDE 6

#### **NODAL MARGINAL ZONE B-CELL LYMPHOMA**

Nodal Marginal Zone B-cell Lymphoma is a type of non-Hodgkin's lymphoma (NHL). Lymphomas are cancers of lymph cells. There are nearly 30 different types of lymphoma belonging to two main categories - Hodgkin's lymphoma and non-Hodgkin's lymphoma (NHL). Nodal Marginal Zone B-cell Lymphoma is one of the uncommon types of NHL. It is a type of low-grade (or slow growing) lymphoma that arises from B-cells and mainly affects lymph nodes. It's called marginal zone lymphoma because the changes in the cell occur in an area of the B-cells called the marginal zone. Nodal means that it starts in the lymph nodes. Nodal marginal zone B-cell lymphoma mainly affects older individuals. There are no known direct risk factors for this lymphoma.

#### **Symptoms of Nodal Marginal Zone B-cell Lymphoma**

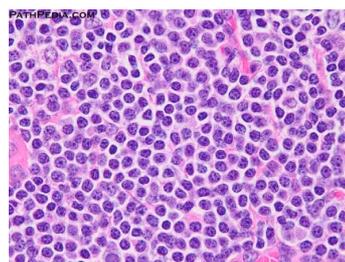
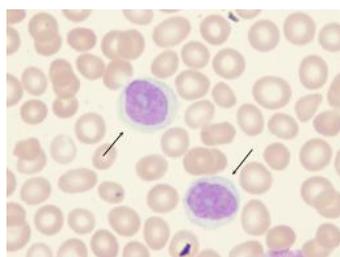
The most common symptom of this lymphoma is enlargement of lymph nodes. Enlarged nodes become apparent as swellings in neck, armpits or groin. This may be the only symptom, or there may be other associated symptoms and signs like night sweats, fever, weight loss, loss of appetite and tiredness. These are known as B symptoms.

#### **Causes**

The causes of nodal MZL are unknown. It is not infectious and cannot be passed on to other people.

#### **How it is diagnosed?**

A diagnosis is made by removing an enlarged lymph node (a biopsy) and examining the cells under a microscope. Biopsies may also be taken from other areas of the body.



Morphologically, marginal zone B cells have small to medium size, irregular nuclei with dispersed chromatin, and inconspicuous nucleoli resembling centrocytes.

## Staging and grading

### Staging

The stage of non-Hodgkin lymphoma describes how many groups of lymph nodes are affected, where they are in the body and whether other organs such as the bone marrow or liver are involved.

#### Stage 1

One group of lymph nodes is affected. A group of lymph nodes refers to lymph nodes in one area of the body, such as in the armpit, on one side of the neck or in the groin.

#### Stage 2

Two or more groups of lymph nodes are affected, and these are all either above or below the diaphragm.

#### Stage 3

The lymphoma is in lymph nodes both above and below the diaphragm.

#### Stage 4

The lymphoma has spread beyond the lymph nodes to other organs, such as the bones, liver or lungs.

### B symptoms

As well as giving each stage a number, doctors also use either the letter A or B to show whether or not the patient has specific symptoms. If there is weight loss, fevers or night sweats, the letter B will be added next to the stage. If these symptoms do not occur, the letter A is added.

### Grading

Non-Hodgkin lymphomas are also divided into two groups: low-grade and high-grade. Low-grade lymphomas are usually slow-growing and high-grade lymphomas grow more quickly. Nodal MZL is a low-grade lymphoma and often develops very slowly. Occasionally it may transform into a high-grade non-Hodgkin lymphoma, which needs more intensive treatment.

### Treatment

If the lymphoma is not causing symptoms, treatment may not be needed immediately. Early treatment at this stage doesn't help people live longer and can cause side effects. After treatment, many patients go into remission. If the lymphoma comes back it can be treated again. This can give another period of remission, and the lymphoma can often be controlled in this way for many years.

### Chemotherapy

It is an important treatment for nodal MZL and can often get the lymphoma into remission.

### Monoclonal antibody therapy

Monoclonal antibodies are drugs that recognise, target and stick to specific proteins on the surface of cancer cells, and can stimulate the body's immune system to destroy these cells. Rituximab is a monoclonal antibody, which may be used to treat nodal MZL.

### Radiotherapy

Radiotherapy is the use of high-energy rays to destroy cancer cells while doing as little harm as possible to the healthy cells. It is usually given if the lymphoma cells are contained in one or two areas of lymph nodes in the same part of the body (stage 1 or 2).

## **Steroids**

Steroids are often given with chemotherapy to help treat lymphomas.

## **Stem cell treatment (transplants)**

Some people with lymphoma may have treatments using their own stem cells or stem cells from a donor. This treatment is not suitable for everyone and is not done routinely. Doctors take into account a person's general health and age before recommending them. Some people have some of their own stem cells collected and stored. This allows them to have higher doses of chemotherapy to destroy the lymphoma cells. After the chemotherapy, their stem cells are returned to help their blood cells recover from the effects of chemotherapy. This is called an autologous transplant. Some people may have treatment using stem cells from another person (a donor). This is called an allogeneic transplant.

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## **References**

1. Marcus, et al. Lymphoma - Pathology, Diagnosis and Treatment. 2007. Cambridge University Press.
2. Lee, et al. Wintrobe's Clinical Haematology. 12th edition. 2009. Lippincott Williams and Wilkins.
3. Improving Outcomes in Haemato-Oncology. October 2003. National Institute for Health and Clinical Excellence (NICE).

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## **Questions**

1. What is Nodal Marginal Zone B-Cell Lymphoma?
  2. Discuss the staging and grading of Nodal Marginal Zone B-Cell Lymphoma
  3. Discuss the symptoms of Nodal Marginal Zone B-cell Lymphoma.
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