

## Follicular Lymphoma

Follicular lymphoma is a non hodgkins lymphoma that affects 15,000 to 20,000 individuals per year. It usually present in adults of middle age and likely arises from germinal center B cells. This tumor is strongly associated with chromosomal translocation (14;18) that juxtaposes the IgH locus on chromosome 14 with the BCL2 locus on chromosome 18. This translocation is seen in approximately 90% of follicular lymphomas and causes the overexpression of the BCL2 gene. This gene codes for apoptosis regulator proteins that antagonize apoptosis and promote the survival of follicular lymphoma cells. This form of lymphoma typically follows a low grade indolent course and presents with painless, generalized lymphadenopathy and can involve extra nodal sites like the bone marrow.



PLAY PICMONIC

### Derives from Germinal Center

#### German-at-center

Germinal centers are sites within lymph nodes where mature B lymphocytes undergo somatic hypermutation, characterized by rapid proliferation, differentiation, and class switching of antibodies during a normal immune response to an infection. Follicular lymphomas likely arise from germinal center B cells.

### Occurs in adults

#### Leave high school as an Adult

Follicular lymphoma usually presents in middle aged adults and afflicts men and females equally.

### T14;18

#### Enter at 14; Leave at 18-sign

Follicular lymphoma is characterized by a (14;18) translocation that juxtaposes the IgH locus on chromosome 14 with the BCL2 locus on chromosome 18. This translocation is seen in approximately 90% of follicular lymphomas and causes the overexpression of the BCL2 gene.

### BCL 2 overexpression

#### Buckle (2) Tutu

BCL2 gene codes for apoptosis regulator proteins that antagonize apoptosis and promote the survival of follicular lymphoma cells. The translocation between chromosome 14 and 18 leads to overexpression of BCL2 and inhibition of apoptosis, leading to prolonged survival of follicular cells.

### BCL 2 inhibits apoptosis

#### No Apoptosis-popper sign

BCL2 gene codes for apoptosis regulator proteins that antagonize apoptosis and promote the survival of follicular lymphoma cells. The translocation between chromosome 14 and 18 leads to overexpression of BCL2 and inhibition of apoptosis, leading to prolonged survival of follicular cells.

### Indolent

#### Indigo-snail

This form of lymphoma typically follows a low grade indolent course. Indolent lymphomas are usually not considered curable because the cancer proliferates too slowly to be accurately targeted by most treatments.

### **Generalized lymphadenopathy**

[Lymph-lime-add \(+\)](#)

Follicular lymphoma commonly presents with painless generalized lymphadenopathy.

### **Bone marrow involvement**

[Bone arrow](#)

Follicular lymphomas can involve extra-nodal sites including the bone marrow. The bone marrow is involved about a third of the time.