

# Burkitt lymphoma

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**Burkitt lymphoma, in the French literature also le lymphoma non-Foltys**, is a highly malignant tumor classified as non-Hodgkin's lymphomas. Its structure is formed by mature **B-cells**. It typically occurs in the lower jaw area. It mainly affects children and young adults.

## Pathogenesis

Tumor cells have the characteristics of B-lymphocyte. From a genetic point of view, they are characterized by translocation of the *c-myc* protoncogene from chromosome 8 to 2, 14 or 22 into the region encoding the immunoglobulin chains. In 80% of cases, it is a balanced translocation from chromosome 8 to 14 <sup>[1]</sup>. By changing the position of *c-myc* its **unregulated expression** occurs. Because the gene encodes a transcription factor that stimulates cell division genes, there is an **uncontrolled proliferation of cells** .

## Forms

File:Translocation of Burkitt's lymphoma.svg  
Translocation scheme in Burkitt's lymphoma

Lymphoma occurs in three different forms:

1. **associated with immunodeficiency** (often in patients with AIDS, patients have infiltrated bone marrow and nodules),
2. **sporadic** (most often manifested as an intra-abdominal tumor mass in the ileocecal region, the kidneys and ovaries may be affected, adults tend to have infiltrations in the nodes),
3. **endemic**.

The **endemic** form occurs in equatorial Africa and New Guinea <sup>[2]</sup>. In these areas, it is one of the most common cancers in children <sup>[1]</sup>. In 50% of cases, it affects the bones of the face, it can occur in the gastrointestinal tract (small and large intestine), paired abdominal organs (ovaries) and in the breast, often bilaterally. In the development of an endemic form, a connection with infection EBV is evident.<sup>[3]</sup> Patients often have several-fold **higher levels of antibodies** to EA (early nonstructural antigens) and VCA, with viral DNA and EBNA present in tumor cells. EBV-associated lymphoma develops 7–31 months <sup>[4]</sup> after the acute phase infectious mononucleosis. Levels of anti-EA antibodies rise before lymphoma develops and signal **activation of latent infection**.

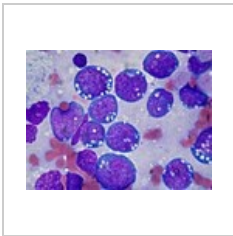
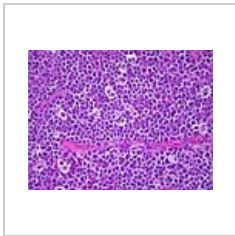
Soubor:Burkitt's lymphoma.jpg	Soubor:Malignant Burkitt's lymphoma, a non-Hodgkin's lymphoma (NHL) 064 lores.jpg
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Burkitt's lymphoma of the jaw

Burkitt lymphoma

## Microscopic image

**Histologically** the tumor is uniform. A reduced amount of cytoplasm, which is **basophilic**, is enclosed in cells with blurred contours of the cytoplasmic membrane. Dark tumor cells form the background for bright macrophages, giving the impression of a "starry sky".



Burkitt lymphoma, dyeing Wright  
hematoxylin-eosin

## Therapy

The disease is well treatable, with a good prognosis. The outcome of the treatment depends on staging.

## Links

### Related Articles

- Malignant lymphoma
- Non-Hodgkin's malignant lymphomas
- Structural chromosome aberrations

### References

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### Reference

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- 2.
- 3.
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