Long term complications of treatment

- infertility
  - MOPP > ABVD; males > females
  - sperm banking should be discussed
  - premature menopause
- secondary malignancy
  - skin, AML, lung, MDS, NHL, thyroid, breast...
- cardiac disease

A practical way to think of lympho

Category		Survival of untreated patients	Curability	To tr not t
Non-Hodgkin lymphoma	Indolent	Years	Generally not curable	Gener defer F asymp
	Aggressive	Months	Curable in some	Treat
	Very aggressive	Weeks	Curable in some	Treat
Hodgkin lymphoma	All types	Variable – months to years	Curable in most	Treat

Lab Diagnostic Studies

- Lymph node biopsy
- Bone marrow aspiration and biopsy
- Immunohistochemistry
- Flow cytometry
- Molecular Genetic studies
- FISH
- Cytogenetics

Cytogenetic Lab

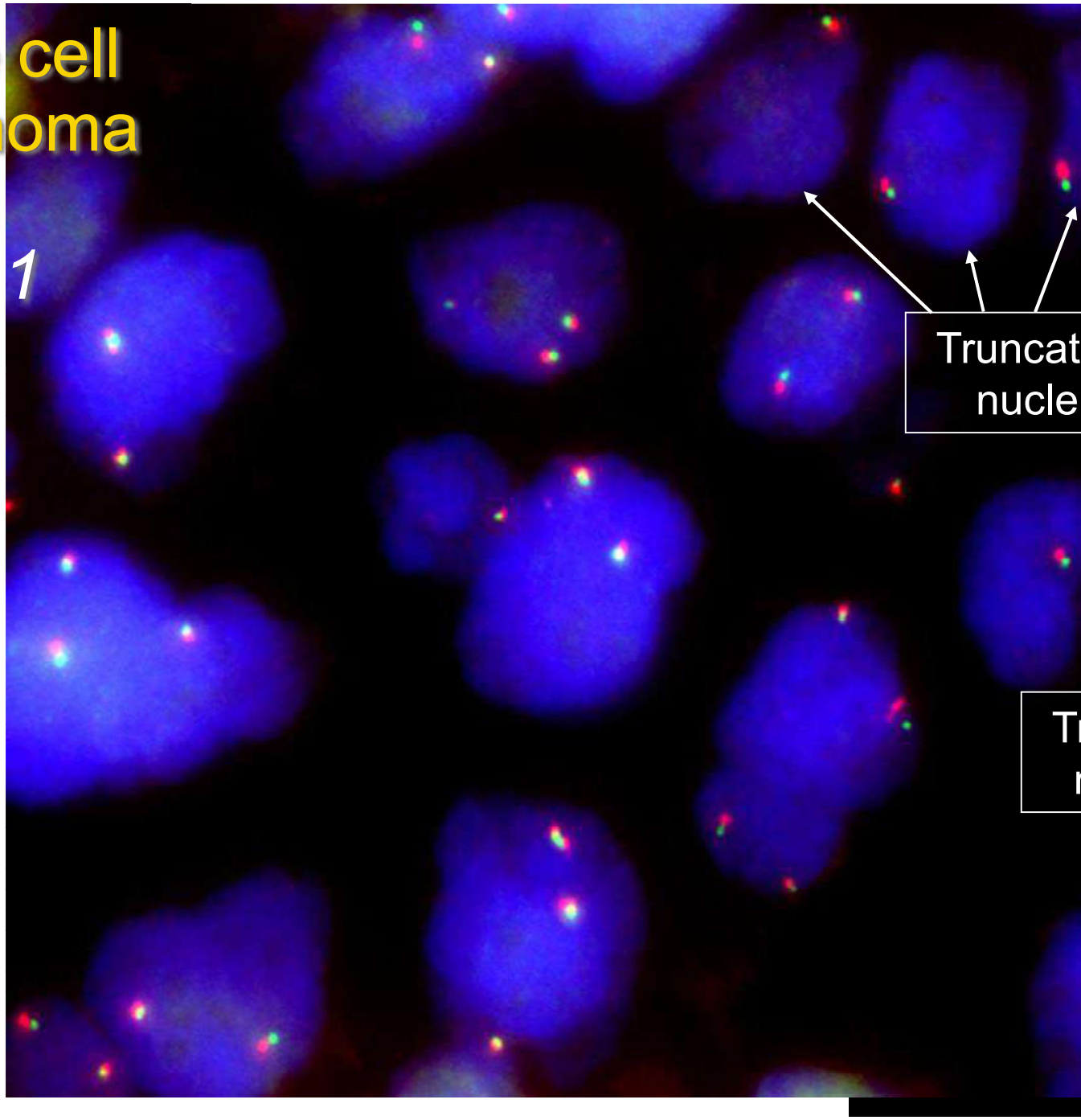
- t(14,18) common (about 30%)
  - *Bcl-2*
  - Follicular growth pattern
- t(8,14) ! common in Burkitt's ! *c-myc*
- Multiple anomalies common
- Correlation between cytogenetic char
  and outcome is variable

FISH analysis of paraffin embedded tissue sections

In the next slide two examples of a lymphoma hybridised with a split-apa probe are shown.

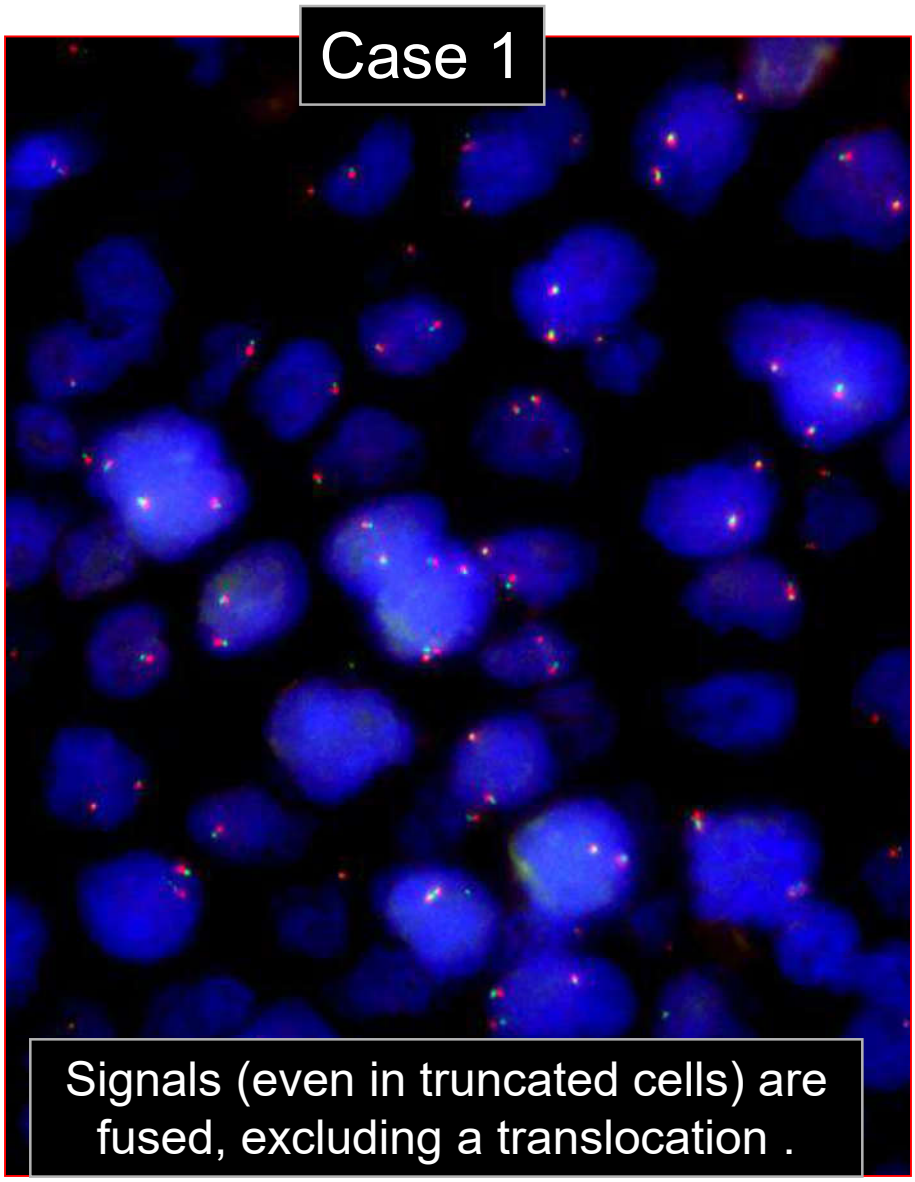
Large cell lymphoma

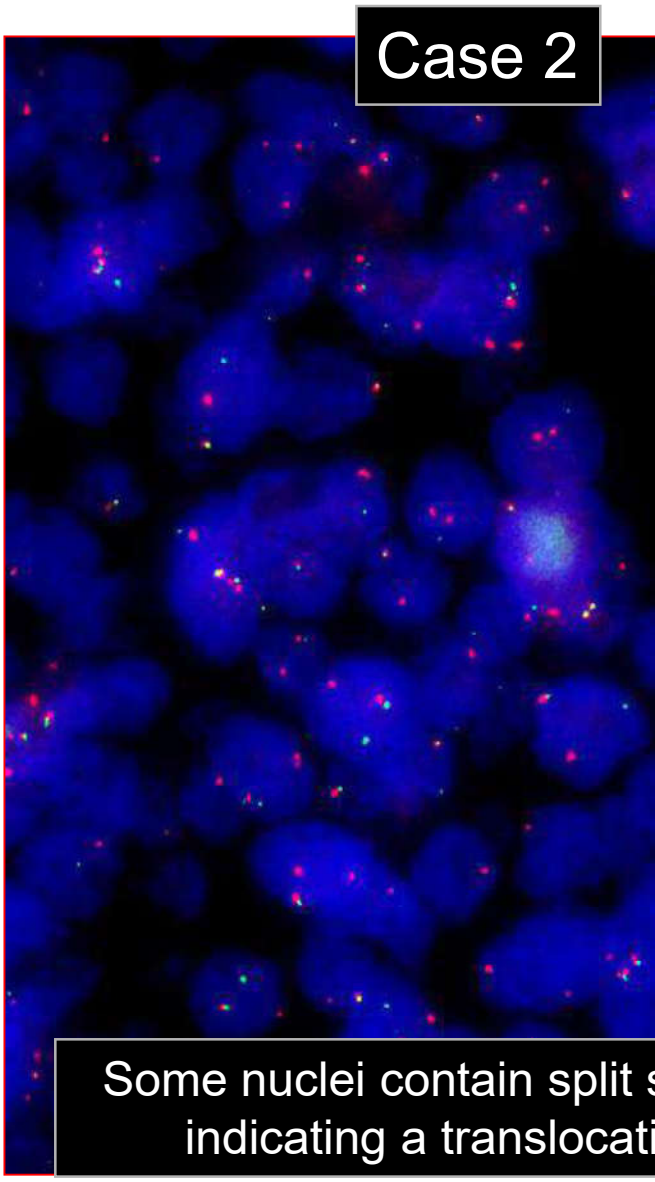
Case 1



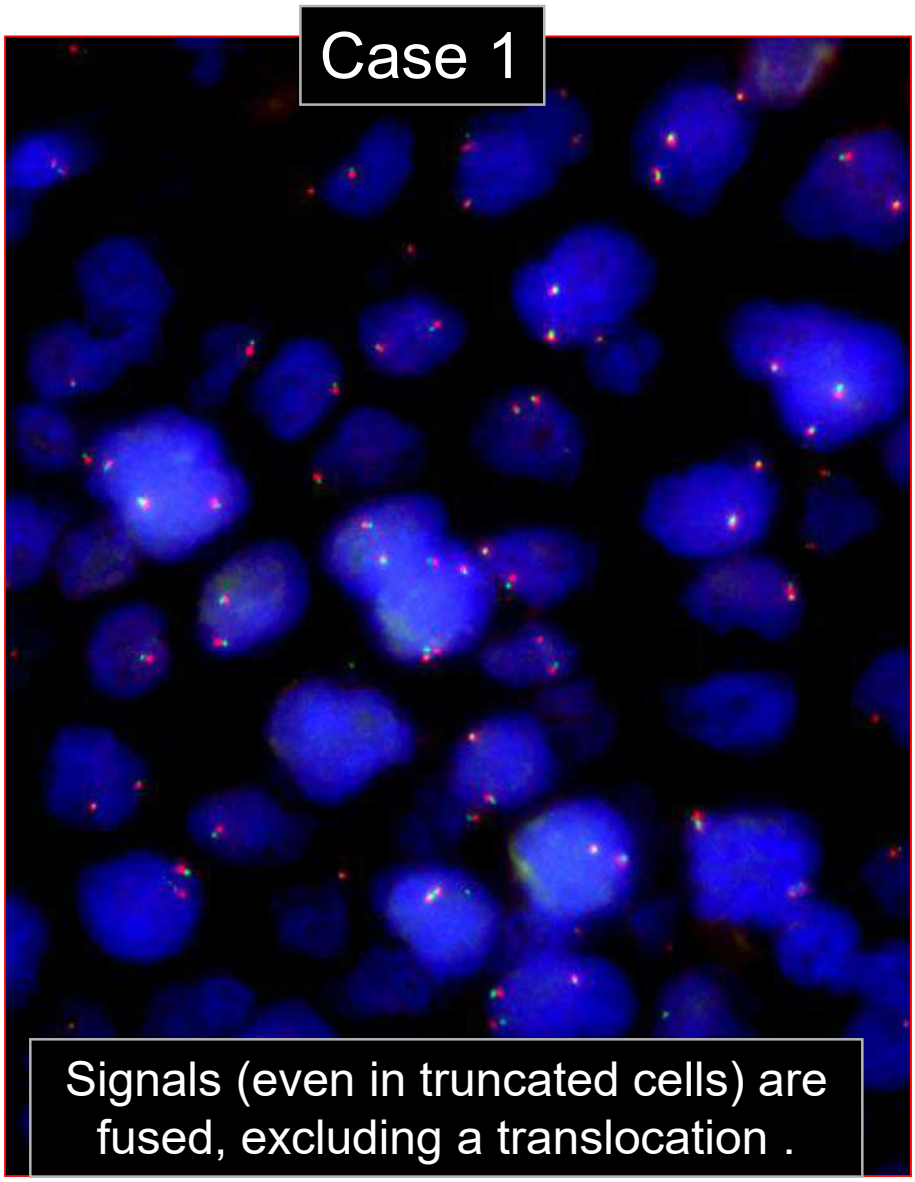
Myc split-apart probe:

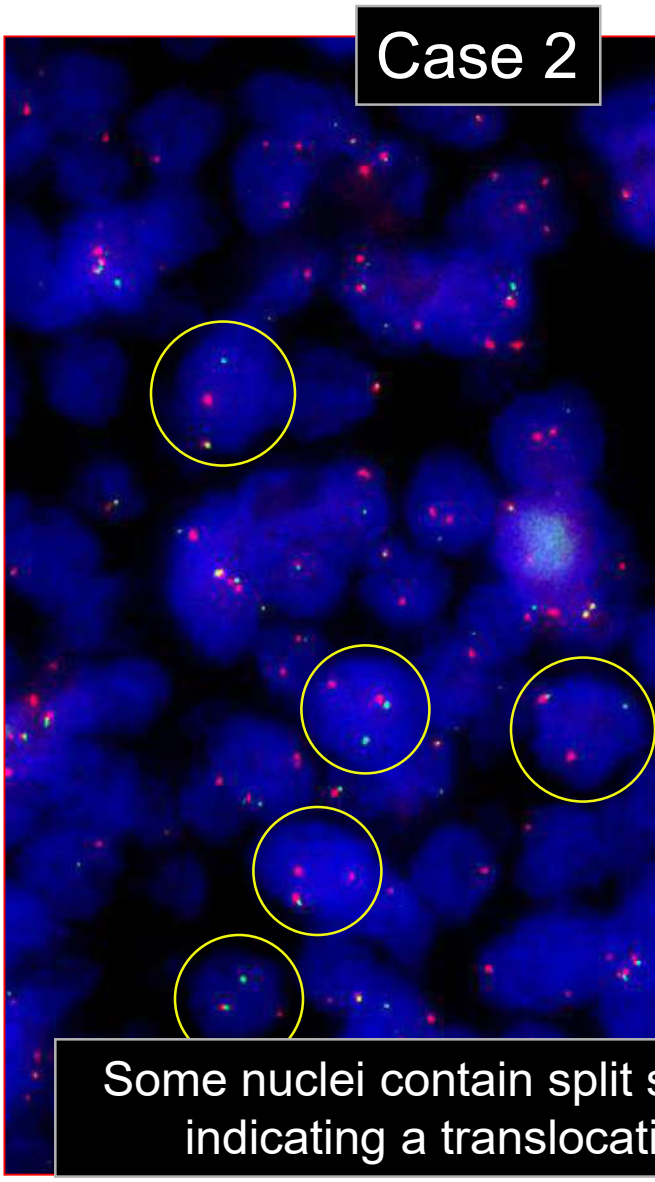
Interpretation of results





Interpretation of results





FISH analysis of paraffin embedded tissue sections

There are now plentiful examples of how the FISH pro
is needed in routine lymphoma diagnosis.

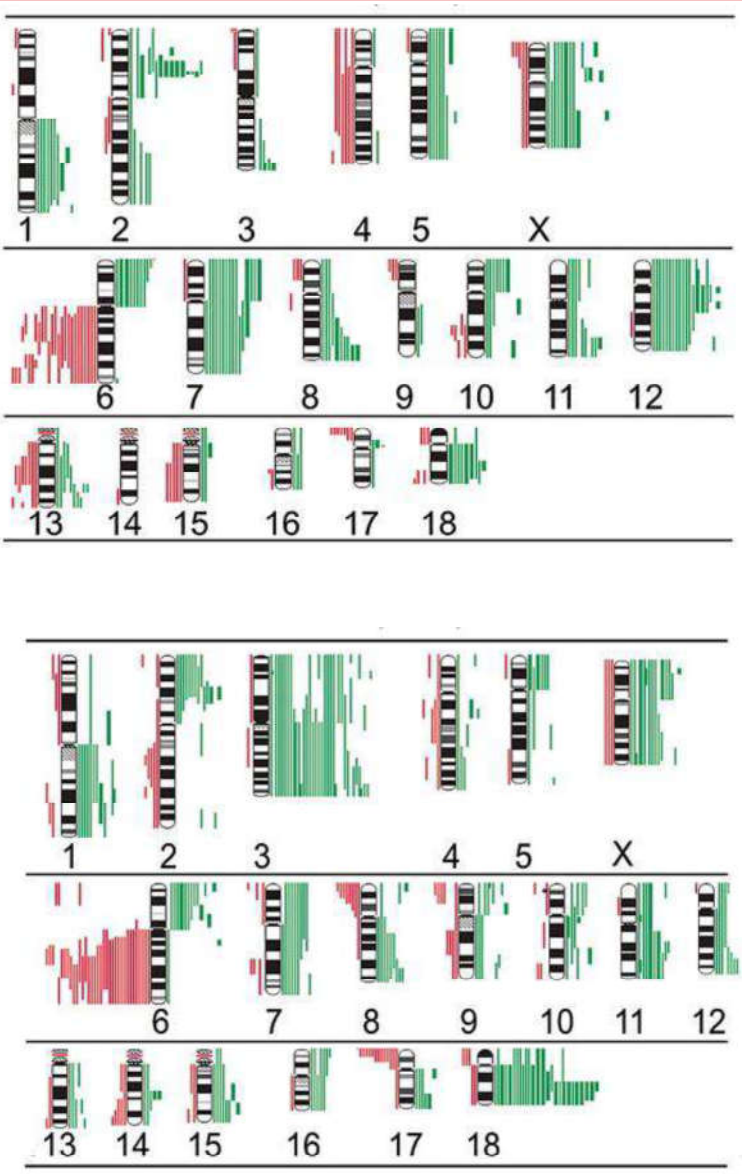
MALT lymphomas with the t(11;18)(q32;q21) translocation: For m
laboratories FISH analysis is more convenient than a PCR proce
detecting such cases.

"Burkitt-like" lymphomas: Cases suggestive of Burkitt's lymphom
atypical features should be analysed by the FISH technique for e
of MYC translocation.

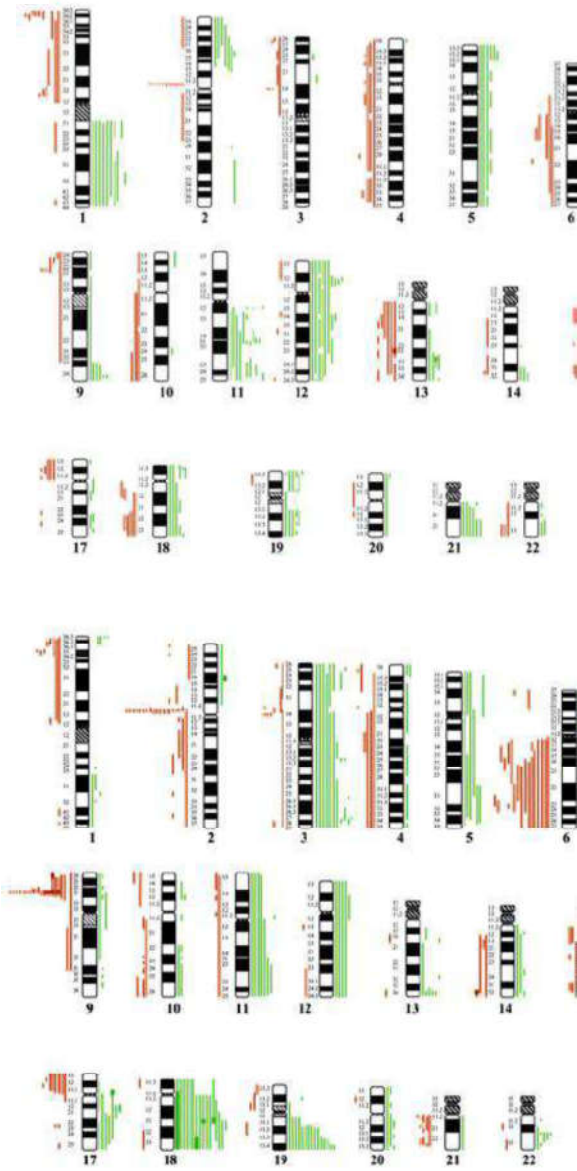
What future applications of the FISH technique are lik
emerge in the future?

One area lies in the detection of chromosomal amplifi
and deletions of clinical significance. (CGH)

For example specific patterns of chromosomal gains or losses have noted in diffuse large B cell lymphoma.



Bea et al (2005) Blood 106:3183-3190



Tagawa et al Blood. (2005);106:1770-1777

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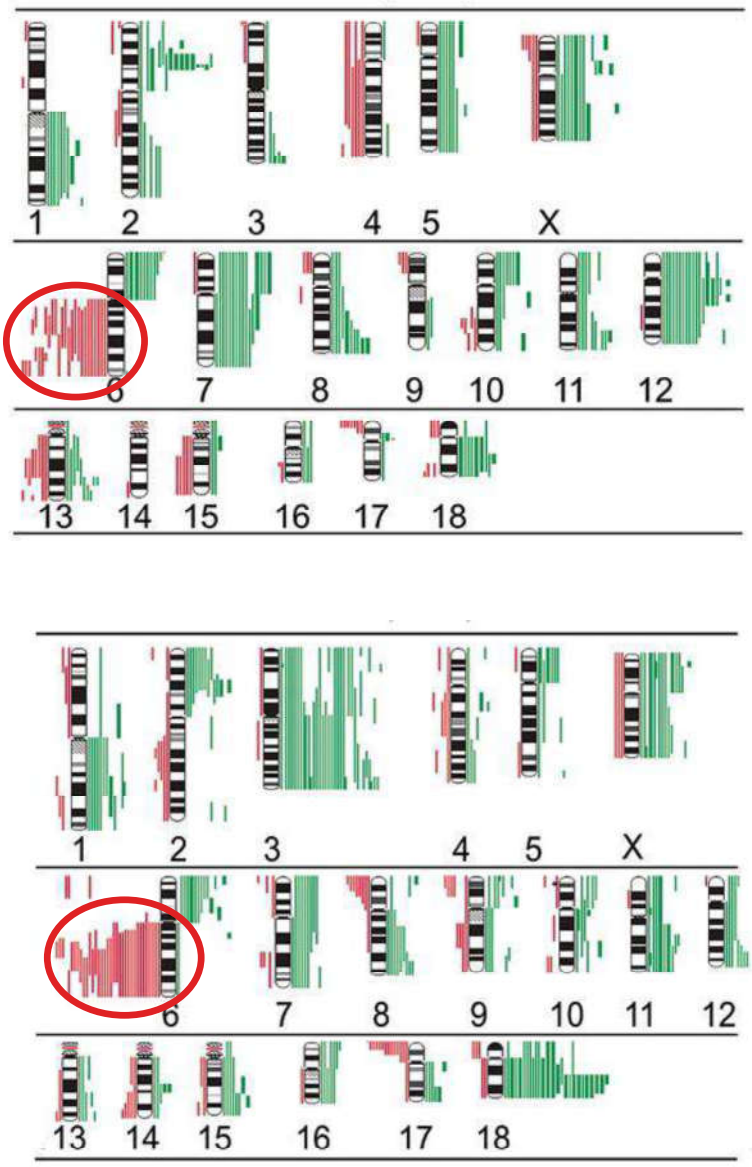
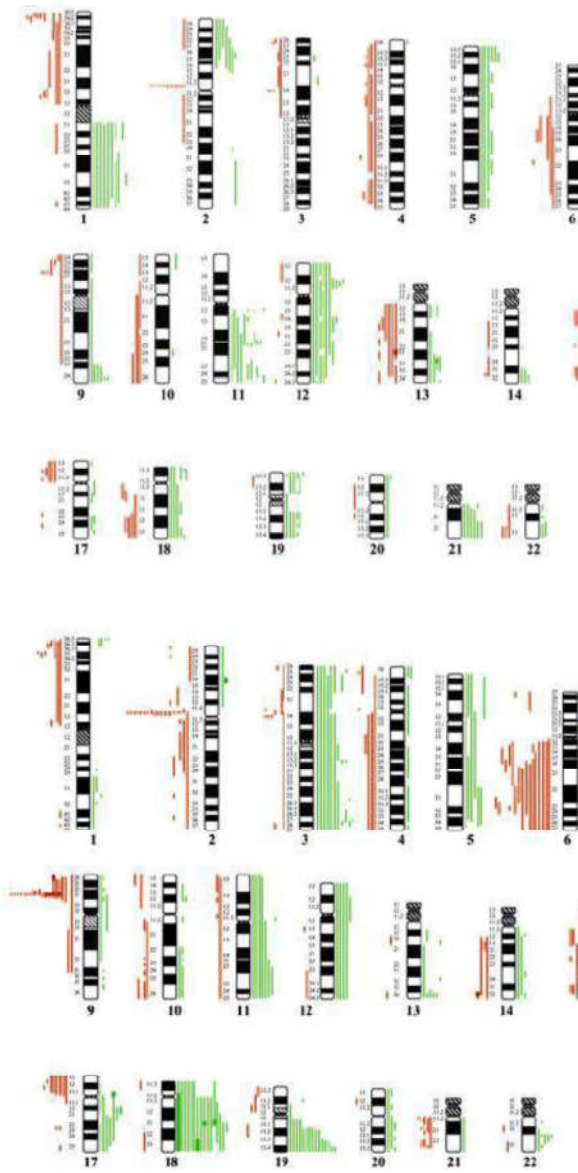


Bea et al (2005) Blood 106:3183-3190



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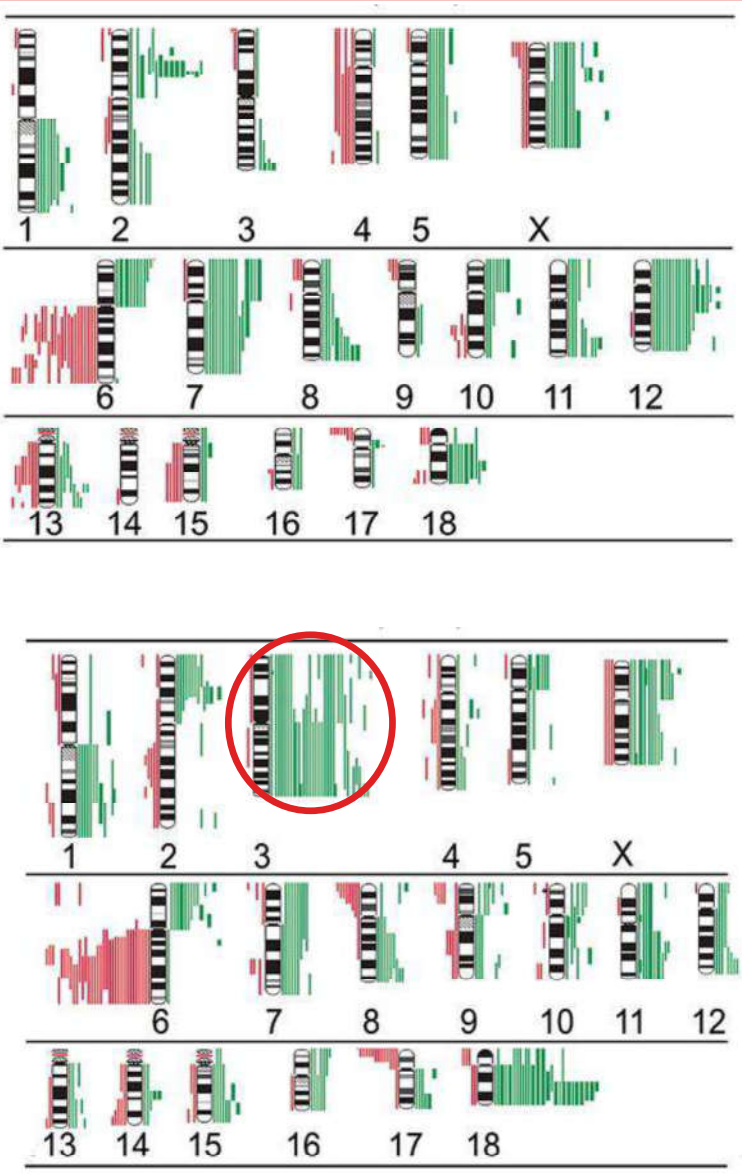
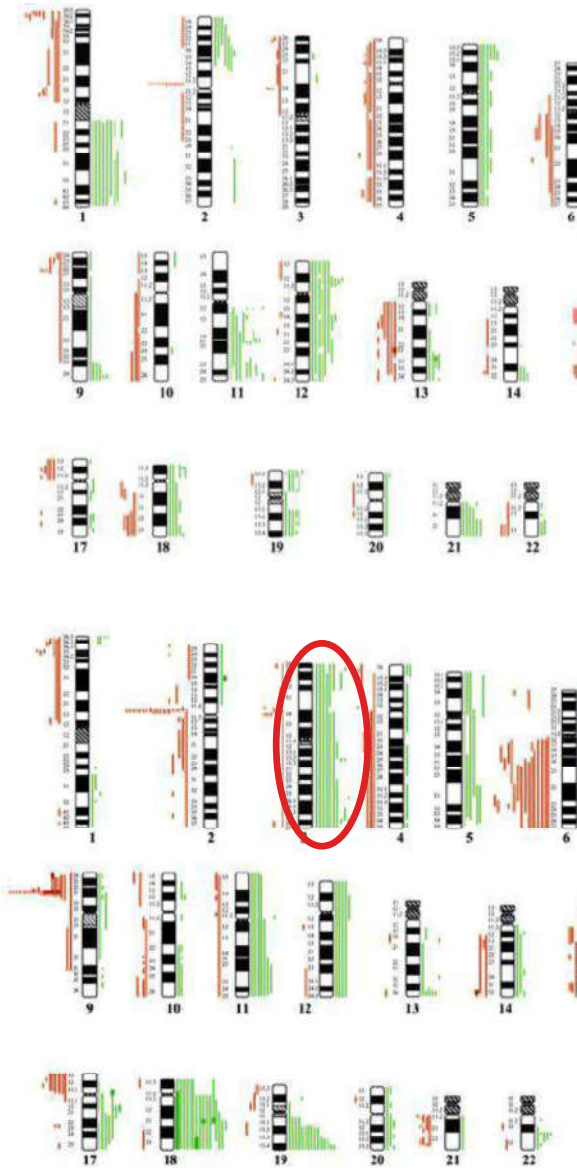


Bea et al (2005) Blood 106:3183-3190



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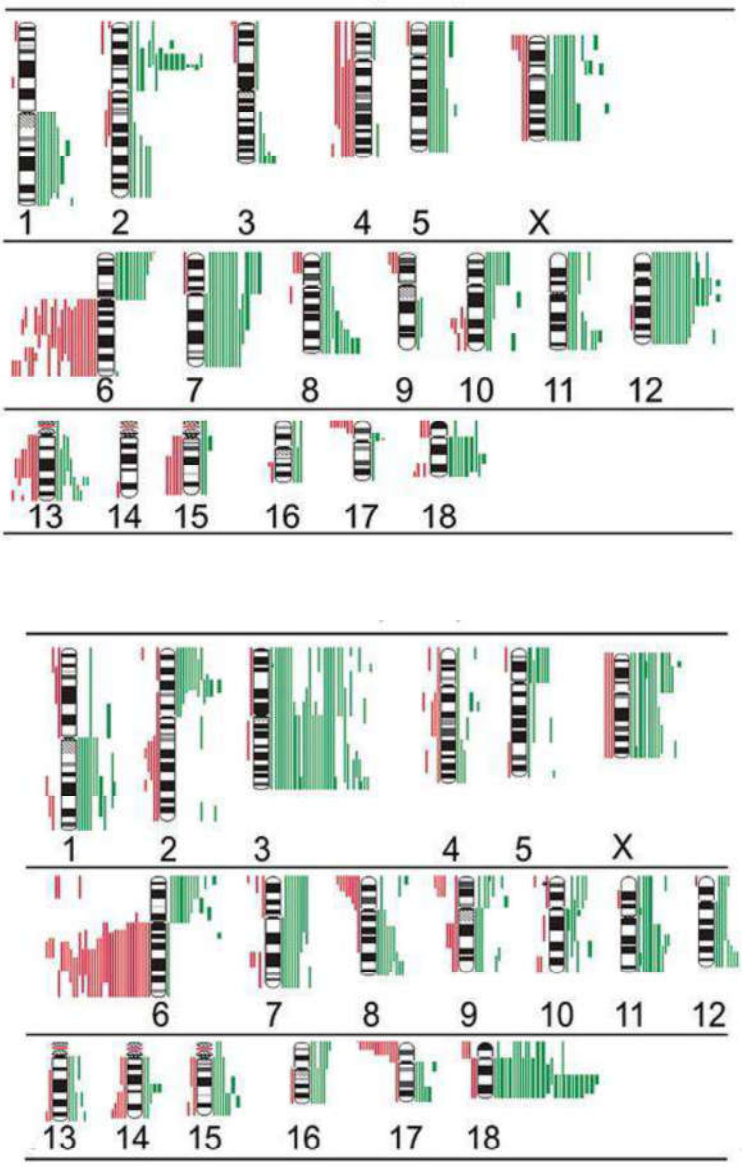

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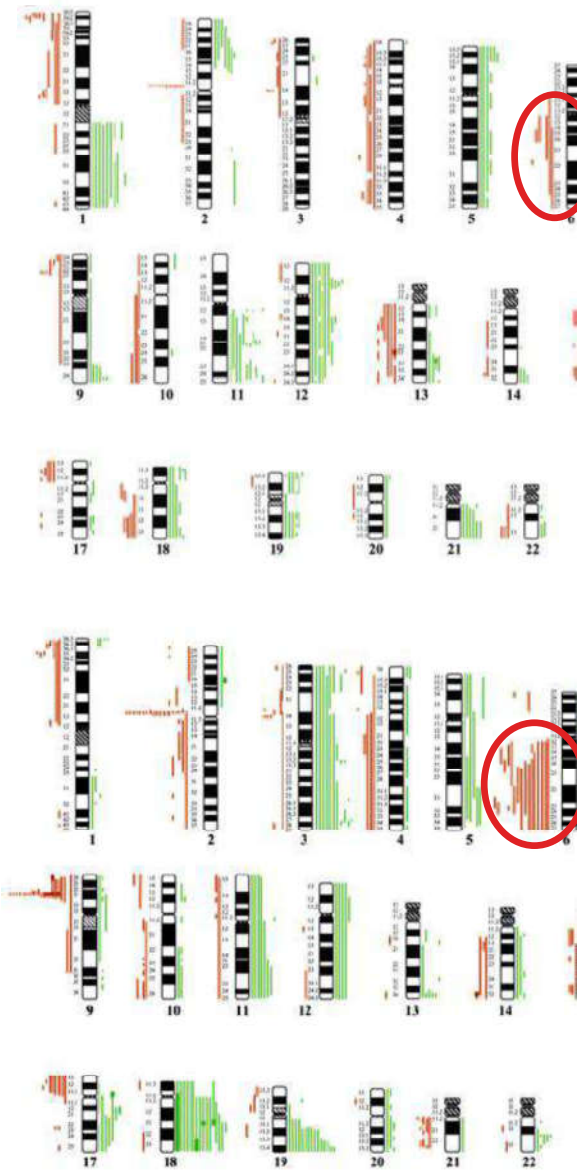


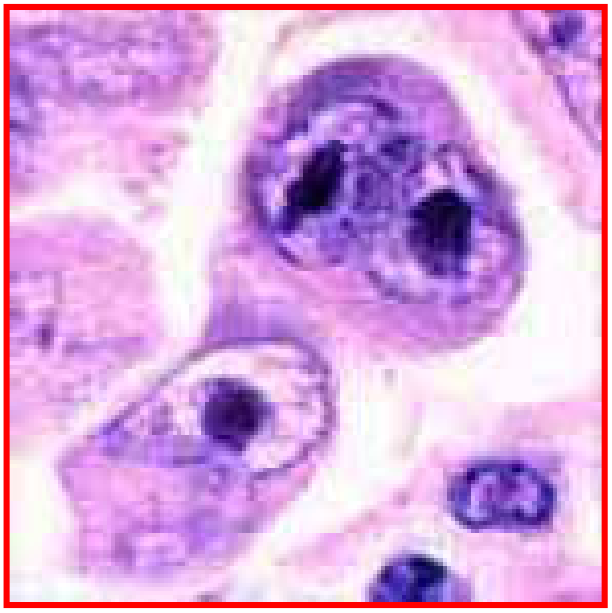
Tagawa et al Blood. (2005);106:1770-1777

Molecular Cytogenetic Lab

Recurrent molecular abnormalities in lympho

- t(14;18) / Bcl2 - JH in follicular lymphom
- t(11;14) / Bcl1 - JH in Mantle Zone lympl
- t(3;14) / Bcl6 - JH in Diffuse Large Cell lymphoma
- t(8;14) / cMyc - JH in Burkitt lymphoma
- t(2,5) / ALK-NPM in Anaplastic Large Ce Lymphoma

Histology Lab
RS cell and variants

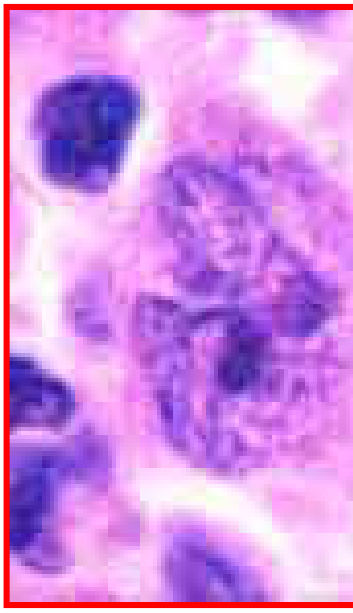


classic RS cell

(mixed cellularity)

lacunar cell

(nodular sclerosis)



popcor

(lymphoc
predomir