



70
years



CYTOGENETICS



Sociedad Española de
Hematología y Hemoterapia

1956-2026



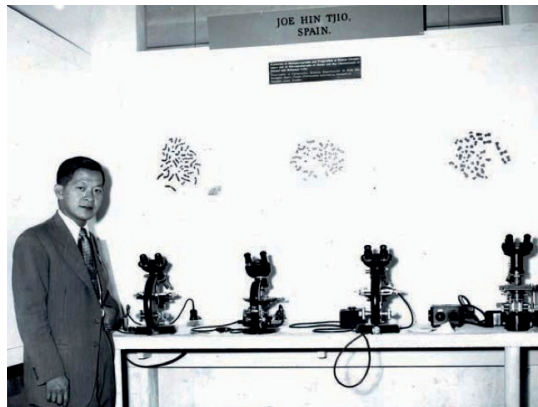
Calendar coordinator: **María José Calasanz**

Affiliation: **Laboratorio de Citogenética y Biología Molecular. CIMA LAB Diagnostics. Clínica Universidad de Navarra, Pamplona**

2025 OCTOBER

SUN	MON	TUE	WED	THU	FRI	SAT
28	29	30	01	02	03	04
05	06	07	08	09	10	11
12	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	01

A historic tribute to hematological cytogenetics: the protagonists



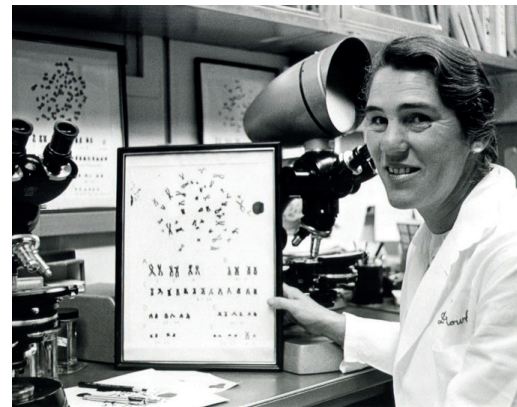
1956. Tjio and Levan
(46 chromosomes)



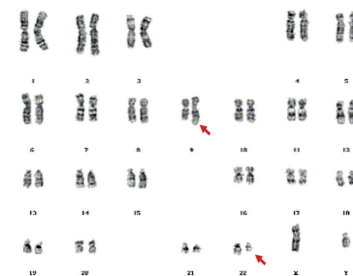
CONVENTIONAL STAINING



1960. Nowell and Hungerford
(Ph chromosome)



1973. Janet Rowley
(translocation 9:22)



G BANDS

2025
OCTOBER

Affiliation: Laboratorio de Citogenética y Biología Molecular. CIMA LAB Diagnostics. Clínica Universidad de Navarra, Pamplona

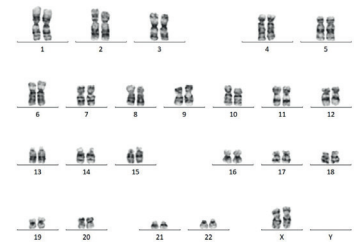
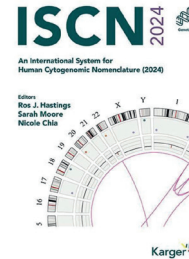
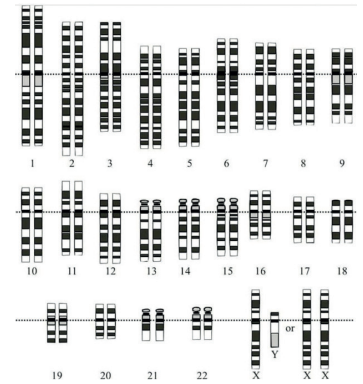
Authorship: María José Calasanz, Aroa Irigoyen, Carmen Ferreira

2025 NOVEMBER

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Grupo Cooperativo Español de Citogenética Hematológica (GCECGH)

www.gcecgh.org



2025
NOVEMBER

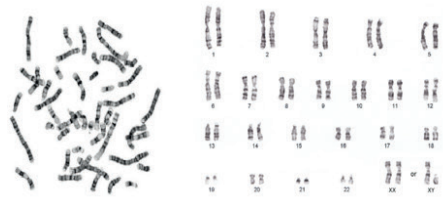
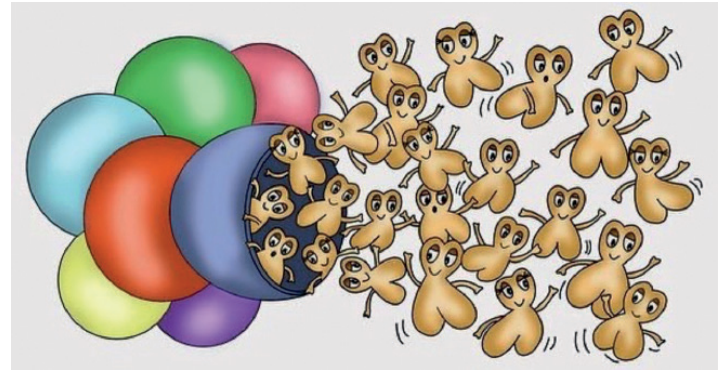
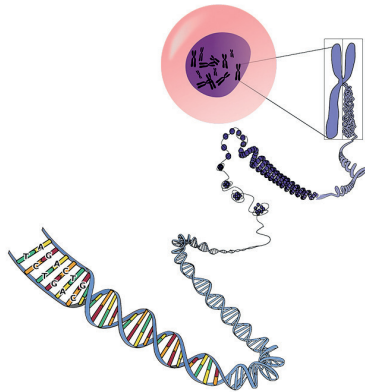
Affiliation: Laboratorio de Citogenética y Biología Molecular. CIMA LAB Diagnostics. Clínica Universidad de Navarra, Pamplona

Authorship: María José Calasanz, en representación del GCECGH

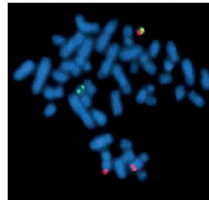
2025 DECEMBER

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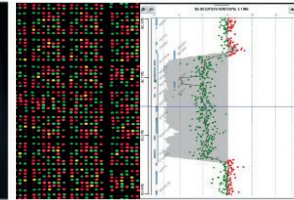
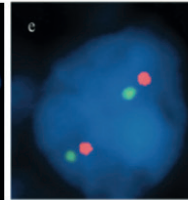
Evolution of cytogenetic techniques: from cytogenetics to cytogenomics



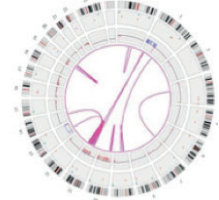
1970
(G-banding karyotype)



1980
(FISH)



2000
(genomic arrays)



2021
(optical mapping)

CONVENTIONAL CYTOGENETICS

1) G-banding karyotype

MOLECULAR CYTOGENETICS

2) Molecular karyotype (aCGH/aSNPs)

CYTOGENOMICS

3) Optical karyotype (OGM)

2026 JANUARY

SUN	MON	TUE	WED	THU	FRI	SAT
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18	19	20	21	22	23	24
25	26	27	28	29	30	31

Cytogenetics and chromosome instability syndromes

A



B



A) Tetradial figure in a patient with Fanconi anemia resulting from two poorly repaired chromatid breaks.

B) Sister chromatid exchanges (SCE) as a diagnostic technique for patients with Bloom syndrome.

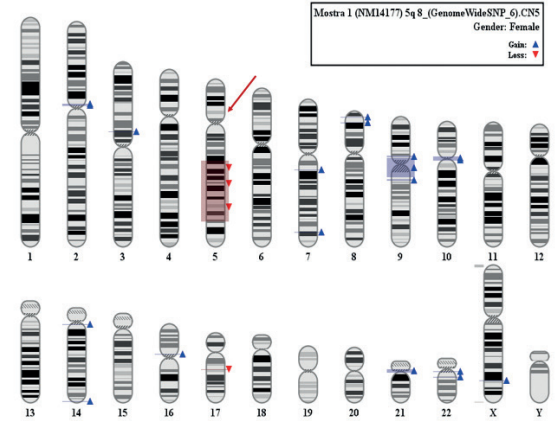
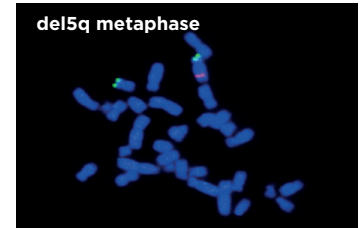
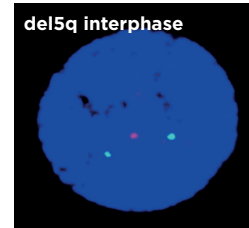
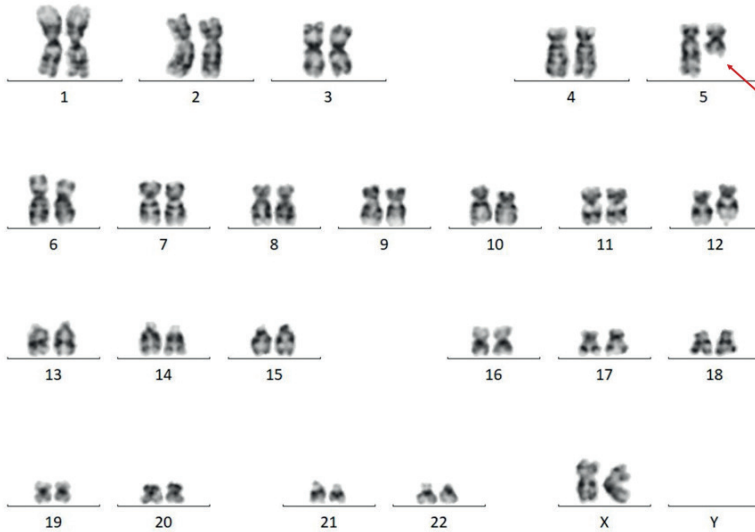
Authorship: Roser Pujol, Jordi Surrallés

Affiliation: Instituto de Investigación del Hospital de Sant Pau/CIBERER, Barcelona

2026 FEBRUARY

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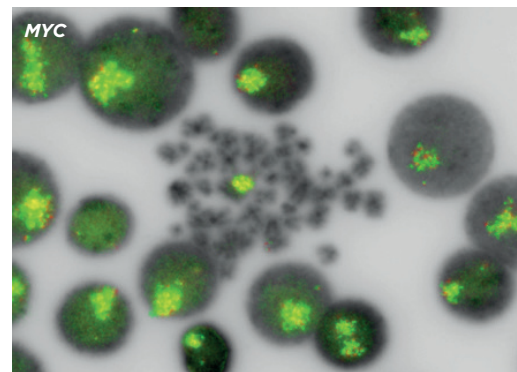
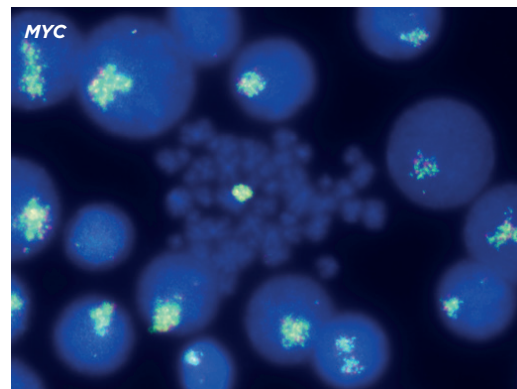
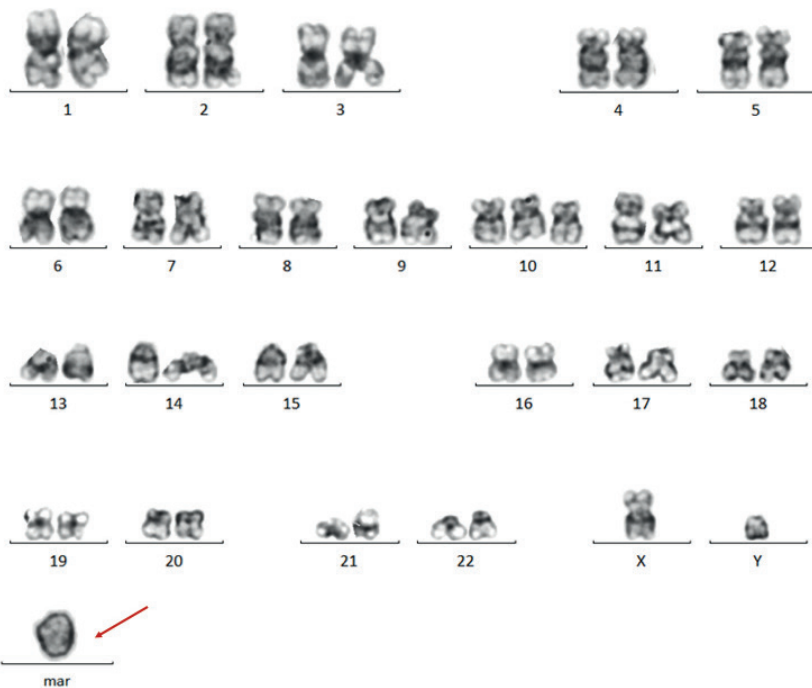
G-banding karyotype, FISH, and aCGH in a patient with MDS: del(5)(q13q33)



2026 MARCH

SUN	MON	TUE	WED	THU	FRI	SAT
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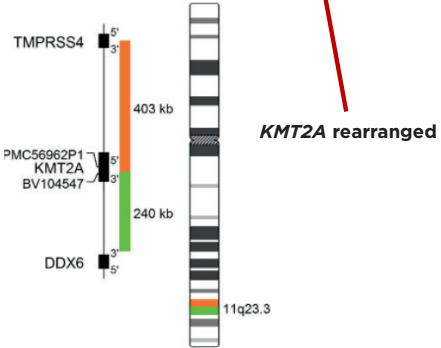
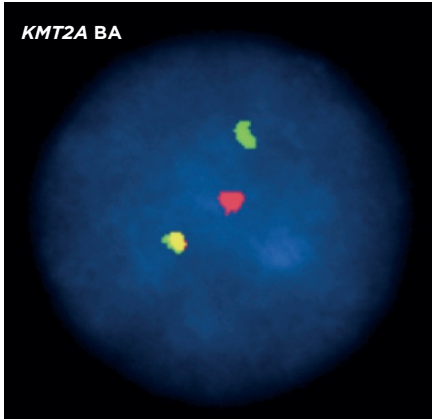
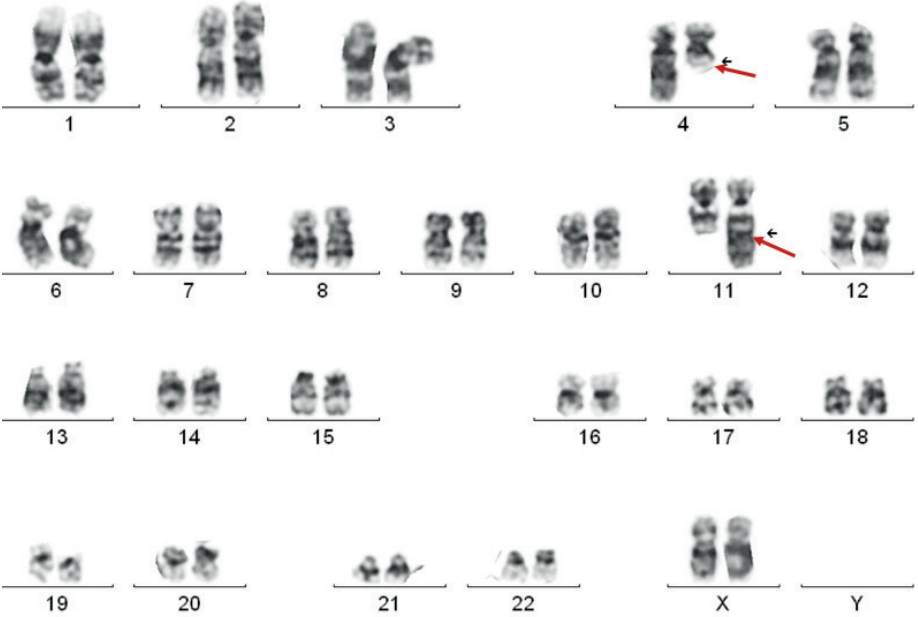
G-banding karyotype and FISH in a patient with AML: amplified MYC gene



2026 APRIL

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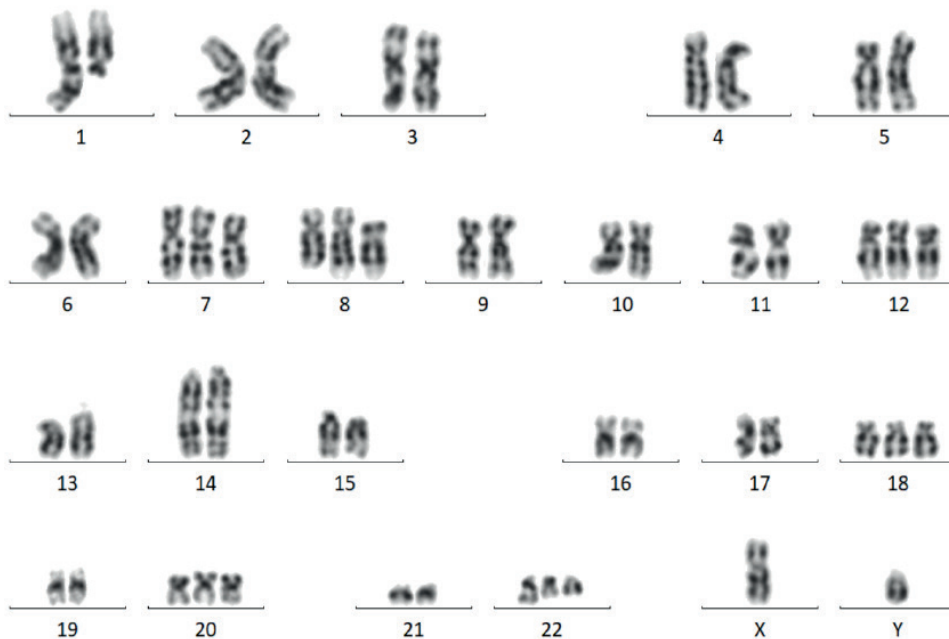
G-banding karyotype and FISH in a patient with *KMT2A*-rearranged B-cell ALL: 46,XX,t(4;11)(q21;q23)



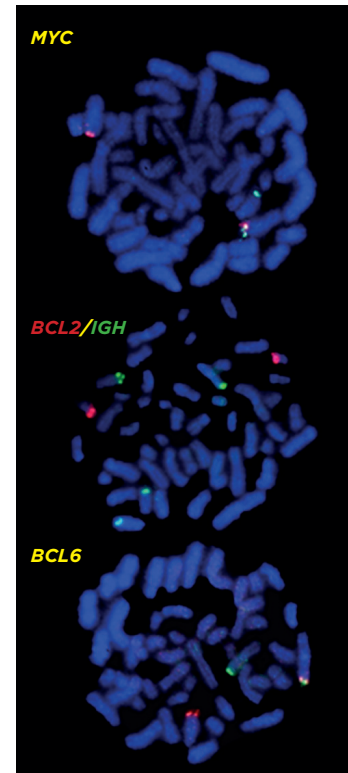
2026 MAY

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Complex G-banding karyotype and metaphase FISH for *MYC*, *BCL6*, and *BCL2::IGH* in high-grade B-cell lymphoma



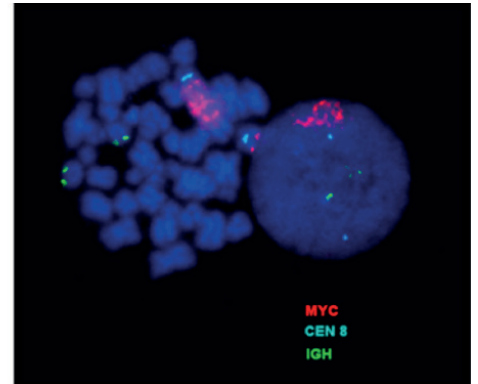
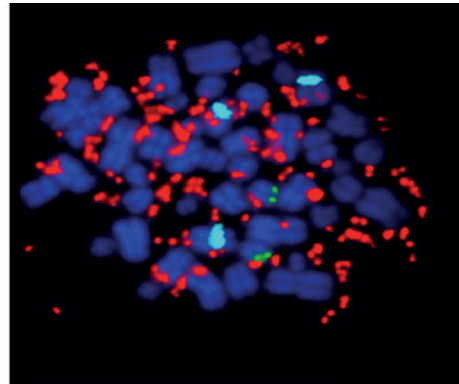
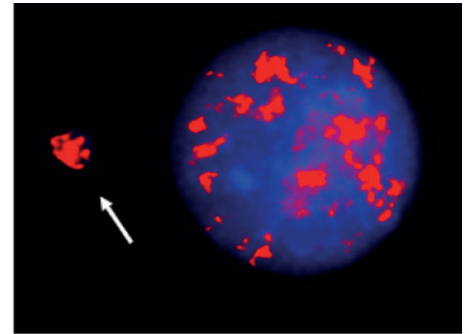
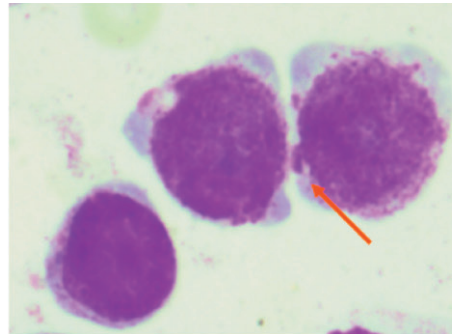
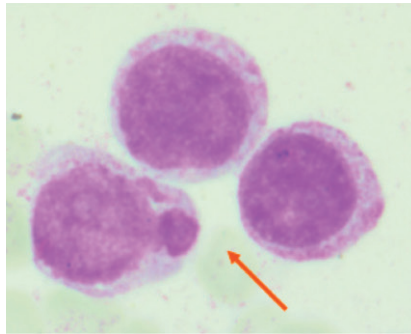
52,XY,t(1;14)(q12;q32),+7,+8,t(8;22)(q24;q11)x2,+12,der(14)t(1;14)(q12;q32),+18,+20,+22



2026 JUNE

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MYC gene amplification in a patient with acute myeloid leukemia (AML): dmin, hsr



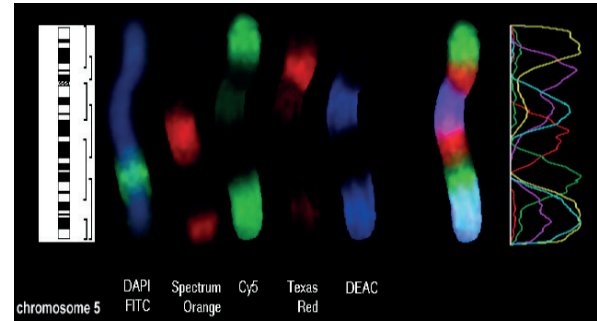
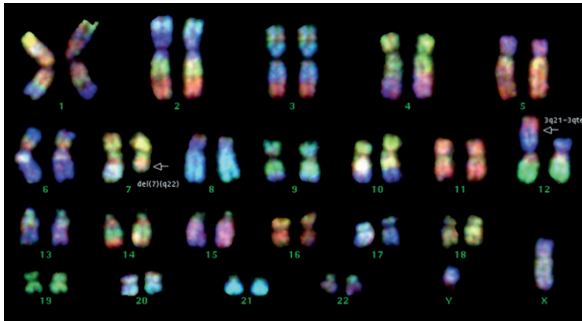
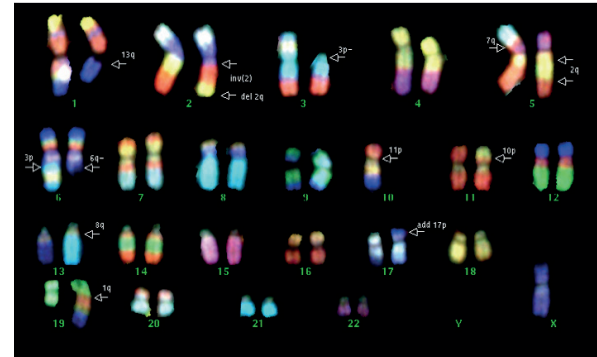
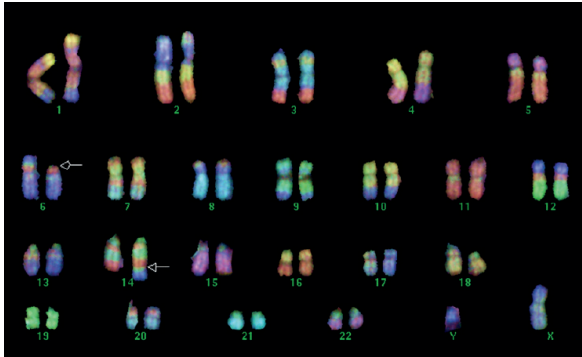
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2026 AUGUST

SUN	MON	TUE	WED	THU	FRI	SAT
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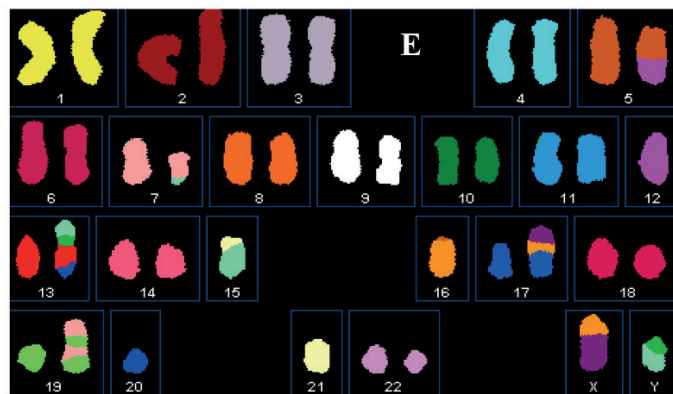
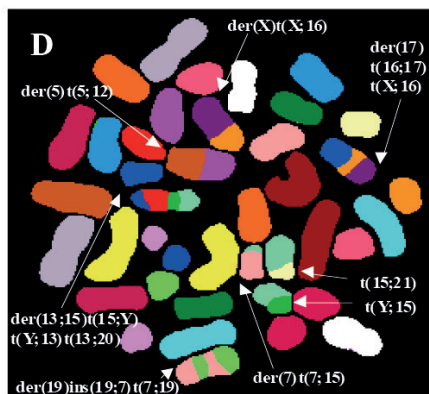
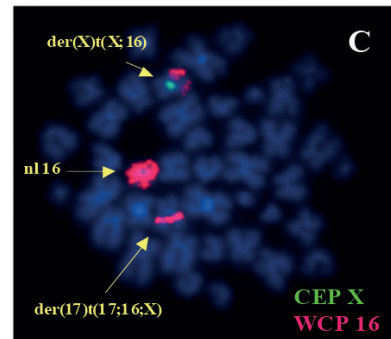
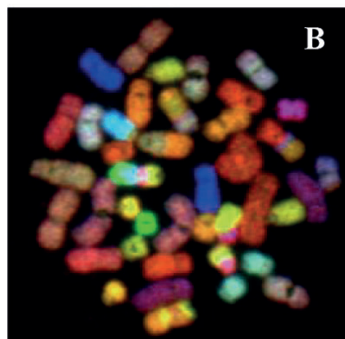
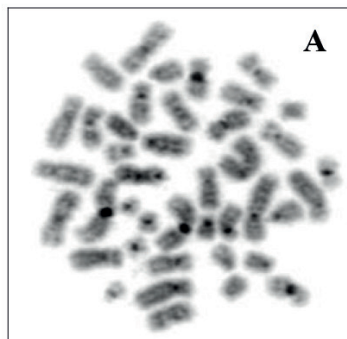
Karyotypes of patients with SMZL using the multibanding FISH technique (RxFISH)



2026 SEPTEMBER

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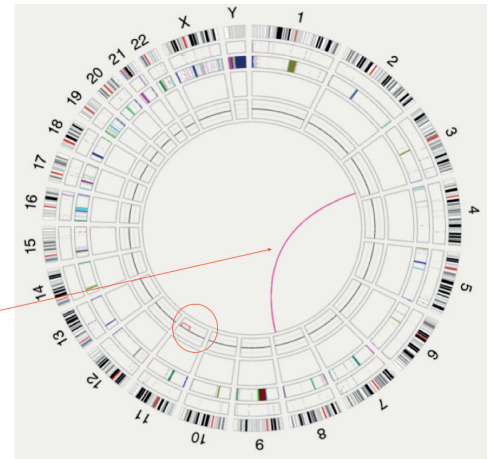
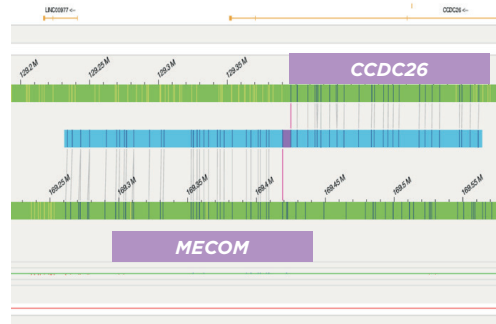
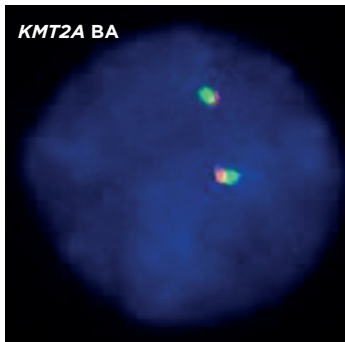
Metaphase and spectral karyotype (SKY) of a patient with AML and complex karyotype



2026 OCTOBER

SUN	MON	TUE	WED	THU	FRI	SAT
27	28	29	30	01	02	03
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Optical karyotype (OGM) in a patient with AML: cryptic translocation t(3;8)(q26;q24)/MECOM::CCDC26



2026
OCTOBER

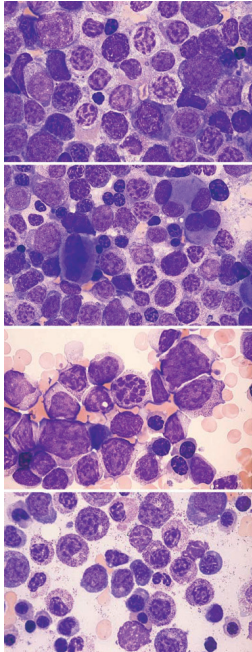
2026 NOVEMBER

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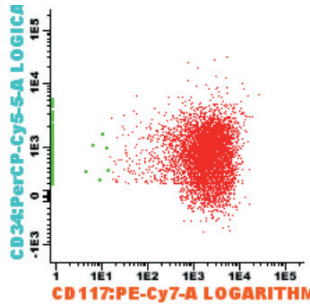
Reality in 2026: cytogenetics and integrated diagnosis in oncohematology

Current cytogenetics at WHO, ICC 2022!

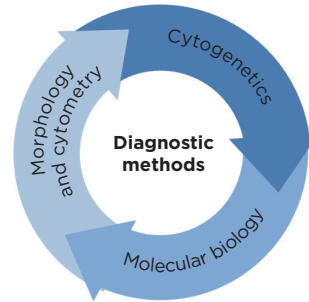
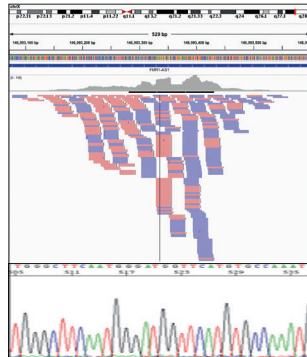
Morphology



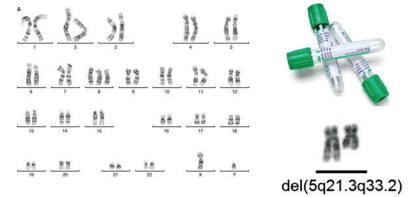
Cytometry



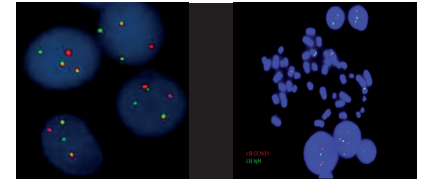
Mutations (Sanger, NGS)



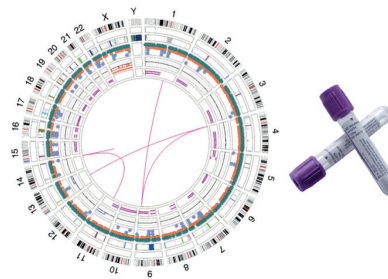
G-banding karyotype



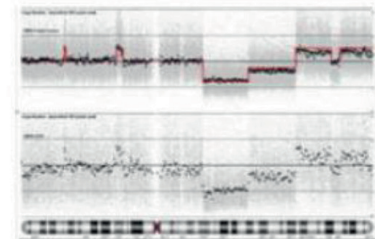
FISH



Optical karyotype (OGM)



Molecular karyotype (aCGH/aSNPs)



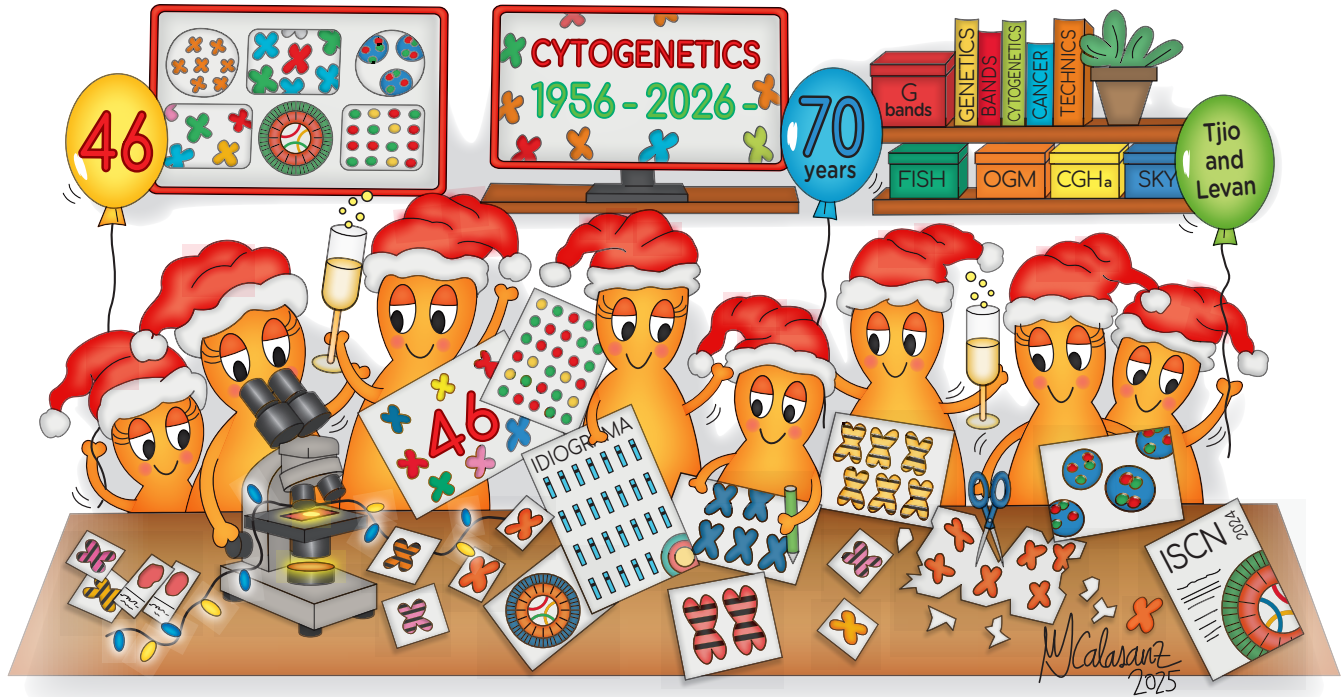
2026
NOVEMBER

Authorship: Esperanza Such, María José Calasanz
Affiliation: Laboratorio de Citogenética y Biología Molecular Hematológica.
Servicio de Hematología y Hemoterapia, Hospital Universitario y Politécnico La Fe, Valencia.
Laboratorio de Citogenética y Biología Molecular. CIMA LAB Diagnostics. Clínica Universidad de Navarra, Pamplona

2026 DECEMBER

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27	28	29	30	31	01	02

Everyone at GCECGH wish you a **HAPPY 2026!!!**



2026
DECEMBER



1956-2026

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years

CYTOGENETICS



Sociedad Española de
Hematología y Hemoterapia

