

REALIZING PRECISION MEDICINE IN CHRONIC LYMPHOCYtic LEUKEMIA

Biomarkers for Improved Risk Stratification



**ERIC: a scientific community
for scientists with a passion
for CLL research**

2nd July 2019 – Tel Aviv, Israel

ERIC Information

- **Non-profit organization** according to German law
Klinik I für Innere Medizin, Universitätsklinikum Köln
Kerpener Straße 62, 50937, Köln
- Established on 31st January 2006
- Executive office:
Hematology Department, Hospital Sant Pau,
Mas Casanovas 90, 08041, **Barcelona**, Spain
- **PIC** Number: 930535939

WP7 - European Leukemia Net

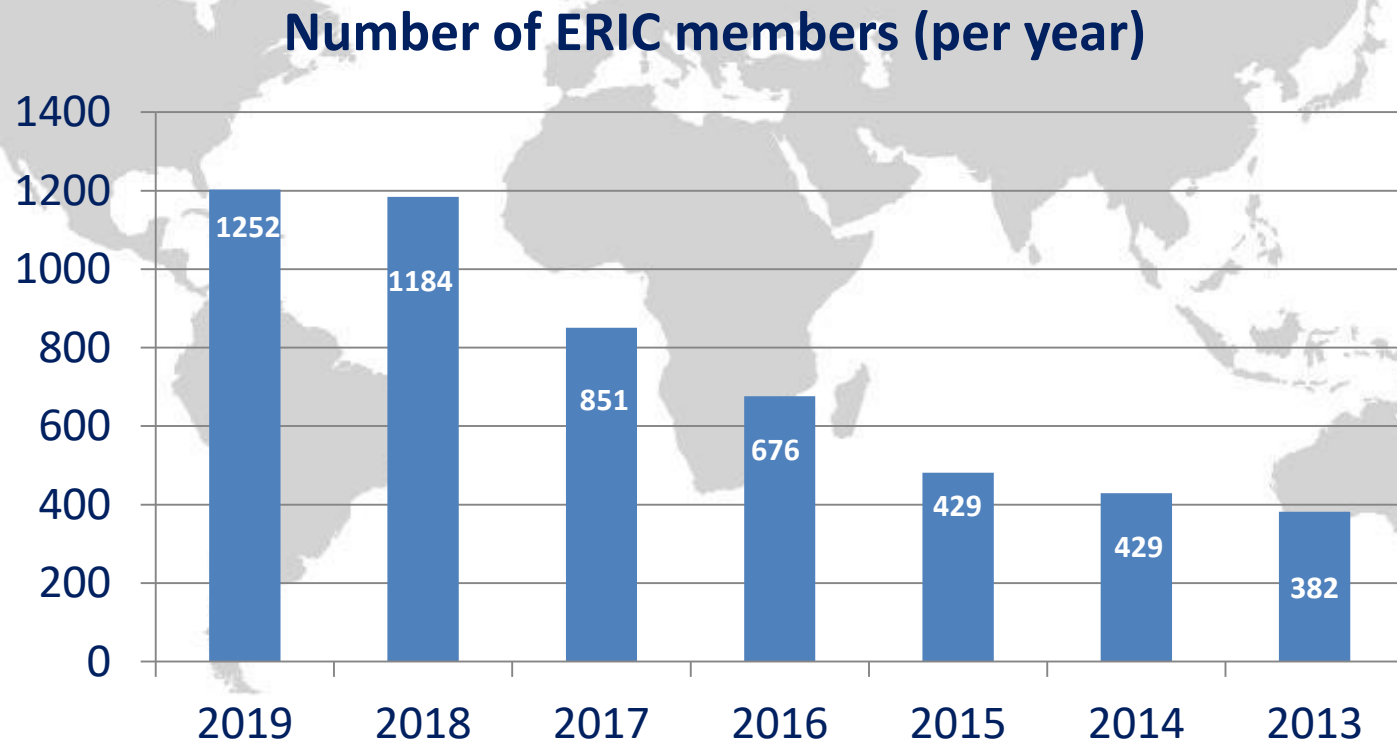


Scientific WG - EHA

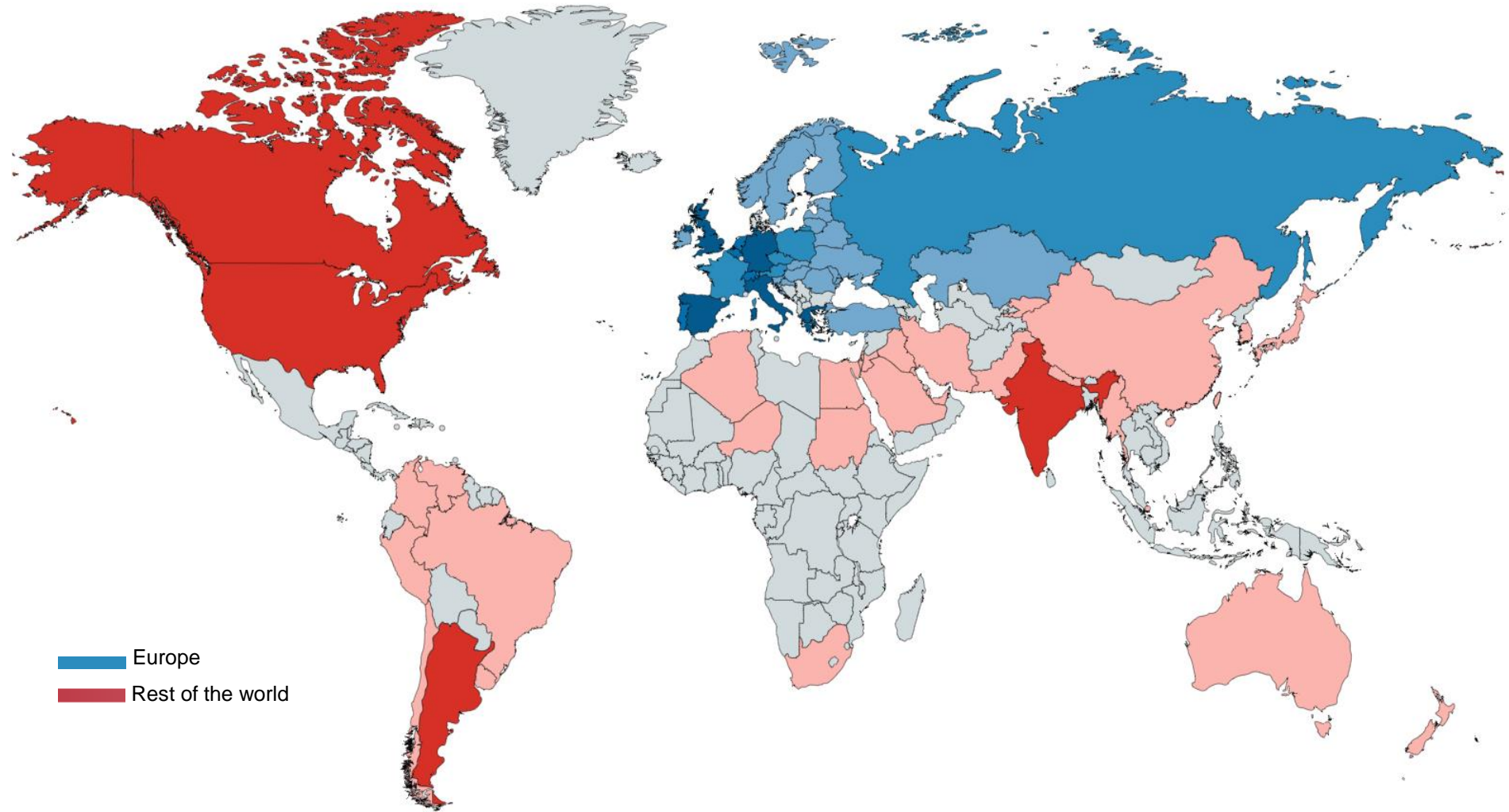


ERIC Membership

- **1252 Members**
- **Distributed amongst 78 countries / 598 different institutions**



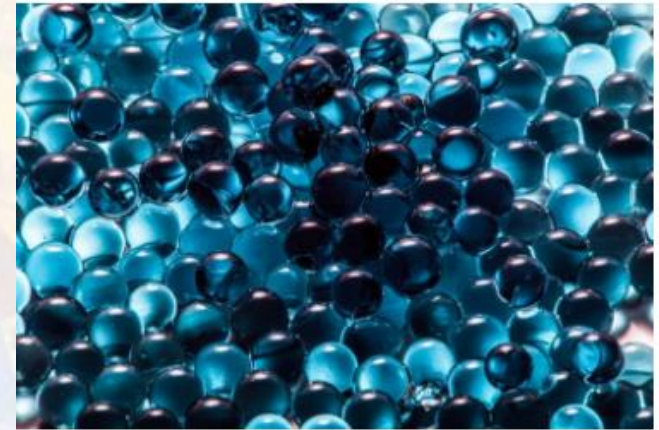
ERIC Membership



Join ERIC

Please join ERIC if you are not a member already

- Receive regular updates on ERIC activities
- Participate in ERIC projects
- Network with other CLL experts
- Get involved - it's free
- Join by going to our webpage,



www.ericll.org and clicking on the “Membership” page

ERIC Mission & Activities

To to improve the outcome of patients with chronic lymphocytic leukemia (CLL) and related diseases through basic, translational and clinical research

through collaborative effort at a European level

- **Research Projects**
- **Publications**
- **Harmonization/Recommendations**
- **Meetings/Educational events**

ERIC Mission & Activities

To to improve the outcome of patients with chronic lymphocytic leukemia (CLL) and related diseases through basic, translational and clinical research

through collaborative effort at a International level

- **Research Projects**
- **Publications**
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2018 ERIC Publications

CYTOGENETIC COMPLEXITY IN CHRONIC LYMPHOCYTIC LEUKEMIA: DEFINITIONS, ASSOCIATIONS AND CLINICAL IMPACT

P. Baliakas, S. Jeromin, M. Iskas, A. Puiggros, K. Plevova, F: NguyenKhac, Z. Davis, G.M. Rigolin, A. Visentin, A. Xochelli, J. Delgado, F. Baran-Marszak, E. Stalika, P. Abrisqueta, K. Durechova, G. Papaioannou, V. Eclache, M. Dimou, T. Iliakis, R. Collado, M. Doubek, M .J. Calasanz, N. Ruiz-Xiville, C. Moreno, M. Jarosova, A.C. Leeksma, P. Panayiotidis, H. Podgornik, F. Cymbalista, A. Anagnostopoulos, L. Trentin, N. Stavroyianni, F. Davi, P. Ghia, A. P. Kater, A. Cuneo, S. Pospisilova, B. Espinet, A. Athanasiadou, D. Oscier, C. Haferlach and K. Stamatopoulos

Blood Journal (2018 December)

IMMUNOGLOBULIN GENE SEQUENCE ANALYSIS IN CHRONIC LYMPHOCYTIC LEUKEMIA: FROM PATIENT MATERIAL TO SEQUENCE INTERPRETATION

A .Agathangelidis, L.A. Sutton, A. Hadzidimitriou, C. Tresoldi, A.W. Langerak, C. Belessi, F: Davi, R. Rosenquist, K. Stamatopoulos, P. Ghia

Journal of Visualized Experiments, JoVE (2018 November 26)

EFFICACY OF BENDAMUSTINE AND RITUXIMAB AS FIRST SALVAGE TREATMENT IN CHRONIC LYMPHOCYTIC LEUKEMIA AND INDIRECT COMPARISON WITH IBRUTINIB: A GIMEMA, ERIC AND UNK CLL FORMU STUDY

Cuneo A, Follows G, Rigolin G M, Piciocchi A, Tedeschi A, Trentin L, Medina Perez A, Coscia M, Laurenti L, Musuraca G, Farina L, Rivas Delgado A, Orlandi E A, Galieni P, Romana Mauro F, Visco C, Amendola A, Billio A, Marasca R, Chiarenza A, Meneghini V, Ilariucci F, Marchetti M, Molica S, Re F, Gaidano G, Gonzalez M, Forconi F, Ciolli S, Cortelezzi A, Montillo M, Smolej L, Schuh A, A Eyre T, Kennedy B, Bowles K M, Vignetti M, de la Serna J, Moreno C, Foà R, Ghia P

Haematologica 2018 April 19

ERIC RECOMMENDATIONS FOR TP53 MUTATION ANALYSIS IN CHRONIC LYMPHOCYTIC LEUKEMIA - UPDATE ON METHODOLOGICAL APPROACHES AND RESULTS INTERPRETATION

Malcikova J, Tausch E, Rossi D, Sutton LA, Soussi T, Zenz T, Kater A, Utoft Niemann C, Gonzalez D, Davi F, Gonzalez Diaz M, Moreno C, Gaidano G, Stamatopoulos K, Rosenquist R, Stilgenbauer S, Ghia P, Pospisilova S & on behalf of the European Research Initiative on Chronic Lymphocytic Leukemia (ERIC) – TP53 network

Leukemia (2018) doi:10.1038/s41375-017-0007-7

REPRODUCIBLE DIAGNOSIS OF CHRONIC LYMPHOCYTIC LEUKEMIA BY FLOW CYTOMETRY: AN EUROPEAN RESEARCH INITIATIVE ON CLL (ERIC) & EUROPEAN SOCIETY FOR CLINICAL CELL ANALYSIS (ESCCA) HARMONISATION PROJECT

Rawstron AC, Kreuzer K-A, Soosapilla A, Spacek M, Stehlikova O, Gambell P, Mclver-Brown N, Villamor N, Psarra K, Arroz M, Milani R, de la Serna J, Cedena MT, Jaksic O, Nomdedeu J, Moreno C, Rigolin GM, Cuneo A, Johansen P, Johnsen HE, Rosenquist R, Utoft Niemann C, Kern W, Westerman D, Trneny M, Mulligan S, Doubek M, Pospisilova S, Hillmen P, Oscier D, Hallek M, Ghia P, and Montserrat E.

Cytometry Part B 2018; 94B: 121–128.

Subsequent therapies in Venetoclax treated patients who have discontinued venetoclax due to either

- 1) progression,**
- 2) adverse event**
- 3) Transformation**

FOCUS: Ibrutinib after Ven
Venetoclax after Ven

A Retrospective Study to Examine the Efficacy and Safety of Obinutuzumab + Chlorambucil and Obinutuzumab Monotherapy in the Frontline Treatment of CLL Patients-Outside Clinical Trials

by

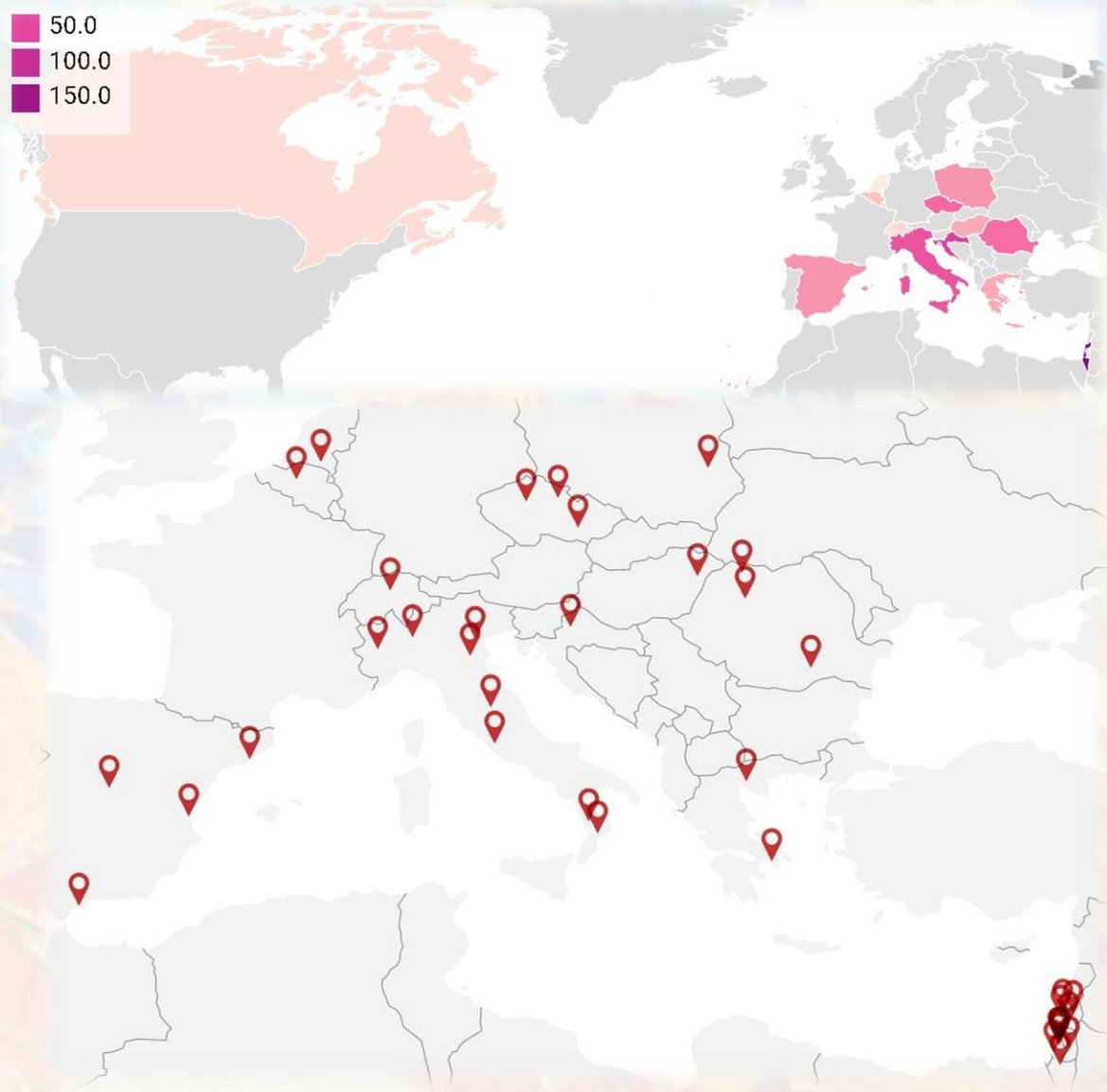
Dr. Yair Herishanu

ERIC in collaboration with the Israeli CLL Study Group

**Total patients: 460
(Excluded: 28)**

**Medical centers: 51
represent 40 cities,
located in 13 different countries:**

- Belgium (6 patients)
- Canada (3)
- Croatia (57)
- Czech Republic (36)
- Greece (9)
- Hungary (8)
- Israel (198)
- Italy (41)
- The Netherlands (1)
- Poland (30)
- Romania (35)
- Spain (30)
- Switzerland (3)



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Harmonization

- ZAP70** Letestu et al, Cytometry part B (2006)

- MRD** Rawstron et al, Leukemia (2007)
Rawstron et al, Leukemia (2014)
Rawstron et al, Leukemia (2017)

- IGHV genes** Ghia et al, Leukemia (2007)
Langerak et al, Leukemia (2011)
Rosenquist et al, Leukemia (2017)

- TP53 aberrations** Zenz et al, Leukemia (2010)
Pospisilova et al, Leukemia (2012)
Benner et al, Haematologica (2014)
Te Raa et al, Br J Haematol (2014)
Malcikova et al, Leukemia (2018)

- Novel gene mutations** Baliakas et al, Leukemia (2015)

- Cytogenetic complexity** Baliakas et al, Blood (2019)

TP53 Network

- ERIC promotes and supports, through education, the:
 - Importance of testing **for TP53 aberrations all cases needing therapy, before first and later lines of treatment**
 - Adoption of appropriate diagnostic techniques to ensure reliable and comparable results
→ **Certification of laboratories**
- The countries in green have at least 1 certified centre
- Besides Europe, ERIC also has certified centres in Australia, Brazil



146
Certified
Centres from
28 countries



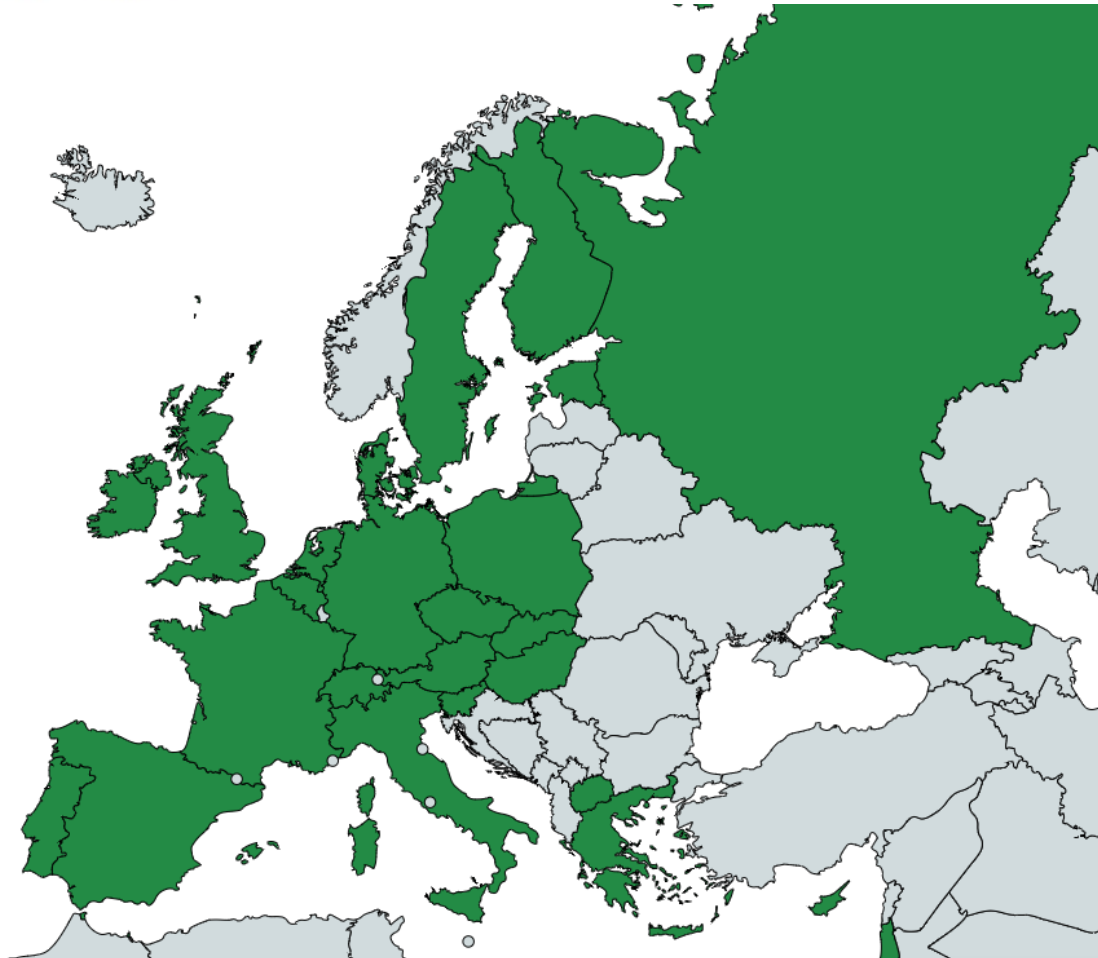
11
Reference
Centres



3
Certifying
Centres



7
TP53 Certification
Rounds completed



IGHV Network

- ERIC promotes and supports, through education, the:
 - Importance of **immunogenetic analysis** across the medical community before using CIT
 - Adoption of appropriate diagnostic techniques to ensure reliable and comparable results
→ **Certification of laboratories**
- The countries in blue have at least 1 certified centre
- Besides Europe, ERIC also has certified centres in Argentina, Australia, Taiwan and USA



92
Certified
Centres from
30 countries



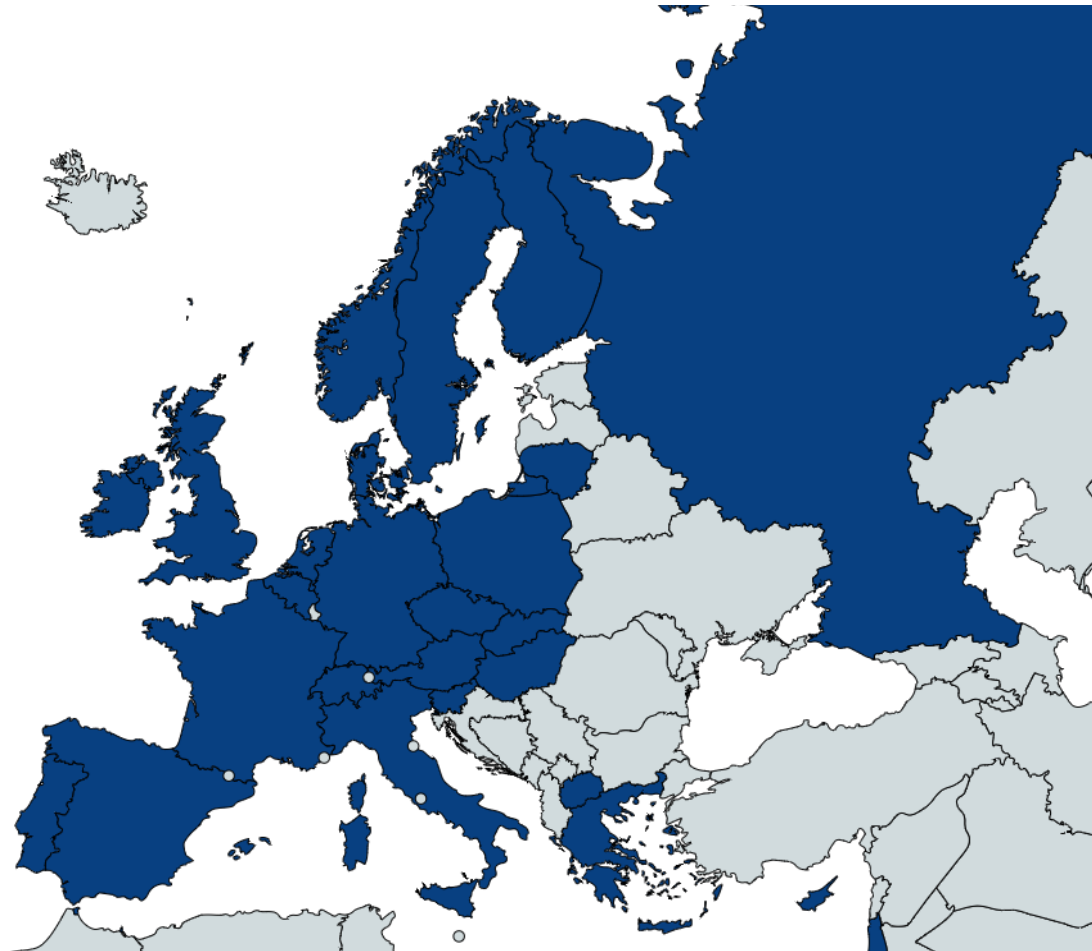
7
Reference
Centres



2
Certifying
Centres



4
IGHV Certification
Rounds completed



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Educational Workshops

HANDS-ON WORKSHOP ON IGHV GENE ANALYSIS IN CLL

- 1st 14-15 JUNE 2007, UPPSALA (SWEDEN)
- 2nd 9-11 OCTOBER 2008, PARIS (FRANCE)
- 3rd 24-25 SEPTEMBER 2009, THESSALONIKI (GREECE)
- 4th 6 - 7 APRIL 2011, STRESA (ITALY)
- 5th 26-27 SEPTEMBER 2013, BRNO (CZECH REPUBLIC)
- 6th 22-23 SEPTEMBER 2016, UPPSALA (SWEDEN)

ERIC WORKSHOP ON IGHV ANALYSIS IN CLL

- 23 MAY 2017 (TEL AVIV, ISRAEL)
- 04 JULY 2018 (TEL AVIV, ISRAEL)
- 10 April 2019 (TEL AVIV, ISRAEL)

NIH-ERIC WORKSHOP ON IGHV GENE ANALYSIS IN CLL

- 28-29 MARCH 2019 (BETHESDA, MARYLAND, USA)

IMMUNOGENETICS IN CLL IN THE NGS ERA (ONE DAY WORKSHOP)

- 24 NOVEMBER 2017, ROTTERDAM, (THE NETHERLANDS)

ERIC WORKSHOP ON TP53 ANALYSIS IN CLL

- 1st 1-3 OCTOBER 2015, MASARYK UNIVERSITY CAMPUS, BRNO (CZECH REPUBLIC)
- 2nd 7-8 NOVEMBER 2017, HOTEL LA PALMA, STRESA (ITALY)

INTERNATIONAL WORKSHOP BIOMARKERS IN CLL: THE ART OF SYNTHESIS

- 16-17 MARCH 2018 (BELGRADE, SERBIA)

INTERNATIONAL WORKSHOP BIOMARKER-GUIDED MANAGEMENT OF CLL

- 13 APRIL 2018 (MOSCOW, RUSSIA)

A scenic view of Stresa, Italy, featuring a church with a bell tower, colorful buildings, and a lake with mountains in the background.

**ERIC WORKSHOP ON MRD ANALYSIS IN
CHRONIC LYMPHOCYTIC LEUKEMIA**

Theoretical and practical aspects of Minimal residual Diseases analysis in CLL
with special emphasis on data interpretation and reporting

15-16 March, 2019
Hotel La Palma, Stresa, Italy

A scenic view of the Washington Monument in Washington, D.C., surrounded by cherry blossom trees and a body of water.

**WORKSHOP ON
IMMUNOGLOBULIN GENE
IN CLL**

28-29 March, 2019
Bethesda, Maryland

2019 ERIC Workshops

ERIC WORKSHOP ON MRD ANALYSIS IN CHRONIC LYMPHOCYTIC LEUKEMIA

- 15-16 MARCH, 2019 (STRESA, ITALY)

EDUCATIONAL WORKSHOP ON IMMUNOGLOBULIN GENE ANALYSIS ON CLL

- 28-29 MARCH, 2019 (BETHESDA, US)

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2019 ERIC Workshops

ERIC WORKSHOP ON MRD ANALYSIS IN CHRONIC LYMPHOCYTIC LEUKEMIA

- 15-16 MARCH, 2019 (STRESA, ITALY)

EDUCATIONAL WORKSHOP ON IMMUNOGLOBULIN GENE ANALYSIS ON CLL

- 28-29 MARCH, 2019 (BETHESDA, US)

2020 ERIC Workshops

ERIC WORKSHOP ON TP53 AND IG GENES ANALYSIS IN CHRONIC LYMPHOCYTIC LEUKEMIA

- 26-27 FEBRUARY, 2020 (CHANDIGARH, INDIA)

WP7 MEETING/ERIC ASSEMBLY

- 31 MARCH, 2020 (MANNHEIM, GERMANY)

ERIC International Meeting 2018

- **TOTAL 365 ATTENDEES**

❖ Delegates	210
❖ Students/Trainees	47
❖ Pharma/Industry	53
❖ Faculty	42

- **FROM 32 COUNTRIES**

- Argentina
- Australia
- Austria
- Belgium
- Canada
- Colombia
- Czech Republic
- Denmark
- Estonia
- France
- Germany
- Greece
- Hong Kong
- Hungary
- Israel
- Italy
- Latvia
- Lithuania
- Netherlands
- Norway
- Poland
- Portugal
- Romania
- Russia
- Serbia
- Spain
- Sweden
- Switzerland
- Turkey
- Ukraine
- United Kingdom
- United States



Scientific Programme

09.45 - 10.00 Introduction – ERIC: a scientific community for scientists with a passion for CLL research | Paolo Ghia, ERIC President

Session I. Setting the tone | Chair: Paolo Ghia

10.00 - 10.20 Precision medicine in CLL: which are the pre-requisites?
Kostas Stamatopoulos, CERTH

Session II. Cell-intrinsic biomarkers | Chair: Blanca Espinet

10.20 - 10.50 Cytogenetics | Blanca Espinet, Hospital del Ma

10.50 - 11.20 TP53 aberrations | Sarka Pavlova, CEITEC

11.20 - 11.40 Coffee Break

Session III. Cell-intrinsic biomarkers (continued) | Chair: Blanca Espinet

11.40 - 12.10 Recurrent mutations in CLL: focus on resistance mechanisms to novel targeted therapies | Lesley-Ann Sutton, Karolinska Institute

12.10 - 12.40 Overview and recommendations | Panagiotis Baliakas, Uppsala University

12.40 - 13.30 Lunch Break

Session III. Immunogenetics | Chair: Anton Langerak

13.30 - 14:00 Immunogenetics | Andreas Agathangelidis, CERTH

14.00 - 14.30 NGS immunogenetic analysis in CLL | Anton Langerak, Erasmus MC

14.30 - 15.00 Overview and recommendations | Anastasia Hadzidimitriou, CERTH

15.00 - 15.15 Coffee Break

Session IV. Interactive case session

Moderators: Paolo Ghia, Kostas Stamatopoulos

15.15 - 16.30 Interactive case session | Faculty and participants

**THANK YOU VERY MUCH
FOR YOUR ATTENTION**

www.ericll.org