

Oral Abstracts

Young Investigator Meeting

Friday, May 12, 2017

Presentation Time	Title
8:35 AM	<p>Targeting the Spliceosome in a Novel Adoptive Transfer Model of Sf3b1^{mut}/Atm^{del} Chronic Lymphocytic Leukemia</p> <p>Elisa ten Hacken¹ (Primary Presenter), Lili Wang¹, Michael Thomas², Fara Faye Regis¹, Zachary Cartun¹, Silvia Buonamici², Donna Neuberg¹, Ruben Carrasco¹, Catherine J. Wu¹ ¹Dana-Farber Cancer Institute, Boston, MA; ²H3 Biomedicine, Cambridge, MA</p>
8:40 AM	<p>p.P2514fs Mutant NOTCH1 Has Longer Lasting Transcription Factor Activity Due to Slower Inactivation and Degradation</p> <p>Jennifer Edelmann¹ (Primary Presenter), Tetyana Klymenko¹, Chen Lu², Emma Vilventhraraja¹, Sven Estenfelder³, Eugen Tausch³, Stephen Beers², Stephan Stilgenbauer³, Cragg Mark², Andrejs Ivanov¹, John Gribben¹ ¹Barts Cancer Institute, Queen Mary University of London, London, United Kingdom; ²University of Southampton, Southampton General Hospital, Southampton, United Kingdom; ³University Hospital in Ulm, Ulm, Germany</p>
9:05 AM	<p>CLL Myeloid-Derived Suppressor Cell Subtypes Correlate With and Polarize T-Cell Subsets Differently</p> <p>Gerardo Ferrer¹ (Primary Presenter), Brendan Franca², Pui Yan (Paulina) Chiu¹, Stefano Vergani³, Andrea Nicola Mazzeo¹, Florencia Palacios¹, Davide Bagnara¹, Shih-Shih Chen¹, Sophia Yancopoulos¹, Yun Liu¹, Alikei Xochelli⁴, Joy Yan¹, Jacqueline Barrientos⁵, Jonathan E. Kolitz^{1,3,6,7}, Steven L. Allen^{1,3,7}, Kostas Stamatopoulos⁴, Kanti Rai^{1,3,6,7}, Barbara Sherry¹, Nicholas Chiorazzi¹ ¹The Feinstein Institute for Medical Research, Manhasset, NY; ²College of the Holy Cross, Worcester, MA; ³Hofstra Northwell Health Cancer Institute, New Hyde Park, NY; ⁴Institute of Applied Biosciences, Center for Research and Technology Hellas (CERTH), Thessaloniki, Greece; ⁵CLL Research and Treatment Program, Northwell Health Cancer Institute, New York, NY; ⁶North Shore University Hospital, Manhasset, NY; ⁷Long Island Jewish Medical Center, Queens, NY</p>
9:20 AM	<p>Sphingosine Kinase 1 Is Associated With the Activation, Proliferation, and Survival of Chronic Lymphocytic Leukemia Cells</p> <p>María Belén Almejún¹ (Primary Presenter), Mercedes Borge¹, Ana Colado¹, Enrique Podaza¹, Denise Risnik¹, Carlos Daniel De Brasi¹, Irma Slavutsky¹, Carmen Stanganelli¹, María Cabrejo², Horacio Fernández Grecco², Fernando R Bezares³, Santiago Cranco⁴, Rubén Ángel Burgos⁴, Julio César Sánchez-Ávalos⁴, Pablo Oppezzo⁵, Mirta Giordano⁶, Romina Gamberale¹ ¹Instituto de Medicina Experimental (IMEX), Consejo Nacional de Investigaciones Científicas y Técnicas (CONICET), Academia Nacional de Medicina, Buenos Aires, Argentina; ²Sanatorio Dr. Julio Méndez, Buenos Aires, Argentina; ³Hospital General de Agudos Dr. Teodoro Alvarez, Buenos Aires, Argentina; ⁴Instituto Alexander Fleming, Buenos Aires, Argentina; ⁵Institut Pasteur de Montevideo, Montevideo, Uruguay; ⁶Institute for Experimental Medicine, Buenos Aires, Argentina</p>

9:35 AM	The (Auto)Antigen Specificities of B-Cell Receptor Immunoglobulins From CLL Stereotyped Subset 4 Are Positively and Negatively Selected by Structural Elements Introduced by Somatic Mutation and Isotype Class Switching
	Yun Liu ¹ (Primary Presenter), Rosa CATERA ¹ , Chao Gao ² , Joy Yan ¹ , Amanda Magli ¹ , Steven L. Allen ^{1,3,4,5} , Jonathan E. Kolitz ^{1,3,4,5} , Kanti Rai ^{1,3,4,5} , Charles C. Chu ⁶ , Ten Feizi ² , Kostas Stamatopoulos ⁷ , Nicholas Chiorazzi ¹ ¹ The Feinstein Institute for Medical Research, Manhasset, NY; ² Imperial College London, London, United Kingdom; ³ Hofstra Northwell School of Medicine, Hempstead, NY; ⁴ North Shore University Hospital, Manhasset, NY; ⁵ Long Island Jewish Medical Center, Queens, NY; ⁶ University of Rochester Medical Center, Rochester, NY; ⁷ Institute of Applied Biosciences, Center for Research and Technology Hellas (CERTH), Thessaloniki, Greece
9:50 AM	PI3K p110δ Plays Critical Roles in Chronic Lymphocytic Leukemia Cells and Leukemia T-Cell Immunity
	Shuai Dong (Primary Presenter), Minh Tran, Meixiao Long, Natarajan Muthusamy, John Byrd, Amy Johnson The Ohio State University, Columbus, OH
10:05 AM	CLL Stereotyped IGHV-D-J Rearrangements Can Be Detected in Normal B-Cell Populations Using Ultra-Deep, Next Generation Sequencing Techniques
	Stefano Vergani ¹ (Primary Presenter), Davide Bagnara ² , Andrea Nicola Mazzarello ² , Gerardo Ferrer ² , Sophia Yancopoulos ³ , Kostas Stamatopoulos ³ , Nicholas Chiorazzi ² ¹ Hofstra Northwell School of Medicine, Hempstead, NY; ² The Feinstein Institute for Medical Research, Manhasset, NY; ³ Institute of Applied Biosciences, Center for Research and Technology Hellas (CERTH), Thessaloniki, Greece, Thessaloniki, Greece
10:45 AM	Effects of Ibrutinib on Macrophage-Polarization and on the Immune-Response Against Mycobacterium Tuberculosis
	Mercedes Borge ¹ (Primary Presenter), Ana Colado ¹ , Denise Kviatcovsky ¹ , María Belén Almejún ¹ , Melanie Genoula ¹ , Céline Cougoule ² , Enrique Podaza ¹ , Denise Risnik ¹ , Esteban Enrique Elias ¹ , Isabelle Maridonneau-Parini ² , Fernando R Bezares ³ , Horacio Fernández Grecco ⁴ , María Cabrejo ⁴ , Mirta Giordano ⁵ , María del Carmen Sasiain ¹ , Romina Gamberale ¹ , Luciana Balboa ¹ ¹ Instituto de Medicina Experimental (IMEX), Consejo, Nacional de Investigaciones Científicas y Técnicas (CONICET), Academia Nacional de Medicina, Buenos Aires, Argentina; ² Université de Toulouse, CNRS, UPS, Toulouse, France; ³ Hospital General de Agudos Dr. Teodoro Alvarez, Buenos Aires, Argentina; ⁴ Sanatorio Dr. Julio Méndez, Buenos Aires, Argentina; ⁵ Institute for Experimental Medicine (IMEX), Buenos Aires, Argentina
11:00 AM	Combination of Ibrutinib and Short-Course Fludarabine in Previously Untreated Patients With CLL/SLL: A Result of a Pilot Phase II Study
	Inhye Ahn (Primary Presenter), Xin Tian, Susan Soto, Pia Nierman, Janet Valdez, Irina Maric, Maryalice Stetler-Stevenson, Constance Yuan, Gerald Marti, Adrian Wiestner National Institutes of Health, Bethesda, MD
11:15 AM	Ibrutinib Mediates Changes in Chromatin Structure in Chronic Lymphocytic Leukemia: Epigenetic Studies From the Bloodwise TAP ICLL Trial
	Katherine Holmes ¹ (Primary Presenter), Ildar Sadreev ¹ , Andrew Rawstron ¹ , Talha Munir ¹ , David Westhead ² , Peter Hillmen ¹ , Pascal Lefevre ¹ ¹ St James's University Hospital, Leeds, England; ² University of Leeds, Leeds, United Kingdom
11:30 AM	Cultivation of Leukemia Cells Under Anoxia for the Identification of CLL Patients With Aggressive Clinical Course and Resistance to Chemoimmunotherapy
	Leopold Sellner ¹ (Primary Presenter), Jürgen Kopitz ¹ , Anette Heller ¹ , Monika Heinzl-Gutenbrunner ² , Cornelius Gutenbrunner ³ , Peter Schirmacher ¹ , Anthony D. Ho ¹ , Michael Schmitt ¹ , Peter Dreger ¹ , Georg Gdynia ¹ ¹ University Hospital Heidelberg, Heidelberg, Germany; ² University Hospital Marburg, Marburg, Germany; ³ MH Statistical Consulting, Marburg, Germany

11:45 AM	Cytogenetic Complexity in Chronic Lymphocytic Leukemia: Definitions, Associations With Other Biomarkers, and Clinical Impact
	<p>Panagiotis Baliakas¹ (Primary Presenter), Sabine Jeronim², Michalis Iskas³, Anna Puiggros⁴, Karla Plevova⁵, Aliko Xochelli⁶, Julio Delgado⁷, Jana Kotaskova⁸, Evangelia Stalika⁶, Pau Abrisqueta⁹, Kristina Durechova⁵, Giorgos Papaioannou¹⁰, Rosa Collado¹¹, Michael Doubek¹², M Jose Calasanz¹³, Neus Ruiz-Xiville¹⁴, Carol Moreno¹⁵, Achilles Anagnostopoulos¹⁰, Niki Stavroyianni¹⁰, Arnon Katter¹⁶, Blanca Espinet⁴, Sarka Pospisilova⁸, Anastasia Athanasiadou¹⁰, Kostas Stamatopoulos⁶, Claudia Haferlach²</p> <p>¹Uppsala University, Uppsala, Sweden; ²MLL Munich Leukemia Laboratory, Munich, Germany; ³Hematology Department and HCT Unit, G. Papanicolaou Hospital, Thessaloniki, Greece; ⁴Fundació Institut Hospital del Mar d'Investigacions Mèdiques (IMIM), Barcelona, Spain; ⁵Central European Institute of Technology (CEITEC), Masaryk University, Brno, Czech Republic; ⁶Institute of Applied Biosciences, Center for Research and Technology Hellas, Thessaloniki, Greece; ⁷Hospital Clínic, Institut d'Investigacions Biomèdiques Augustí Pi i Sunyer (IDIBAPS), Universitat de Barcelona, Barcelona, Spain; ⁸CEITEC, Masaryk University; Department of Internal Medicine - Hematology and Oncology, University Hospital Brno, Brno, Czech Republic; ⁹Vall d'Hebron Institute of Oncology, Barcelona, Spain; ¹⁰G. Papanicolaou Hospital, Thessaloniki, Greece; ¹¹Consorcio Hospital General Universitario, Valencia, Spain; ¹²University Hospital Brno, Brno, Czech Republic; ¹³Servicio de Citogenética, Departamento de Genética, Universidad de Navarra, Pamplona, Spain; ¹⁴Servei Laboratori Hematologia, ICO-Hospital Germans Trias i Pujol, Institut de Recerca Contra la Leucèmia Josep Carreras (IJC), Universitat Autònoma de Barcelona, Badalona, Spain; ¹⁵Hospital de la Santa Creu i Sant Pau, Barcelona, Spain; ¹⁶Lymphoma and Myeloma Center, Academic Medical Center Amsterdam, University of Amsterdam, Amsterdam, Netherlands</p>
12:00 PM	Impact of Gender on Outcome After Chemoimmunotherapy in Patients With Chronic Lymphocytic Leukemia: A Meta-Analysis of the German CLL Study Group (GCLLSG)
	<p>Othman Al-Sawaf¹, Sandra Robrecht¹, Jasmin Bahlo¹, Anna-Maria Fink¹, Paula Cramer¹, Christian Maurer¹, Manuela Bergmann², Martin Dreyling³, Elisabeth Lange⁴, Michael Kneba⁵, Stephan Stilgenbauer⁶, Hartmut Döhner⁶, Michael Kiehl⁷, Ulrich Jäger⁸, Clemens Wendtner⁹, Kirsten Fischer¹, Valentin Goede¹, Michael Hallek¹, Barbara Eichhorst¹, Georg Hopfinger⁸</p> <p>¹University Hospital of Cologne, Cologne, Germany; ²Hospital Munich-Schwabing, Munich, Germany; ³University Hospital of the Ludwig-Maximilians-University, Munich, Germany; ⁴Evangelisches Krankenhaus Hamm, Hamm, Germany; ⁵University Hospital of Kiel, Kiel, Germany; ⁶University Hospital of Ulm, Ulm, Germany; ⁷Frankfurt (Oder) General Hospital, Frankfurt/Oder, Germany; ⁸Medical University of Vienna, Vienna, Austria; ⁹Hospital Munich-Schwabing, Munich, Germany</p>
12:15 PM	CLL-IPI and IgA Predict Rate of Severe Infections in a Nationwide Study
	Michael Asger Andersen, Christian Brieghel, Marie Helleberg, Caspar Da Cunha-Bang, Carsten Utoft Niemann Rigshospitalet, Copenhagen, Denmark
1:50 PM	Progression on Ibrutinib in Patients With Somatic Mutations in the BCR and NF-κB Pathways
	<p>Clare Sun¹, Dan Landau², Daniel Rosebrock³, Sarah Herman¹, Inhye Ahn¹, Mohammed Farooqui¹, Donna Neuberg⁴, Dimitri Livitz³, Ignaty Leshchiner³, Gad Getz³, Catherine J. Wu⁴, Adrian Wiestner¹, Chingiz Underbayev¹</p> <p>¹National Institutes of Health, Bethesda, MD; ²New York Genome Center, New York, NY; ³Broad Institute, Cambridge, MA; ⁴Dana Farber Cancer Institute, Boston, MA</p>
2:05 PM	Ibrutinib Represents a Novel Class of Immune Modulating Therapeutics That Enhances the Survival of Activated T-Cells and Reverses CLL Cell-Mediated Immunosuppression
	<p>Meixiao Long¹, Kyle Beckwith¹, Do Priscilla¹, Bethany Mundy¹, Amber Gordon¹, Amy Lehman¹, Kami Maddocks¹, Carolyn Carolyn¹, Jeffrey Jones¹, Joseph Flynn¹, Leslie Andritsos¹, Farrukh Awan¹, Joseph Fraietta², Carl June², Marcela Maus³, Jennifer Woyach¹, Michael Caligiuri¹, Amy Johnson¹, Natarajan Muthusamy¹, John Byrd¹</p> <p>¹The Ohio State University, Columbus, OH; ²University of Pennsylvania, Philadelphia, PA; ³Harvard Medical School, Boston, MA</p>

2:20 PM	Rationale for Expansion of Vgamma9Vdelta2 T-Cells for Autologous Cellular Therapy in Chronic Lymphocytic Leukemia in Combination With Ibrutinib
	Iris de Weerd ¹ , Sanne Endstra ¹ , Roeland Lameris ² , Tom Hofland ¹ , Ester Remmerswaarl ¹ , Ineke ten Berge ¹ , Sanne Tonino ¹ , Tanja de Gruijl ² , Hans van der Vliet ² , Arnon Kater ¹ ¹ Academic Medical Center, Amsterdam, Netherlands; ² VU University Medical Center, Amsterdam, Netherlands
2:35 PM	Comparison of Innate Immunity Changes Following Ibrutinib and Venetoclax Treatment of Relapsed Chronic Lymphocytic Leukemia Patients
	Chia Sharpe ¹ , Joanne Davis ¹ , Kylie Mason ¹ , Rachel Koldej ¹ , Constantine Tam ^{2,3} , David Ritchie ¹ ¹ Royal Melbourne Hospital, Melbourne, Australia; ² Peter MacCallum Cancer Centre, East Melbourne, Australia; ³ St Vincent's Hospital, Melbourne, Australia
2:50 PM	Tumor Antigen ROR1 Targeted Delivery of miR-29b in Chronic Lymphocytic Leukemia Induces Epigenetic Reprogramming Resulting in Cell Cycle Arrest and Therapeutic Benefit In Vivo
	Chi-Ling Chiang ¹ , Swagata Goswami ¹ , Frank Frizzera ¹ , Zhiliang Xie ¹ , Xiaomeng Huang ¹ , Rajeswaran Mani ¹ , Sivasubramanian Baskar ² , Christoph Rader ³ , Mitch Phelps ¹ , Guido Marcucci ⁴ , John Byrd ¹ , L. James Lee ¹ , Natarajan Muthusamy ¹ ¹ The Ohio State University, Columbus, Ohio; ² National Institutes of Health, Bethesda, MD; ³ The Scripps Research Institute, Jupiter, FL; ⁴ City of Hope, Duarte, CA
3:05 PM	Selective Targeting Cyclin-Dependent Kinase-9 (CDK9) Antagonizes Survival of Neoplastic B-Cells via Dereglulation of c-MYC and MCL-1
	Taylor Rowland ¹ , Cody Paiva ¹ , Bhargava Sreekantham ¹ , Scott Best ¹ , Joelle Rowley ¹ , Peter Hurlin ² , Lisa Drew ³ , Alexey Danilov ¹ ¹ Oregon Health and Science University, Knight Cancer Institute, Portland, Oregon; ² Shriners Hospital for Children, Portland, OR; ³ Astra Zeneca, Boston, MA; ¹ Oregon Health and Science University, Portland, Oregon
XVII International Workshop on Chronic Lymphocytic Leukemia	
Presentation Date	
Saturday, May 13, 2017	
Presentation Time	Title
12:30 PM	Mutations in NOTCH1 PEST Domain Confers Growth Advantage to CLL Cells
	Francesca Arruga ^{1,2} (Primary Presenter), Simona Cignetto ^{1,2} , Nicoletta Vitale ² , John Allan ³ , Marta Coscia ⁴ , Gianluca Gaidano ⁵ , Richard Furman ³ , Silvia Deaglio ^{1,2} ¹ Human Genetics Foundation, Torino, Italy; ² University of Torino, Torino, Italy; ³ New York Presbyterian Hospital, Weill Cornell Medicine, New York, NY; ⁴ A.O. Città della Salute e della Scienza S. Giovanni Battista, Torino, Italy; ⁵ Università del Piemonte Orientale, Vercelli, Italy
4:30 PM	CLL Mutations in the Earliest Cells of the Hematopoietic Lineage: Documentation and Need for Caution
	Sonia Marsilio ¹ (Primary Presenter), Hossein Khiabani ² , Giulia Fabbri ³ , Claudio Scuoppo ³ , Stefano Vergani ⁴ , Stephen Devereux ⁵ , Emili Montserrat ⁶ , Elizabeth J. Shpall ⁷ , Mohammad Hadigol ² , Kanti Rai ^{4,8,9,10} , Raul Rabadan ³ , Riccardo Dalla-Favera ³ , Laura Pasqualucci ³ , Nicholas Chiorazzi ⁸ ¹ Weill Cornell Medicine, New York, NY; ² Rutgers University, Camden, NJ; ³ Columbia University, New York, NY; ⁴ Hofstra Northwell School of Medicine, Hempstead, NY; ⁵ Kings College Hospital, London, United Kingdom; ⁶ Hospital Clínic, Institut d'Investigacions Biomèdiques Augustí Pi i Sunyer (IDIBAPS), Universitat de Barcelona, Barcelona, Spain; ⁷ University of Texas MD Anderson Cancer Center, Houston, TX; ⁸ The Feinstein Institute for Medical Research, Manhasset, NY; ⁹ North Shore University Hospital, Manhasset, NY; ¹⁰ Long Island Jewish Medical Center, Northwell Health, Queens, NY
4:45 PM	IL-4R – IL-4 Axis Disruption by Ibrutinib Therapy Contributes to the Greater Vulnerability of U-CLL Clones to Loss of Microenvironmental Inputs

	Shih-Shih Chen ¹ (Primary Presenter), Priyadarshini Ravichandran ^{1,2} , Barbara Sherry ¹ , Yasmine Kieso-Chelico ^{1,2} , Jacqueline Barrientos ³ , Jan Burger ⁴ , Kanti Rai ^{1,5,6,7} , Nicholas Chiorazzi ¹ ¹ The Feinstein Institute of Medical Research, Manhasset, NY; ² Northwell Health System, Great Neck, NY; ³ CLL Research and Treatment Program, Northwell Health Cancer Institute, Lake Success, NY; ⁴ University of Texas MD Anderson Cancer Center, Houston, TX; ⁵ Hofstra Northwell School of Medicine, Hempstead, NY; ⁶ North Shore University Hospital, Manhasset, NY ⁷ Long Island Jewish Medical Center, Northwell Health, Queens, NY
Sunday, May 14, 2017	
Presentation Time	Title
9:45 AM	Differential CLL BCR/Co-Receptor Density Regulation in Various Intraclonal Fractions, Before and During Ibrutinib Treatment
	Andrea Nicola Mazzarello ¹ (Primary Presenter), Stefano Vergani ² , Gerardo Ferrer ¹ , Shih-Shih Chen ¹ , Yun Liu ¹ , Sophia Yancopoulos ¹ , Joy Yan ¹ , Jacqueline Barrientos ³ , Kanti Rai ^{1,2,3,4} , Nicholas Chiorazzi ¹ ¹ The Feinstein Institute for Medical Research, Manhasset, NY; ² Hofstra Northwell School of Medicine, Hempstead, NY; ³ CLL Research and Treatment Program, Northwell Health Cancer Institute, Lake Success, NY; ⁴ North Shore University Hospital, Manhasset, NY; ⁵ Long Island Jewish Medical Center, Northwell Health, Queens, NY
10:00 AM	Intraclonal Diversification and Evolution in Chronic Lymphocytic Leukemia Patients by High-Throughput Sequencing of IGHV-D-J Rearrangements
	Davide Bagnara ¹ (Primary Presenter), Stefano Vergani ² , Gerardo Ferrer ³ , Andrea Nicola Mazzarello ³ , Franco Fais ¹ , Nicholas Chiorazzi ³ ¹ University of Genoa, Genova, Italy; ² Hofstra Northwell School of Medicine, Hempstead, NY; ³ The Feinstein Institute for Medical Research, Manhasset, NY
5:00 PM	Outcomes of Ibrutinib-Treated Patients With Chronic Lymphocytic Leukemia/Small Lymphocytic Leukemia With High-Risk Prognostic Factors in an Integrated Analysis of 3 Randomized Phase 3 Studies
	Thomas Kipps ¹ (Primary Presenter), Graeme Fraser ² , Steven Coutre ³ , Jennifer Brown ⁴ , Jacqueline Barrientos ⁵ , Paul Barr ⁶ , John Byrd ⁷ , Susan O'Brien ⁸ , Marie Sarah Dilhuydy ⁹ , Peter Hillmen ¹⁰ , Ulrich Jäger ¹¹ , Carol Moreno ¹² , Paula Cramer ¹³ , Stephan Stilgenbauer ¹⁴ , Asher Chanan-Khan ¹⁵ , Michelle Mahler ¹⁶ , Mariya Salman ¹⁶ , Mei Cheng ¹⁷ , Anil Londhe ¹⁶ , Joi Ninomoto ¹⁷ , Angela Howes ¹⁶ , Danelle James ¹⁷ , Michael Hallek ¹³ ¹ University of California, San Diego, Moores Cancer Center, La Jolla, CA; ² Juravinski Cancer Centre, McMaster University, Hamilton, Ontario; ³ Stanford University School of Medicine, Stanford, CA; ⁴ Center for Chronic Lymphocytic Leukemia, Dana-Farber Cancer Institute, Boston, MA; ⁵ CLL Research and Treatment Program, Northwell Health Cancer Institute, Lake Success, NY; ⁶ University of Rochester Medical Center, Rochester, NY; ⁷ The Ohio State University Comprehensive Cancer Center, Columbus, OH; ⁸ University of California, Irvine, Irvine, CA; ⁹ Hôpital Haut-Lévêque, Pessac, France; ¹⁰ The Leeds Teaching Hospitals, St James Institute of Oncology, Leeds, United Kingdom; ¹¹ Division of Hematology and Hemostaeology, Medical University of Vienna, Vienna, Austria; ¹² Hospital de la Santa Creu i Sant Pau, Barcelona, Spain; ¹³ University Hospital Cologne, Cologne, Germany; ¹⁴ University Hospital of Ulm, Ulm, Germany; ¹⁵ Division of Hematology, Mayo Clinic Cancer Center, Jacksonville, FL; ¹⁶ Janssen Research and Development, Raritan, NJ/Buckinghamshire, United Kingdom; ¹⁷ Pharmacyclics LLC, an AbbVie Company, Sunnyvale, CA
5:15 PM	Left Atrial Abnormality as a Predictor of Ibrutinib-Associated Atrial Fibrillation in Patients With Chronic Lymphocytic Leukemia: A Predictive Model
	Anthony Mato ¹ (Primary Presenter), Rupal O'Quinn ¹ , Erin Bange ¹ , Lisa Gashonia ¹ , Suparna Clasen ¹ , Jakub Svoboda ¹ , Sunita Nasta ¹ , Daniel Landsburg ¹ , Lauren Strelec ¹ , Chadi Nabhan ² , Peter Pickens ³ , Ali Naveed ³ , Kaitlin Kennard ¹ , Coleen Dorsey ¹ , Mitchell Hughes ¹ , Donald Tsai ¹ , Krista Isaac ⁴ , Joanna Rhodes ¹ , David Porter ¹ , Steven Schuster ¹ , Joseph Carver ¹ , ¹ Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA; ² Cardinal Health, Deerfield, OH; ³ Abington Jefferson Health, Abington, PA; ⁴ Lankenau Medical Center, Wynnewood, PA

5:30 PM	Ibrutinib, Fludarabine, Cyclophosphamide, and Obinutuzumab (GA101) (iFCG) for Previously Untreated Patients With CLL With Mutated IGHV
	Nitin Jain ¹ (Primary Presenter), Philip Thompson ¹ , Jan Burger ¹ , Gautam Borthakur ¹ , Prithviraj Bose ¹ , Zeev Estrov ¹ , Alessandra Ferrajoli ¹ , Varsha Gandhi ¹ , William Plunkett ¹ , Wanda Lopez ¹ , Hagop Kantarjian ¹ , Susan O'Brien ² , Michael Keating ¹ , William Wierda ¹ ¹ The University of Texas MD Anderson Cancer Center, Houston, TX; ² University of California, Irvine, CA
5:45 PM	NOTCH1 Mutation as a Predictive Factor in the Context of Fludarabine and Cyclophosphamide (FC) With or Without Ofatumumab Treatment
	Eugen Tausch ¹ (Primary Presenter), Sven Estenfelder ¹ , Anna Dolnik ² , Tamara Blättle ¹ , Veronika Opatrna ¹ , Tadeusz Robak ² , Sebastian Grosicki ³ , Daniel Mertens ⁴ , Lars Bullinger ¹ , Celine Pallaud ⁵ , Hartmut Döhner ¹ , Stephan Stilgenbauer ¹ ¹ University Hospital of Ulm, Ulm, Germany; ² Medical University of Lodz, Lodz, Poland; ³ Silesian Medical University, Katowice, Poland; ⁴ German Cancer Research Center (DKFZ), Heidelberg, Germany; ⁵ Novartis Pharma AG, Basel, Switzerland
Monday, May 15, 2017	
Presentation Time	Title
2:00 PM	Durability of Responses on Continuous Therapy and Following Drug Cessation in Deep Responders With Venetoclax and Rituximab
	Danielle Brander ¹ (Primary Presenter), Mary Ann Anderson ² , Shuo Ma ³ , John F. Seymour ⁴ , Michael Y. Choi ⁵ , Thomas Kipps ⁵ , Lang Zhou ⁶ , Kevin Balbarin ⁶ , Betty Prine ⁶ , Maria Verdugo ⁶ , Su Young Kim ⁶ , L. Leanne Lash ⁶ , Andrew W. Roberts ² ¹ Duke Cancer Institute, Duke University Health System, Durham, NC; ² Royal Melbourne Hospital and Walter and Eliza Hall Institute of Medical Research, Parkville VIC, Australia; ³ Northwestern University, Evanston, IL; ⁴ Peter MacCallum Cancer Centre, Melbourne VIC, Australia; ⁵ University of California San Diego, Moores Cancer Center, La Jolla, CA; ⁶ AbbVie Inc., North Chicago, IL
3:15 PM	A Novel NF-κB Inhibitor Shows Activity in Richter Syndrome
	Tiziana Vaisitti ^{1,2} (Primary Presenter), Federica Gaudino ^{1,2} , Samedy Ouk ³ , Maria Moscvin ^{1,2} , Nicoletta Vitale ² , Francesca Arruga ^{1,2} , Sara Serra ^{1,2} , Cinzia Bologna ^{1,2} , Giorgio Inghirami ⁴ , John Allan ⁴ , Hsiou-Chi Liou ³ , Richard Furman ⁴ , Silvia Deaglio ^{1,2} ¹ Human Genetics Foundation; ² University of Torino; ³ ImmuneTarget Inc., San Diego, CA; ⁴ New York Presbyterian Hospital, Weill Cornell Medicine, New York, NY
3:30 PM	Allogeneic Hematopoietic Stem Cell Transplantation Using HLA-Compatible Donors in Younger High Cytogenetic Risk CLL Patients Results in Very High Long-Term Progression-Free Survival and May Therefore Favorably Compete With Sequential Targeted Therapy
	Michel van Gelder ¹ (Primary Presenter), Dimitris Ziagkos ² , Liesbeth de Wreede ² , Anja van Biezen ² , Peter Dreger ³ , Martin Gramatzki ⁴ , Matthias Stelljes ⁵ , Niels Smedegaard Andersen ⁶ , Nicolaas Schaap ⁷ , Antonin Vitek ⁸ , Dietrich Beelen ⁹ , Liisa Volin ¹⁰ , Jürgen Finke ¹¹ , Jacob Passweg ¹² , Matthias Eder ¹³ , Maciej Machaczka ¹⁴ , Julio Delgado ¹⁵ , William Krüger ¹⁶ , Ludek Raida ⁹ , Gerard Socié ¹⁸ , Pavel Jindra ¹⁹ , Boris Afanasyev ²⁰ , Eva Wagner ²¹ , Yves Chalandon ²² , Anja Henseler ²³ , Stefan Schoenland ³ , Nicolaus Kröger ²⁴ , Johannes Schetelig ²⁵ ¹ Maastricht University Medical Center, Maastricht, Netherlands; ² Dept Medical Statistics and Bioinformatics, Leiden, Netherlands; ³ University Hospital Heidelberg, Heidelberg, Germany; ⁴ University Hospital Schleswig-Holstein, Kiel, Germany; ⁵ University of Muenster, Meunster, Germany; ⁶ Rigshospitalet, Copenhagen, Denmark; ⁷ Radboud University-Nijmegen Medical Center, Nijmegen, Netherlands; ⁸ Institute of Hematology and Blood Transfusion, Czech Republic; ⁹ University Hospital of Essen, Essen, Germany; ¹⁰ Helsinki University Hospital Comprehensive Cancer Center, Helsinki, Finland; ¹¹ University of Freiburg, Breisgau, Germany; ¹² University Hospital, Basel, Switzerland; ¹³ Hannover Medical School, Hannover, Germany; ¹⁴ Karolinska University Hospital, Solna, Sweden; ¹⁵ Institut d'Investigacions Biomèdiques Augustí Pi i Sunyer (IDIBAPS), Universitat de Barcelona, Barcelona, Spain; ¹⁶ Universitätsmedizin Greifswald, Greifswald, Germany; ¹⁷ University Hospital, Olomouc, Czech Republic; ¹⁸ Hopital St Louis, Paris, France; ¹⁹ Charles University

	<p>Hospital, Pilsen, Czech Republic; ²⁰First State Pavlov Medical University of St Petersburg, St Petersburg, Russia; ²¹University Medical Center Mainz, Mainz, Germany; ²²Hôpitaux Universitaires de Genève, Geneva, Switzerland; ²³Leiden University Medical Center, Leiden, Netherlands; ²⁴University Hospital Eppendorf, Hamburg, Germany; ²⁵University Hospital of the Technical University Dresden, Dresden, Germany</p>
3:45 PM	<p>Reduced-Intensity Conditioning Allogeneic Stem Cell Transplantation for High-Risk CLL Followed by Preemptive MRD-Based Immunointervention: Final Results From the Phase II ICLL03 RICAC-PMM Trial</p>
	<p>Olivier Tournilhac¹(Primary Presenter), Le Garff Tavernier Magali², Reza Tabrizi³, Stéphanie Nguyen⁴, Lionel Mannone⁵, Patrice Chevallier⁵, Oumedaly Reman⁶, Tomowiak Cecile⁷, Cécile Borel⁸, Sylvie François⁹, Pascal Turlure¹⁰, Sebastien Maury¹¹, Gaelle Guillerm¹², Laure Vincent¹³, Luc-Matthieu Bilger¹⁴, Richard Lemal¹, Claire Quiney⁴, Lauren Veronese¹, Aurélie Cabrespine¹, Jacques-Olivier Bay^{1,15}, Véronique Leblond⁴, Nathalie Dhedin¹⁶</p> <p>¹Centre Hospitalier Universitaire (CHU), France; ²Assistance Publique – Hopitaux de Paris (AP-HP), Paris, France; ³CHU de Bordeaux, Pessac, France; ⁴CHU Pitié Salpêtrière, Paris, France; ⁵CHU de Nice, Nantes, France; ⁶CHU de Caen, Caen, France; ⁷CHU, Poitiers, France; ⁸Oncopole, Toulouse, France; ⁹CHU d'Angers, Angers, France; ¹⁰CHU de Limoges, Limoges, France; ¹¹CHU Henri Mondor, Creteil, France; ¹²CHU de Brest, Brest, France; ¹³CHU de Montpellier, Montpellier, France; ¹⁴CHU de Strasbourg, Strasbourg, France; ¹⁵Society of Bone Marrow Transplantation and Cellular Therapy (SFGM-TC), Paris, France; ¹⁶CHU Saint-Louis, Paris, France</p>

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128	<p>Outcomes of Standard of Care Regimens in Treatment-Naïve Chronic Lymphocytic Leukemia (CLL) Patients With Unmutated Immunoglobulin Heavy Chain Variable (IGHV) Genes</p> <p>Paolo Ghia^{1,2}, Peter Hillmen³, Carol Moreno⁴, Stephan Stilgenbauer⁵, Thomas Webb⁵, Anil Londhe⁶, Angela Howes⁶, Michelle Mahler⁶, Nishan Sengupta⁶, Mark Wildgust⁶ ¹Università Vita-Salute San Raffaele; ²Istituto Di Ricovero e Cura a Carattere Scientifico (IRCCS) Istituto Scientifico San Raffaele, Milano, Italy; ³The Leeds Teaching Hospitals, St James Institute of Oncology, Leeds, United Kingdom; ⁴Hospital de la Santa Creu i Sant Pau, Barcelona, Spain; ⁵University Hospital of Ulm, Ulm, Germany; ⁶Janssen Scientific Affairs, LLC, Horsham, PA</p>
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130	<p>Control or Cure in Chronic Lymphocytic Leukemia? Profile of the Long Responder Patients After One Line of Chemo-Immunotherapy: A Retrospective Study of the Filo</p> <p>Yann Guillermin¹, Charles Herbaux², Fabien Subtil³, Thérèse Aurran-Schleinitz⁴, Florence Cymbalista⁵, Remi Letestu⁵, Stephane Leprêtre⁶, Laribi Kamel⁷, Véronique Leblond⁸, Gilles Salles⁹, Pascal Godmer¹⁰, Henry Jardel¹⁰, Pierre Feugier¹¹, Frédérique Orsini-Piocelle¹², Vincent Lévy⁵, Anne-Sophie Michallet¹ ¹Centre Léon Bérard, Lyon, France; ²Centre Hospitalier Régional Universitaire (CHRU) Huriez, Lille, France; ³Centre Hospitalier Universitaire (CHU) Lyon Sud, Pierre-Bénite, France; ⁴Institut Paoli Calmette, Marseille, France; ⁵CHU Avicenne, Bobigny, France; ⁶Le Centre Henri-Becquerel (CLCC), Rouen, France; ⁷CH Le Mans, Le Mans, France; ⁸CHU La Pitié Salpêtrière, Paris, France; ⁹CHU Lyon-Sud, Pierre-Bénite, France; ¹⁰CH Bretagne Atlantique, Vannes, France; ¹¹CHU Nancy, Nancy, France; ¹²CH Annecy, Metz-Tessy, France</p>
131	<p>Deficiencies in Immunoglobulin Classes and Immunoglobulin G Subclasses Are Associated With Shorter Overall Survival in CLL</p> <p>Kyle Crassini¹, Eva Zhang², Shalini Balendran³, Jane Freeman⁴, Giles Best⁵, Cecily Forsyth³, Naomi Mackinlay², Ping Han⁶, William Stevenson², Stephen Mulligan² ¹Kolling Institute of Medical Research, Sydney, Australia; ²Royal North Shore Hospital, Sydney, Australia; ³Gosford Hospital, New South Wales, Australia; ⁴Sydney Adventist Hospital, Sydney, Australia; ⁵University of Sydney, Sydney, Australia; ⁶Laverty Pathology, New South Wales, Australia</p>

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	Lin Yang ¹ , Sara Beiggi ² , Sara Kost ² , Yunli Zhang ³ , Robert Schmidt ⁴ , Ganchimeg Ishdorj ² , Dhaliwal Dhali ² , Versha Banerji ² , Sabine Mai ¹ , Spencer Gibson ² , James Johnston ² ¹ University of Manitoba, Winnipeg, Canada; ² CancerCare Manitoba, Winnipeg, Canada; ³ Diagnostic Services of Manitoba, Winnipeg, Canada; ⁴ University of British Columbia, British Columbia, Canada
133	Current Practices in Managing Chronic Lymphocytic Leukemia (CLL): Elucidating Education Needs of Hematologists/Oncologists
	Emily Van Laar ¹ , Elaine Hamarstrom ¹ , Richard Furman ² ¹ Medscape LLC, New York, NY; ² Weill Cornell Medical College, New York, NY
134	Characteristics of Patients Treated for CLL in a Real-World Registry: Results From informCLL™
	Anthony Mato ¹ , Jeff Sharman ² , John Pagel ³ , Danielle Brander ⁴ , Karen Kadish ⁵ , Brian Tomlinson ⁶ , David Ipe ⁷ , Huiying Yang ⁷ , Israel Arango-Hisijara ⁷ , Bhavini Srivastava ⁷ , Brad Schenkel ⁸ , Jacqueline Barrientos ⁹ ¹ Abramson Cancer Center, University of Pennsylvania, Philadelphia, PA; ² Willamette Valley Cancer Institute and Research Center, Springfield, OR; ³ Swedish Cancer Institute Hematologic Malignancies Program, Seattle, WA; ⁴ Duke Cancer Institute, Duke University Health System, Durham, NC; ⁵ Tufts Medical Center, Boston, MA; ⁶ CancerCare, New York, NY; ⁷ Pharmacyclics LLC, an AbbVie Company, Sunnyvale, CA; ⁸ Janssen Scientific Affairs, LLC, Horsham, PA; ⁹ CLL Research and Treatment Program, Northwell Health Cancer Institute, Lake Success, NY
135	Rituximab Used as a Single Agent for Autoimmune Hemolytic Anemia (AIHA) in Treatment-Naïve Chronic Lymphocytic Leukemia (CLL) Patients Induces Also Significant Disease Response Without Toxicity
	Sotirios Sachanas ¹ , Gerassimos Pangalis ¹ , Efstathios Koulieris ¹ , Maria Moschogiannis ¹ , Xanthi Yiakoumis ¹ , Pantelis Tsirkinidis ¹ , Christina Kalpadakis ² , Chrysothea Zaroulis ¹ , Theodoros Vassilakopoulos ³ , Christina Kyrtsonis ³ , Maria Angelopoulou ³ ¹ Athens Medical Center, Athens, Greece; ² Heraklion University Hospital, Heraklion, Greece; ³ Laikon General Hospital, University of Athens, Athens, Greece
136	Final Follow-Up of a Phase I Dose-Ranging Study of Bendamustine and Rituximab (BR) in patients With Chronic Lymphocytic Leukemia (CLL) With Comorbidities
	Alexey Danilov ¹ , Lionel Lewis ² , Jennifer Brown ³ ¹ Oregon Health and Science University, Portland, OR; ² Dartmouth University, Lebanon, NH; ³ Dana-Farber Cancer Institute, Center for Chronic Lymphocytic Leukemia, Boston, MA
137	Impact of Dose-Difference in Comparator Arms Among Clinical Trials on Treatment Effect Size in a Network Meta-Analysis: A Case of First-Line Therapies in Chronic Lymphocytic Leukemia (CLL)
	Vasudha Bal ¹ , Mkaya Mwamburi ² , Teresa Cascella ³ , Smeet Gala ² , Anshul Shah ² , Merena Nanavaty ² ¹ Novartis Pharmaceuticals Corporation, East Hanover, NJ; ² Market Access Solutions, LLC, Raritan, NJ; ³ Novartis Pharma AG, Basel, Switzerland
138	Characteristics of Chronic Lymphocytic Leukemia in Japan (CLLRSG-01 Study)
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139	The Role of CD200 in the Diagnosis of Chronic Lymphocytic Leukemia
	Alba Mora ¹ , Eva Puy Vicente ² , Carolina Cuellar ² , Rosa Bosch ¹ , Laura Blanco ² , Rodrigo Martino ² , Jose M Ubeda ² , Jorge Sierra ² , Carolina Moreno ² , Josep Nomdedeu ² ¹ Institute of Biomedical Research (IIB Sant Pau), Barcelona, Spain; ² Hospital de la Santa Creu i Sant Pau, Barcelona, Spain
140	Persistently Low Lymphocyte Counts After FCR Therapy for Chronic Lymphocytic Leukemia Are Associated With Longer Overall Survival
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141	Detailed Analysis of Polypharmacy With Novel Agents in CLL: Investigating Drug Related Adverse Effects and Interactions
	Julian Lindsay, Sarah Hilmer, Daniel Scott, Sunaina Miranda, Stephen Mulligan Royal North Shore Hospital, Sydney, Australia
143	A Diagnostic Laboratory Experience of Interpreting Variants in Exons 2-10 of TP53 Detected by Next Generation Sequencing (NGS)
	Sophie Laird ¹ , Laura Chiecchio ¹ , Alison Callaway ¹ , Daniel Ward ¹ , Nick Cross ² ¹ Salisbury National Health Service (NHS) Foundation Trust, Salisbury, United Kingdom; ² Wessex Regional Genetics Laboratory, Salisbury, United Kingdom
144	AID and LPL mRNA Expression Identify Patients With Different Clinical Outcomes Within UM CLLs
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145	Comparative Safety Analysis of Currently Approved Anti-CD20 Monoclonal Antibodies for First-Line Treatment of Chronic Lymphocytic Leukemia (CLL)
	Mkaya Mwamburi ¹ , Vasudha Bal ² , Teresa Cascella ² , Smeet Gala ¹ , Anshul Shah ¹ , Merena Nanavaty ¹ ¹ Market Access Solutions, LLC, Raritan, NJ; ² Novartis Pharmaceuticals Corporation, East Hanover, NJ
146	Analysis of Primary Hemostasis Alterations Induced By Ibrutinib Assessed by Shutter Speed and Aggregometry Impedance
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147	CD27 Expression as a Novel Prognostic and Diagnostic Marker in Chronic Lymphocytic Leukemia and Other B-Cell Chronic Lymphoproliferative Disorders
	Jingbo Lu, Yi Miao, Lei Cao, XinYi Du, Hui Wang, Lu Liu, Li Wang, Wei Xu, Jian-Yong Li, Yujie Wu, Lei Fan, The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, China
148	Observational Study in Comorbid Patients With CLL Receiving First-Line Rituximab-Bendamustine
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149	Bendamustine Plus Rituximab in Untreated Chronic Lymphocytic Leukemia Patients: The MDA-CLL-2015-02 Study
	Adolfo De La Fuente ¹ , Begoña Navas ² , Maria Jose Terol ³ , Antonio Gutierrez ⁴ , Marta Callejas ⁵ , Jose Antonio Garcia Marco ⁶ , Maria Dolores Garcia-Malo ⁷ , Javier de la Serna ⁸ , Isabel Teresa González-Gascón y Marín ⁹ , Laura Garcia Sanchis ¹⁰ , Mónica Ballesteros ¹¹ , Celina Benavente ¹² , Isidro Jarque ¹³ , Juliana Ochoa Gullon ¹² , Paola Beneit ¹⁴ , Raquel de Oña ¹ , Carlos Montalabn ¹ , Mónica Estevez ¹ , Rebeca Iglesias ¹ , Antonio Diaz-Lopez ¹ , Patricia Baltasar ¹⁵ ¹ MD Anderson Spain, Madrid, Spain; ² Hospital Moncloa, Madrid, Spain; ³ Hospital Clinico de Valencia, Valencia, Spain; ⁴ Hospital Son Espases, Baleares, Spain; ⁵ Hospital Principe de Asturias, Madrid, Spain; ⁶ Hospital Universitario Puerta de Hierro, Madrid, Spain; ⁷ Hospital Morales Meseguer, Murcia, Spain; ⁸ Hospital Universitario 12 de Octubre, Madrid, Spain; ⁹ Hospital Infanta Leonor, Madrid, Spain; ¹⁰ Hospital General de Castellon, Castellon, Spain; ¹¹ Hospital General Universitario Gregorio Marañon, Madrid, Spain; ¹² Hospital Clínico San Carlos, Madrid, Spain; ¹³ Hospital Universitari I Politècnico La Fe, Valencia, Spain; ¹⁴ Hospital Universitario San Juan de Alicante, Alicante Beneit, Spain; ¹⁵ Hospital Universitario La Paz, Madrid, Spain

150	Quantitative Assessment of Leukemia Burden, Response and Redistribution During Ibrutinib Monotherapy in B-CLL by Total Tumor Mass Score (TTM) and CT Volumetry - KROHEM CLL2 Study
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151	Cytopenia at Diagnosis in Indian CLL Patients: Is It Always Advanced Disease?
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152	Prognostic Role of CLL Immunogenetics - Prospective Evaluation in Real-World Patients Treated With BR Regimen in the First Line
	Vladimir Strugov, Elena Stadnik, Andrey Rummyantsev, Tatyana Andreeva, Yulia Virts, Yulia Mirolyubova, Pavel Butylin, Andrey Zaritskey Federal Almazov North-West Medical Research Centre, St Petersburg, Russian Federation
153	Molecular Parameters Affecting Biology of CLL in Indian Sub Continent: Analysis of 100 Cases
	Renu Saxena, Ravi Kumar, Sudha Sazawal, Manoranjan Mahapatra All India Institute of Medical Sciences, New Delhi, India
154	Detection of Genetic Aberrations in CLL Using Multiplex Ligation-Dependent Probe Amplification (MLPA)
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155	Cost Burden of First-Line Treatment Failure in Patients With Chronic Lymphocytic Leukemia
	Song Wang ¹ , Marie-Hélène Lefeuvre ² , Patrick Lefeuvre ² , Hela Romdhani ² , Bruno Emond ² , Mekré Senbetta ¹ ¹ Janssen Scientific Affairs, LLC, Horsham, PA; ² Groupe d'Analyse, Ltée, Montreal, Quebec, Canada
156	Treatment Patterns of Newly Diagnosed Chronic Lymphocytic Leukemia (CLL) Patients in the U.S.
	Anna Wallace ¹ , Yen Wen Chen ¹ , Brad Schenkel ² , Whitney York ¹ , Song Wang ² ¹ HealthCore, Inc, Wilmington, Delaware; ² Janssen Scientific Affairs, LLC, Horsham, PA
157	Demographic Characteristics and Care Pathways of Patients With Chronic Lymphocytic Leukemia in Lower-Normandy (France): A Registry-Based Real-Life Vision
	Edouard Cornet ¹ , Olivier Sérée ² , Julie Pasquier ² , Virginie Duchenet ¹ , Jean-Marc Poncet ¹ , Gandhi Damaj ¹ , Xavier Blaizot ² , Xavier Troussard ¹ ¹ Centre Hospitalier Universitaire (CHU) Caen, Normandy, France; ² Réseau Régional de Cancérologie Onco Basse-Normandie, Normandy, France
158	First Chronic Lymphocytic Leukemia Registry in Uruguay
	Isabel Moro ¹ , Carolina Oliver ² , Matilde Boada ³ , Hugo Giordano ⁴ , Cecilia Canessa ⁵ , Daniela Lens ² , Carolina Sosa ⁶ , Cristina Otero ⁷ , Raul Gabús ⁶ , Lina Foren ³ , Ada Caneiro ³ , Cecilia Guillermo ³ ¹ Sociedad de Hematología del Uruguay, Montevideo, Uruguay; ² Hospital de Clínicas, Universidad de la República, Montevideo, Uruguay; ³ Uruguayan Society of Hematology, Montevideo, Uruguay; ⁴ Asociacion Española, Montevideo, Uruguay; ⁵ Médica Uruguaya, Centro de Asistencia del Sindicato Médico del Uruguay, Montevideo, Uruguay; ⁶ Hospital Maciel, Montevideo, Uruguay; ⁷ Martinez Prado, Montevideo, Uruguay
159	Validity and Reproducibility of the CLL-IPI and the MDACC Prognostics Indexes in a Cohort of Spanish Patients
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160	Clinico-Hematological Profile and Prognostic Values of Different Biological Factors in Chronic Lymphocytic Leukemia: A Single Institute Experience From Northern India
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161	A Higher Percentage of Abnormal Nuclei Detected by FISH Confers a Worse Outcome in Chronic Lymphocytic Leukemia
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162	The Impact of Chemo/Immune Therapy-Related Cytopenias on the Clinical Course of Chronic Lymphoid Leukemia
	Mufide Okay, Ibrahim Celalettin Haznedaroglu, Umit Yavuz Malkan, Gursel Gunes, Nevin Alayvaz Aslan, Osman Ilhami Ozcebe, Salih Aksu, Yahya Buyukasik, Haluk Demiroglu, Nilgun Sayinalp Hacettepe University, Ankara, Turkey
163	Fludarabine, Cyclophosphamide and Rituximab (FCR) in Front-Line Treatment of Patients With Chronic Lymphocytic Leukemia (CLL)
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164	Development of BCR Signaling Markers in CLL and Other B-Cell Malignancies Using Phosphotyrosine Profiles
	Kapil Meleveedu ¹ , Kazuya Machida ¹ , Jeffrey Wasser ¹ , Adam Boruchov ² , Bruce Mayer ² , Karen Hook ¹ , Adam Lafaontaine ¹ , Yeuming Chang ¹ ¹ University of Connecticut Health Center, Genetics and Genome Sciences, Raymond and Beverly Sackler Laboratory of Genetics and Molecular Medicine, Farmington, CT; ² St Francis Hospital and Medical Center, St Francis/Mt Sinai Regional Cancer Center, Farmington, CT
165	Liver Dysfunction in Chronic Lymphocytic Leukemia: Prevalence, Outcomes, and Pathological Findings
	Paul Hampel, Sara Achenbach, Rebecca King, Douglas Simonetto, Melissa Larson, Curtis Hanson, Timothy Call, Wei Ding, Saad Kenderian, Deborah Bowen, Michael Conte, Susan Schwager, Susan Slager, Kari Chaffee, Neil Kay, Tait Shanafelt, Sameer Parikh Mayo Clinic, Rochester, MN
166	Prognostic Impact of Pre-Existing Type 2 Diabetes Mellitus in Chronic Lymphocytic Leukemia
	Rui Gao, Wei Xu, Jin-Hua Liang, Li Wang, Hua-Yuan Zhu, Lei Fan, Jian-Yong Li The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China
167	Medical Comorbidities as Assessed by CIRS Impact Outcomes Following Chemo-Immunotherapy in Chronic Lymphocytic Leukemia: A Multicenter Retrospective Analysis
	MaxGordon ¹ , Spencer James ² , Sudhir Manda ² , Alexey Danilov ³ ¹ Oregon Health and Science University, Portland, OR; ² Dartmouth University, Hanover, NH; ³ Oregon Health and Science University, Portland, OR
168	The Prognostic Impact of Serum Antinuclear Antibodies on Overall Survival in Patients With Chronic Lymphocytic Leukemia
	Qian Sun, Li Wang, Hua-Yuan Zhu, Wei Wu, Jin-Hua Liang, Lei Cao, Yi Xia, Jia-Zhu Wu, Yan Wang, Rong Wang, Lei Fan, Jian-Yong Li, Wei Xu The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Nanjing, China
169	Vaccination With Dendritic Cells Loaded With Autologous Leukemic Cells in Combination With Low-Dose Lenalidomide in Chronic Lymphocytic Leukemia (CLL) Patients: An Early Clinical Trial
	Marzia Palma, Lotta Hansson, Tom Mulder, Lars Adamson, Barbro Näsman-Glaser, Kia Heimersson, Fariba Mozaffari, Ann Svensson, Giusy Gentilcore, Anders Österborg, Håkan Mellstedt Karolinska Institutet, Stockholm, Sweden
170	Prognostic Study of Clinico-Biological Characteristics in Treatment-Naïve Patients Affected by Chronic Lymphocytic Leukaemia With Trisomy 12
	Francesco Autore ¹ , Paolo Strati ² , Idanna Innocenti ¹ , Francesco Corrente ¹ , Livio Trentin ³ , Agostino Cortelezzi ⁴ , Carlo Visco ⁵ , Marta Coscia ⁶ , Antonio Cuneo ⁷ , Alessandro Gozzetti ⁸ , Francesca Romana Mauro ⁹ , Marco Montillo ¹⁰ , Massimo Gentile ¹¹ , Fortunato Morabito ¹¹ , Stefano Molica ¹² , Paolo Falcucci ¹³ , Giovanni D'Arena ¹⁴ , Roberta Murru ¹⁵ , Donatella Vincelli ¹⁶ , Gianluigi Reda ¹⁷ , Maria Chiara Tisi ⁵ , Candida Vitale ¹⁸ , Gian Matteo Rigolin ¹⁹ , Alessandra Ferrajoli ² , Luca Laurenti ²⁰ ¹ Catholic University of the Sacred Heart, A. Gemelli Policlinic, Rome, Italy; ² MD Anderson Cancer Center, Houston, TX; ³ University of Padova, Padova, Italy; ⁴ Istituto Di Ricovero e Cura a Carattere Scientifico (IRCCS) Ca' Granda – Università degli

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171	Definition of Disease-Progression Risk Stratification in Untreated Chronic Lymphocytic Leukemia Using Combined Clinical, Molecular and Virological Variables
	Shu-Chao Qin, Lei Fan, Wei Xu, Jian-Yong Li The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Jiangsu, China
172	Chinese External Validation of the Cochrane Haematological Malignancies Group Prognostic Index for Chronic Lymphocytic Leukemia Patients
	Shu-Chao Qin, Wei Xu, Jian-Yong Li The First Affiliated Hospital of Nanjing Medical University, Jiangsu Province Hospital, Jiangsu, China
173	TIGIT as a New Target for Checkpoint Inhibition for Chronic Lymphocytic Leukemia
	Kemal Catakovic, Franz Gassner, Christoph Rathswohl, Richard Greil, Tanja Hartmann, Roland Geisberger Laboratory for Immunological and Molecular Cancer Research (LIMCR), Paracelsus Medical University Salzburg, Salzburg, Austria
174	Secondary Cancers, Major Infections and Autoimmune Diseases Occur in Different Subsets of Patients With Chronic Lymphocytic Leukemia
	Andrea Visentin, Silvia Imbergamo, Federica Frezzato, Carmela Gurrieri, Veronica Martini, Filippo Severin, Leonardo Martinello, Marco Pizzi, Edoardo Scomazzon, Francesco Piazza, Monica Facco, Gianpietro Semenzato, Livio Trentin University of Padua, Padua, Italy
175	Expression of Autophagy Related Genes in Chronic Lymphocytic Leukemia Is Associated With Disease Course
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176	First-Line Obinutuzumab Monotherapy in CLL
	Nathanael Gay, Eliana Kozin, Craig Okada, Stephen Spurgeon Oregon Health and Science University, Knight Cancer Institute, Portland, OR
177	Cell Surface Activated, Bispecific "Demibodies" for Highly Specific CLL Cell Detection and Killing
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178	A Phase II Study of the Combination of Lenalidomide and Rituximab as Frontline Treatment in Patients With Chronic Lymphocytic Leukemia
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179	Stereotyped BCR Receptor Pattern and IGHV Mutational Status in Macedonian Patients With Chronic Lymphocytic Leukemia (CLL)
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	Republic of Macedonia
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200	PALB2 Mutational Status in CLL – A Potential Therapeutic Target?
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201	TP53 Mutational Profile in CLL: Some Ariadne's Threads in a Complex Landscape? A Retrospective Study of the FILO Group
	Fanny Baran-Marszak ¹ , Valérie Vidal ¹ , Virginie Eclache ¹ , Lauren Veronese ² , Olivier Tournilhac ³ , Frederic Davi ¹ , Florence Nguyen-Khac ⁴ , Véronique Leblond ⁴ , Eric Delabesse ⁵ , Loic Ysebaert ⁵ , Audrey Bidet ⁶ , Marie Sarah Dilhuydy ⁷ , Stephanie Poulain ⁸ , Charles Herbaux ⁹ , Marie-Hélène Estienne ¹⁰ , Caroline Dartigeas ¹¹ , Cedric Pastoret ¹² , Sophie de Guibert ¹² , Stéphane Giraudier ¹³ , Jehan Dupuis ¹³ , Pascale Cornillet-Lefebvre ¹⁴ , Anne Quinquenel ¹⁴ , Sophy Laibe ¹⁵ , Thérèse Aurran-Schleinitz ¹⁵ , Dina Naguib ¹⁶ , Xavier Troussard ¹⁶ , Pierre Sulobert ¹⁷ , Anne-Sophie Michallet ¹⁸ , Catherine Thieblemont ¹⁹ , Remi Letestu ¹ , Gregory Lazarian ¹ , Vincent Lévy ¹ , Thierry Soussi ²⁰ , Florence Cymbalista ¹ ¹ Centre Hospitalier Universitaire (CHU) Avicenne, Bobigny, France; ² CHU de Clermont-Ferrand, Clermont-Ferrand, France; ³ CHU Estaing, Clermont-Ferrand, France; ⁴ CHU Pitié-Salpêtrière, Paris, France; ⁵ CHU Toulouse, Toulouse, France; ⁶ CHU de Bordeaux, Bordeaux, France; ⁷ Hôpital Haut-Lévêque, Bordeaux, France; ⁸ CHU Lille, Lille, France; ⁹ Lille2, Lille, France; ¹⁰ CHU Tours, Tours, France; ¹¹ CHRU Hôpital de Tours Bretonneau, Tours, France; ¹² CHU Rennes, Rennes, France; ¹³ CHU Henri Mondor, Creteil, France; ¹⁴ CHU Reims, Reims, France; ¹⁵ Institut Paoli-Calmettes, Marseille, France; ¹⁶ CHU de Caen, Caen, France; ¹⁷ Hospices Civils de Lyon, Lyon, France; ¹⁸ Centre Léon Bérard, Lyon, France; ¹⁹ Hopital St Louis APHP, Paris, France; ²⁰ Karolinska Institutet, Stockholm, Sweden
202	Unraveling CLL Progression in Unmutated Patients: Linking Functional AID Expression With Disease Evolution
	Noé Seija ¹ , Daniel Prieto ¹ , Julieta Sepulveda ² , Pablo Morande ¹ , Angimar Uriepero ¹ , Marcelo Navarrete ² , Pablo Oppezzo ¹ ¹ Institut Pasteur of Montevideo, Montevideo, Uruguay; ² Universidad de Magallanes, Punta Arenas, Chile
203	Genetic Alterations and Clonal Dynamics Observed in CLL Relapse and Richter Transformation After Ibrutinib Treatment
	Jimmy Lee, Kadri Sabah, Carrie Fitzpatrick, Yue L Wang University of Chicago, Chicago, IL
204	STAT3 Regulates miRNA-21 to Target SPRY2 in CLL Patients With Poor Prognosis
	Shantaram Joshi, Ashima Shukla, Vipul Shukla, Nagendra Chaturvedi, Gregory Bociek, Samuel Pirruccello, Hamid Band University of Nebraska Medical Center, Omaha, NE
205	Tracking Low-Burden TP53-Mutated Subclones During CLL Treatment and Remission Using ROR1 Separation
	Jitka Malcikova ^{1,2} , Jana Kotaskova ^{1,2} , Sarka Pavlova ^{1,2} , Nikola Tom ¹ , Karol Pal ¹ , Anna Panovska ² , Yvona Brychtova ² , Michael Doubek ² , Sarka Pospisilova ^{1,2} ¹ Central European Institute of Technology (CEITEC), Masaryk University; ² University Hospital Brno, Brno, Czech Republic
206	A Randomized Phase III Trial to Determine if a Pneumococcal Conjugate Vaccine Can Improve the Immune Response Compared to a Polysaccharide Pneumococcal Vaccine in Patients With Untreated Chronic Lymphocytic Leukemia
	Eva Kimby ¹ , Tobias Svensson ² , Magdalena Kättström ³ , Ylva Hammarlund ⁴ , Daniel Roth ⁵ , Per-Ola Andersson ⁶ , Magnus Svensson ⁷ , Ingmar Nilsson ⁸ , Lars Rombo ¹ , Honar Cherif ⁹ ¹ Karolinska Institute, Stockholm, Sweden; ² Uppsala University, Uppsala, Sweden; ³ Örebro University Hospital, Örebro, Sweden; ⁴ Falun Hospital, Falun, Sweden; ⁵ Lund University Hospital, Lund, Sweden; ⁶ South Älsborgs lasarett, Borås Sweden; ⁷ Eskilstuna Hospital, Eskilstuna, Sweden; ⁸ Karlstad Hospital, Karlstad, Sweden; ⁹ Akademiska University Hospital, Uppsala, Sweden
207	Uncoupling of BCR Internalization and Signaling in Normal and Chronic Lymphocytic Leukemia B-Cells
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208	High Throughput Immunoprofiling of Chronic Lymphocytic Leukemia Patients Assigned to Stereotyped Subset #4: Novel Insights into the Depth, Diversity and Temporal Dynamics of Clonal Evolution
	Katerina Gemenetzi ¹ , Evangelia Stalika ¹ , Anna Vardi ¹ , Fotis E. Psomopoulos ¹ , Achilles Anagnostopoulos ² , Kostas Stamatopoulos ¹ , Anastasia Hadzidimitriou ¹ , Lesley Ann Sutton ³ ¹ Institute of Applied Biosciences, Center for Research and Technology Hellas (CERTH), Thessaloniki, Greece, Thessaloniki, Greece; ² Gene and Cell Therapy Centre, George Papanicolaou Hospital, Thessaloniki, Greece; ³ Uppsala University, Uppsala, Sweden
209	T-Cell Exhausted Phenotype in Early Stages and Progressed Chronic Lymphocytic Leukemia (CLL)
	Isabel Jiménez ¹ , Sabela Bobillo ¹ , Pau Abrisqueta ¹ , Carles Palacio ¹ , Júlia Carabía ¹ , Maria Jose Terol-Castera ² , Marta Crespo ¹ , Francesc Bosch ¹ ¹ Vall d'Hebron Institute of Oncology, Barcelona, Spain; ² Hospital Clínico, INCLIVA Research Institute, University of Valencia, Valencia, Spain
210	RXC005, A Potent and Selective, Reversible BTK Inhibitor Targeting Both Wild-Type and Mutant C481S BTK With Potent Efficacy in ABC-DLBCL Xenograft Mouse Models
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211	Optimization of Chromosomal Analysis in Patients With Chronic Lymphocytic Leukemia (CLL) by Spectral Karyotyping (SKY) – Unrevealing the Evolution of Complex Karyotype
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212	ABT-199 in Combination With Rituximab or GS-9973: Implications for Macrophage Phagocytosis and T-Cell Mediated ABT-199 Resistance in CLL Patients
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213	Structural and Functional Alteration of the Complement System in Chronic Lymphocytic Leukemia Patients
	Regina Michelis, Masad Barhoum, Andrei Braester Galilee Medical Center, Nahariya, Israel
214	A Study of Latent CMV Viral Load and CD8+ CMV-Specific T-Cell Responses in Patients With CLL by Stage of Disease
	Helen Parry ¹ , Jianmin Zuo ¹ , Mikhail Mirajkar ¹ , Mike Griffiths ² , Guy Pratt ¹ , Paul Moss ¹ ¹ University of Birmingham, Birmingham, United Kingdom; ² Birmingham University Hospital, Birmingham, United Kingdom
215	Elucidation of miRNAs Associated With Disease Progression and Response in Chronic Lymphocytic Leukemia
	Ritu Gupta ¹ , Lata Rani ¹ , 2Nitin Mathur ¹ , Kamy Singh ² , Durai Sundar ² , Ajay Gogia ¹ , Lalit Kumar ¹ , Atul Sharma ¹ ¹ All India Institute of Medical Sciences, New Delhi, India; ² Indian Institute of Technology (IIT), New Delhi, India
216	Cross-Resistance and Synergy Between Idelalisib, Bendamustine, and Other Agents in Chronic Lymphocytic Leukemia Cells
	Sara Kost ¹ , Eric Bouchard ² , Versha Banerji ^{1,3} , Spencer Gibson ³ , Sachin Katyal ^{1,3} , James Johnston ³ ¹ Cancercare Manitoba, Manitoba, Canada; ² Université de Saint-Boniface, Manitoba, Canada; ³ Research Institute in Oncology and Hematology, University of Manitoba, Manitoba, Canada
217	Aggressive Lymphomas Secondary to B-Chronic Lymphocytic Leukemia and Low-Grade Non-Hodgkin Lymphoma: A Monocentric Retrospective Review
	Kenza El Alaoui, Marie Maerevoet, Marianne Paesmans, Marie Verduyssen, Chloe Spilledoudt, Alexandre de Wind, Erwin Woff, Martine Roelandts, Pierre Heimann, Brigitte Cantinieaux, Dominique Bron Institut Jules Bordet, Université Libre de Bruxelles, Brussels, Belgium

218	Circulating Mucosal-Associated Invariant T (MAIT) Cells in Chronic Lymphocytic Leukemia (CLL)
	Marice Alcantara ¹ , Jason Kelly ¹ , Morgan Wallace ¹ , George Kannourakis ² , Stuart Berzins ¹ ¹ Fiona Elsey Cancer Research Institute/Federation University, Ballarat, Australia; ² Fiona Elsey Cancer Research Institute, Ballarat, Wendouree, Australia
219	Hodgkin Lymphoma Transformation of Chronic Lymphocytic Leukemia (CLL) in a Patient Under Ibrutinib Therapy
	Sotirios Sachanas ¹ , Gerassimos Pangalis ¹ , Chrysothea Zaroulis ¹ , Maria Moschogiannis ¹ , Xanthi Yiakoumis ¹ , Efstathios Koulieris ¹ , Christina Kalpadakis ² , Dimitra Rontogiannis ³ ¹ Athens Medical Center, Phychikon Branch, Athens, Greece; ² Heraklion University Hospital, Heraklion, Greece; ³ Evangelismos General Hospital, Athens, Greece
220	Functional Implications and Interaction of Macrophages in the Leukemic CLL Microenvironment Upon Genotoxic Stress
	Daniela Vorholt, Christian Pallasch University Hospital Cologne, Cologne, Germany
221	Cytogenetic characterization of large cell transformation (Richter's transformation) in 32 chronic lymphocytic leukemia/small lymphocytic lymphoma patients
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301	Gene Mutations Can Be Detected Not Only in B Lymphocytes but also in Hematopoietic Progenitors in Chronic Lymphocytic Leukemia Patients and Allow Us to Define Better the Prognosis of Cases With Early-Stage Disease and 13q Deletion
	Maria Hernandez Sanchez ¹ , Miguel Quijada-Álamo ¹ , Ana Eugenia Rodríguez-Vicente ¹ , Cristina Robledo ¹ , Rocío Benito ¹ , Adrián Montaña ¹ , Jesús-María Hernández-Sánchez ¹ , Ana-África Martín ¹ , Isabel Teresa González-Gascón y Marín ² , José-Ángel Hernández ² , Jesús María Hernández ¹ ¹ Hospital Universitario de Salamanca, Cancer Research Center, Salamanca, Spain; ² Hospital Universitario Infanta Leonor, Madrid, Spain
302	Autophagy is Regulated by B-Cell Receptor Signalling in Chronic Lymphocytic Leukemia
	Lindsay Smith ¹ , Laura Karydis ¹ , Rachel Dobson ¹ , Rena Liu ¹ , Jonathan Strefford ¹ , Freda Stevenson ¹ , Francesco Forconi ¹ , Graham Packham ¹ , Cragg Mark ^{1,2} , David Tumbarello ¹ , Matthew Blunt ¹ , Andrew Steele ¹ ¹ University of Southampton, Southampton, United Kingdom; ² Southampton General Hospital, Southampton, United Kingdom
303	Identification of CLL BCR Stereotypic Receptors in Normal Human Splenic Lymphocytes by Applying a NGS Approach
	Monica Colombo ^{1,2} , Davide Bagnara ³ , Daniele Reverberi ² , Giovanna Cutrona ² , Margherita Squillario ³ , Michela Mazzocco ⁴ , Gian Luigi Ravetti ² , Manlio Ferrarini ² , Franco Fais ³ ¹ University Hospital, Genoa, Italy; ² Istituto Di Ricovero e Cura a Carattere Scientifico (IRCCS) Azienda Ospedaliera Universitaria (AOU) San Martino-IST, Genoa, Italy; ³ University of Genova, Genova, Italy; ⁴ Ospedale Galliera, Medical Oncology, Genoa, Italy
304	Germline Rare Variant Association Analysis in Chronic Lymphocytic Leukemia
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305	Transcriptome Sequencing Provides Novel Insights into the Biology of Chronic Lymphocytic Leukemia: Focus on Major Stereotyped Subsets
	Diego Cortese ¹ , Viktor Ljungstrom ¹ , Karla Plevova ² , Davide Rossi ³ , Evangelia Stalika ⁴ , Andreas Agathangelidis ⁴ , Lydia Scarfo ⁵ , Alice F. Muggen ⁶ , Anton W. Langerak ⁶ , Sarka Pospisilova ² , Frederic Davi ⁷ , Paolo Ghia ⁵ , Kostas Stamatopoulos ⁴ , Richard Rosenquist Brandell ¹ , Lesley Ann Sutton ¹ ¹ Uppsala University, Uppsala, Sweden; ² Central European Institute of Technology (CEITEC), Masaryk University, Czech Republic; ³ Oncology Institute of Southern Switzerland (IOSI), Bellinzona, Switzerland; ⁴ Centre for Research and Technology-Hellas, Hellas, Greece; ⁵ San Raffaele Hospital, Milano, Italy; ⁶ Erasmus University Medical Center, Rotterdam, Netherlands; ⁷ Assistance Publique – Hopitaux de Paris (AP-HP), Paris, France
306	Targeting Chronic Lymphocytic Leukaemia (CLL) Cellular Migration With the Dual mTor Inhibitor AZD8055: an Emerging Therapeutic Approach
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307	Immunotherapeutic Approaches Using Selective HDAC6 Inhibitors Alone or in Combination With BCR Inhibitors
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308	Bcl-2 Regulation of Calcium Signals Contributes to CLL Pathogenesis, a Novel Therapeutic Target
	Clark Distelhorst Case Western Reserve University, Cleveland, OH
309	The Proliferative Fraction of CLL B Cells Exhibits a Dual Immunologic Phenotype Suggesting Enhanced Antigen-Presentation, Integrin Responsiveness, and IL-4 Receptiveness
	Joy Yan ¹ , Florencia Palacios ¹ , Wentian Li ¹ , Sophia Yancopoulos ¹ , Carlo Calissano ^{1,2} , Jacqueline Barrientos ³ , Steven L. Allen ^{1,4,5,6} , Jonathan E. Kolitz ^{1,4,5,6} , Kanti Rai ^{1,4,5,6} , Nicholas Chiorazzi ¹ ¹ Feinstein Institute of Medical Research, Manhasset, NY; ² Northwell Health Cancer Institute, New York, NY; ³ CLL Research and Treatment Program, Northwell Health Cancer Institute, New York, NY; ⁴ Hofstra Northwell Health Cancer Institute, New Hyde Park, NY; ⁵ North Shore University Hospital, Manhasset, NY; ⁶ Long Island Jewish Medical Center, Queens, NY
310	Lack of p66Shc in the CLL Mouse Model μ-TCL1 Exacerbates Nodal and Extranodal Infiltration of Leukemic Cells Which Can Undergo Richter's Transformation
	Laura Patrussi ¹ , Nagaja Capitani ² , Francesca Cattaneo ¹ , Cristina Ulivieri ¹ , Noemi Manganaro ¹ , Massimo Granai ¹ , Stefania Gobessi ³ , Dimitar Efremov ³ , Lorenzo Leoncini ¹ , Cosima Baldari ¹ ¹ University of Siena, Siena, Italy; ² University of Florence, Florence, Italy; ³ Molecular Hematology, International Centre for Genetic Engineering and Biotechnology (ICGEB), Trieste, Italy
311	Microenvironmental Stimuli Regulate the Expression of miR-21 and Tumor Suppressor Genes PTEN, PIAS3 and PDCD4 Through ZAP-70 Protein in Chronic Lymphocytic Leukemia
	Júlia Carabia ¹ , Cecilia Carpio ¹ , Pau Abrisqueta ¹ , Isabel Jiménez ¹ , Noelia Purroy ¹ , Eva Calpe ¹ , Carles Palacio ¹ , Francesc Bosch ² , Marta Crespo ¹ ¹ Vall d'Hebron Institute of Oncology, Barcelona, Spain; ² Hospital Vall d'Hebron, Barcelona, Spain
312	GIMAP5 Protein Is Over Expressed in CLL Proliferative Subsets and Linked With Cell Death Inhibition
	Cecilia Abreu ¹ , Florencia Palacios ¹ , Daniel Prieto ¹ , Claudia Ortega ¹ , Noé Seija ¹ , Gonzalo Greif ¹ , Tamara Fernández-Calero ¹ , Victoria Irigoien ² , Ana Ines Landoni ³ , Guillermo Dighiero ¹ , Pablo Oppezzo ¹ ¹ Institut Pasteur de Montevideo, Montevideo, Uruguay; ² Hospital de Clínicas, Universidad de la República, Montevideo, Uruguay; ³ Hospital Maciel, Administración de los Servicios de Salud del Estado (ASSE), Servicio de Hematología, Montevideo, Uruguay
313	NOTCH-Signaling in the Tumor Microenvironment Is Required for Canonical WNT Signaling in CLL Cells

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314	Targeted Sequencing for Clinical Investigation in Chronic Lymphocytic Leukemia on Behalf of the FILO Group Damien Roos Weil ¹ , Jerome Lambert ² , Nathalie Droin ³ , Frederik Damm ⁴ , Romain Guièze ⁵ , M'Boypa Diop ³ , Pierre Feugier ⁶ , Stephane Leprêtre ⁷ , Xavier Troussard ⁸ , Vincent Ribrag ³ , Sandrine Vaudaux ⁹ , Roselyne Delepine ¹⁰ , Sophie Raynaud ¹¹ , Julie Lejeune ¹ , Caroline Dartigeas ¹² , Eric Van den Neste ¹³ , Claude Lesty ¹⁴ , Olivier Bernard ³ , Florence Nguyen-Khac ¹⁴ ¹ Hôpital Pitié-Salpêtrière, Service d'Hématologie, Paris, France; ² Hôpital Saint Louis, Service de Biostatistique et Information Médicale, Paris, France; ³ Gustave Roussy, U1170, Villejuif, Ilde France, France; ⁴ Charité, University Medical Center, Berlin, Germany; ⁵ Centre Hospitalier Universitaire (CHU) Clermont-Ferrand, Clermont-Ferrand, France; ⁶ CHU Nancy, Meurthe-et-Moselle, France; ⁷ Le Centre Henri-Becquerel (CLCC), Rouen, Seine-Maritime, France; ⁸ CHU de Caen, Caen, France; ⁹ Centre Régional de Lutte Contre le Cancer, Henri Becquerel, Rouen, France; ¹⁰ CHU Tours, Tours, France; ¹¹ CHU Nice, Nice, France; ¹² Centre Hospitalier Régional Universitaire (CHRU) Hôpital de Tours Bretonneau, Tours, France; ¹³ Cliniques Universitaires UCL Saint-Luc, Brussels, Belgium; ¹⁴ CHU Pitié-Salpêtrière, Paris, France
315	P66Shc Deficiency Promotes B Cell Chemotaxis by Enhancing CXCR4 and CCR7 Recycling in Chronic Lymphocytic Leukemia Nagaja Capitani ¹ , Laura Patrussi ² , Francesca Cattaneo ² , Noemi Manganaro ² , Alessandra Gamberucci ² , Federica Frezzato ³ , Pier Giuseppe Pelicci ⁴ , Mario Milco D'Elios ¹ , Livio Trentin ³ , Gianpietro Semenzato ³ , Cosima Baldari ² ¹ University of Florence, Florence, Italy; ² University of Siena, Siena, Italy; ³ University of Padova, Padua, Italy; ⁴ European Institute of Oncology, Milan, Italy
316	Modulation of sIgM-Mediated Intracellular Signaling Pathways by CD180 Toll-Like Receptor in Chronic Lymphocytic Leukaemia (CLL) Cells Nino Porakishvili ¹ , Nadeeka Rajakaruna ¹ , Uzma Sayed ¹ , Tamar Tsertsvadze ² , Andrew Steele ³ , Nunu Mitskevich ² , Amit Nathwani ⁴ , Rajendra Damle ⁵ , Edward Clark ⁶ , Kanti Rai ⁵ , Nicholas Chiorazzi ⁵ , Peter Lydyard ¹ ¹ University of Westminster, London, United Kingdom; ² Javakhishvili Tbilisi State University, Tbilisi, Georgia; ³ University of Southampton, Southampton, United Kingdom; ⁴ University College Hospital, London, United Kingdom; ⁵ Feinstein Institute of Medical Research, Manhasset, NY; ⁶ University of Washington, Seattle, WA
317	DNA Enhancer Hypomethylation Corresponds With Gene Expression Signatures Preferentially Disrupted by BET Bromodomain and CDK7 Inhibition in Chronic Lymphocytic Leukemia Austin Shull, Lirong Pei, Qimei Han, Justin Choi, Huidong Shi Augusta University, Augusta, Georgia
318	Chronic Lymphocytic Leukemia: JAK2/STAT3 Pathway Dysregulation Involvement in Neoplastic Clone Survival Filippo Severin ¹ , Federica Frezzato ¹ , Veronica Martini ¹ , Flavia Raggi ¹ , Valentina Trimarco ¹ , Leonardo Martinello ¹ , Andrea Visentin ¹ , Edoardo Scomazzon ¹ , Monica Facco ¹ , Gianpietro Semenzato ¹ , Livio Trentin ² ¹ University of Padua, Padua, Italy; ² University of Padova, Padua, Italy
319	Secretory IgM Induces the Accumulation of CD11b+/Ly6G+ Myeloid-Derived Suppressor Cells in Chronic Lymphocytic Leukemia-Bearing Mice Chih-hang Tang, Chih-Chi Hu The Wistar Institute, Philadelphia, PA
320	Increased Down-Regulation of BACH2 Gene in Lymphocytes Subsets From CLL Patients Compared to Older Healthy Donors Luan Dang, Karen Willard Gallo, Soizic Garaud, Hugues Duveillier, Jean Nicolas Lodewycks, Cinzia Solinas, Pushpamali De Silva, Chunyan Gu-Trantien, Basile Stamatopoulos, Catherine Sibille, Dominique Bron, Institut Jules Bordet, Université Libre de Bruxelles (ULB), Brussels, Belgium
321	The Peripheral Immune Cell Landscape of B-CLL Patients: An Analysis by Mass Cytometry Anne-Sophie Michallet ¹ , Thibault Andrieu ² , Paul Mondiere ³ , Joris Gutrin ³ , Hugo Servanton ³ , Frederic Davi ⁴ , Sebastien Dussurgey ² , Thierry Defrance ³ ¹ Centre Léon Bérard, Lyon, France; ² SFR Biosciences, Lyon, France; ³ International Center for Infectiology Research (CIRI), France; ⁴ Assistance Publique – Hopitaux de Paris (AP-HP), Paris, France
322	Loss of a Novel Negative Regulator of mTOR in CLL Patients Tara Roberts Western Sydney University, New South Wales, Australia

323	Synergism Between CD180 and IgD-Mediated Phosphorylation of p38MAPK and Apoptosis of p38MAPK-Signaller Chronic Lymphocytic Leukaemia (CLL) Cells
	Nino Porakishvili ¹ , Uzma Sayed ¹ , Kristina Zaitseva ¹ , Nadeeka Rajakaruna ¹ , Tamar Tsertsvadze ² , Nunu Mitskevich ² , Amit Nathwani ³ , Rajendra Damle ⁴ , Edward Clark ¹ , Kanti Rai ⁴ , Nicholas Chiorazzi ⁴ , John Murphy ¹ , Peter Lydyard ¹ ¹ University of Westminster, London, United Kingdom; ² Javakhishvili Tbilisi State University, Tbilisi, Georgia; ³ University College Hospital, London, United Kingdom; ⁴ Feinstein Institute of Medical Research, Manhasset, NY
324	Role of HSP70-HSF1 Axis in the Pathogenesis of Chronic Lymphocytic Leukemia
	Federica Frezzato ¹ , Flavia Raggi ¹ , Benedetta Accordi ¹ , Silvia Bresolin ¹ , Filippo Severin ¹ , Veronica Martini ¹ , Valentina Trimarco ¹ , Leonardo Martinello ¹ , Andrea Visentin ¹ , Edoardo Scomazzon ¹ , Monica Facco ¹ , Giuseppe Basso ¹ , Gianpietro Semenzato ¹ , Livio Trentin ² ¹ University of Padua, Padua, Italy; ² University of Padova, Padua, Italy
325	A Unique Spliced Isoform of TIN2 Is Expressed in Chronic Lymphocytic Leukemia
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326	In Vitro and In Vivo Expression of the Antimicrobial Peptide LL-37 in CLL
	Enrique Podaza ¹ , Joy Yan ² , Diego Croci ³ , María Belén Almejún ¹ , Florencia Palacios ² , Denise Risnik ¹ , Ana Colado ¹ , Mercedes Borge ¹ , Esteban Enrique Elias ¹ , Horacio Fernández Grecco ⁴ , Fernando R Bezares ⁵ , Nicholas Chiorazzi ² , Romina Gamberale ¹ , Mirta Giordano ¹ ¹ Instituto de Medicina Experimental (IMEX), Consejo, Nacional de Investigaciones Científicas y Técnicas (CONICET), Academia Nacional de Medicina, Buenos Aires, Argentina; ² Feinstein Institute for Medical Research, Northwell Health, Manhasset, NY; ³ Facultad de Ciencias Médicas (UNC), Córdoba, Argentina; ⁴ Sanatorio Dr. Julio Méndez, Argentina; ⁵ Hospital General de Agudos Dr. Teodoro Alvarez, Buenos Aires, Argentina
327	Casein Kinase 1 Delta/Epsilon Inhibition Blocks CLL Chemotaxis and Delays Leukemia Onset in the Eμ-TCL1 Mouse Model of Chronic Lymphocytic Leukemia
	Pavlina Janovska ¹ , Jan Verner ¹ , Jiří Kohoutek ⁴ , Lenka Bryjova ¹ , Marta Dzimkova ⁴ , Hana Skabrahova ¹ , Tomasz Radaszkiewicz ¹ , Tereza Nemcova ¹ , Zuzana Hoferova ⁵ , Katerina Vasickova ¹ , Lucie Smyckova ¹ , Michaela Gregorova ¹ , Alexander Egle ³ , Sarka Pavlova ² , Lucie Poppova ¹ , Sarka Pospisilova ¹ , Vitezslav Bryja ¹ , ¹ Masaryk University, Brno, Czech Republic; ² Central European Institute of Technology (CEITEC), Masaryk University, Brno, Czech Republic; ³ Landeskrankenhaus Salzburg, University Hospital, Salzburg, Austria; ⁴ Veternary Research Institute, Brno, Czech Republic; ⁵ Academy of Sciences of the Czech Republic, Prague, Czech Republic
328	Correlation Between the Pattern of CD180-Mediated Signalling in CLL Cells and Changes in Their Surface CD180 Expression in Cell Culture
	Nino Porakishvili ¹ , Nadeeka Rajakaruna ¹ , Kristina Zaitseva ¹ , Tamar Tsertsvadze ² , Nunu Mitskevich ² , Uzma Sayed ¹ , Amit Nathwani ³ , John Murphy ¹ , Nicholas Chiorazzi ⁴ , Peter Lydyard ¹ ¹ University of Westminster, London, United Kingdom; ² Javakhishvili Tbilisi State University, Tbilisi, Georgia; ³ University College Hospital, London, United Kingdom; ⁴ The Feinstein Institute for Medical Research, Manhasset, NY
329	Use of Differentiated THP.1 Cells to Mimic Nurse-Like Cells for Its Pro-Survival Effect on Chronic Lymphocytic Leukaemia Cells
	Ishaque Sayeed Mohammad ¹ , Melanie Oates ¹ , Ke Lin ² , Andrew Pettitt ¹ , Jack Zhuang ¹ ¹ University of Liverpool, Liverpool, United Kingdom; ² Royal Liverpool and Broadgreen University Hospitals National Health Service (NHS) Trust, Liverpool, United Kingdom
330	The E3 Ubiquitin Ligase c-Cbl in the Regulation of BCR Signalling in Chronic Lymphocytic Leukemia
	Veronica Martini ¹ , Rosa Molfetta ² , Valentina Trimarco ¹ , Federica Frezzato ¹ , Giorgia Chiodin ¹ , Filippo Severin ¹ , Flavia Raggi ¹ , Leonardo Martinello ¹ , Andrea Visentin ¹ , Edoardo Scomazzon ¹ , Monica Facco ¹ , Gianpietro Semenzato ¹ , Rossella Paolini ² , Livio Trentin ³ ¹ University of Padua, Padua, Italy; ² University of La Sapienza, Roma, Rome, Italy; ³ University of Padova, Padua, Italy
331	Hole-y Cell Structures Batman! Structural Effects of FK866 in Primary CLL B-Cells
	Cheryl Peltier ¹ , Eileen McMilan-Ward ¹ , Elizabeth Henson ¹ , Nabanita Chatterjee ¹ , Donna Hewitt ¹ , Danielle Desautels ¹ , Matthieu Bourrier ¹ , Cornelia Mutz ² , Iris Gehrke ¹ , Eric Bouchard ³ , Heinrich Kovar ² , Shantanu Banerji ¹ , Spencer Gibson ¹ , Sara Israels ¹ , Versha Banerji ¹ ¹ University of Manitoba/CancerCare Manitoba, Winnipeg, Canada; ² St Anna Kinderkrebsforschung, Vienna, Austria;

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332	Lipidomic Analysis of B-cells Isolated From the Bone Marrow and Peripheral Blood of CLL Patients and Healthy Controls
	Lauren Thurgood ¹ , Karen Lower ¹ , Bryone Kuss ² ¹ Flinders University, Adelaide, South Australia; ² Flinders Medical Centre, Bedford, South Australia
333	The Src-Family Kinase Fgr Is Implicated in Regulation of CLL Cellular Metabolism
	Spencer Gibson ¹ , Alexandra Ciapala ² ¹ Research Institute in Oncology and Hematology, Manitoba, Canada; ² University of Manitoba, Manitoba, Canada
334	Unexpected Effects of Bisphosphonates in In Vitro Models of Activated CLL Cells
	Elena Gugiatti ¹ , Claudya Tenca ¹ , Fabio Ghiotto ¹ , Serena Matis ² , Daniele Reverberi ² , Giovanna Cutrona ² , Davide Bagnara ¹ , Andrea Nicola Mazzarello ³ , Adalberto Ibatici ² , Ermanno Ciccone ¹ , Franco Fais ¹ , Silvia Bruno ¹ ¹ University of Genoa, Genoa, Italy; ² Istituto Di Ricovero e Cura a Carattere Scientifico (IRCCS) Azienda Ospedaliera Universitaria (AOU) San Martino-IST, Genoa, Italy; ³ The Feinstein Institute for Medical Research, Manhasset, NY
335	Investigating the CLL Kinome to Understand BCR Signaling Dynamics and the Influence of Kinase Inhibitors
	Adam Linley, Leah Wilson, Nagesh Kalakonda, David MacEwan, Ian Prior, Joe Slupsky University of Liverpool, Merseyside, United Kingdom
336	The Cytotoxicity and Cellular Effects of AKT Inhibition by MK2206 and PI3-Kinase D Inhibition by CAL-101 Against CLL Cells in an In Vitro Model of the Hypoxic Microenvironment
	Yandong Shen, Giles Best, Stephen Mulligan, Richard Christopherson University of Sydney, Sydney, Australia
337	Inhibition of BET Family Proteins Targets Multiple Driver Genes in CLL
	Dalia El-Gamal ¹ , Gulcin Ozer ¹ , Ben Powell ² , Zachary Hing ¹ , James Blachly ¹ , Shaneice Mitchell ¹ , Katie Williams ¹ , Bonnie Harrington ¹ , Lapo Alinari ¹ , Robert Baiocchi ¹ , Matthew Cannon ¹ , Virginia Goettl ¹ , Jennifer Woyach ¹ , Deepa Sampath ¹ , Jeffrey Jones ¹ , Amy Lehman ¹ , Lianbo Yu ¹ , Chao Zhang ² , Gideon Bollag ² , John Byrd ¹ , Rosa Lapalombella ¹ ¹ The Ohio State University, Columbus, OH; ² Plexikon Inc., Berkeley, CA
338	Differential Enhancer Transcription Associated With Risk Allele Genotype in CLL
	Bethany Tesar ¹ , Lillian Werner ¹ , Nathalie Pochet ² , Stacey Fernandes ¹ , Ma Reina Improgo ¹ , Josephine Klitgaard ¹ , Christina Thompson ¹ , Megan Hanna ² , Arnold Freedman ¹ , Donna Neuberg ¹ , Matthew Freedman ¹ , Leighton Core ³ , Jennifer Brown ¹ ¹ Dana-Farber Cancer Institute, Boston, MA; ² Broad Institute, Cambridge, MA; ³ University of Connecticut, Storrs, CT
339	BRAFV600E Accelerates Disease Progression and Increases Immune Suppression in a Mouse Model of B-Cell Leukemia
	Yo-Ting Tsai, Aparna Lakshmanan, Amy Lehman, Ellen Sass, Minh Tran, Fabienne Lucas, Meixiao Long, Bonnie Harrington, Krista La Perle, Vincenzo Coppola, Gerard Lozanski, Natarajan Muthusamy, John Byrd, Michael Grever, David Lucas The Ohio State University, Columbus, OH
340	Purification of Trisomy 12 Subclone in Chronic Lymphocytic Leukaemia Using Imaging Flow Cytometry and Fluorescence In Situ Hybridisation in Suspension (FISH-IS)
	Anya Hotinski, Cuc Do Hoang, Karen Lower, Bryan Kuss, Flinders University, Adelaide, South Australia
341	Cell Lines Generated From a Chronic Lymphocytic Leukemia Mouse Model Exhibit Constitutive Btk and Akt Signaling
	Simar Pal Singh ¹ , Saravanan Y. Pillai ¹ , Marjolein J.W de Bruijn ¹ , Ralph Stadhouders ² , Odilia B. Corneth ² , Alice F. Muggen ² , Henk Jan van den Ham ² , Erik Slinger ³ , Marcel Spaargaren ³ , Arnon Katter ³ , Anton W. Langerak ¹ , Rudi W. Hendriks ¹ ¹ Erasmus University Medical Center (Erasmus MC), Rotterdam, Netherlands; ² Centre for Genomic Regulation (CRG), Barcelona, Spain; ³ Academic Medical Center, Amsterdam, Amsterdam, Netherlands
342	CLL Cells Residing in Spleen and Bone Marrow Microenvironments Differ in Their CD44 Variant Usage for Migration and Proliferation
	Julia Christine Gutjahr ¹ , Eva Szenes ¹ , Lisa Tschuch ¹ , Michaela Schleder ² , Simone Roos ³ , Tamara Girbl ⁴ , Richard Greil ⁴ , Alon Ronen ⁵ , Lukas Kenner ² , Veronique Orian-Rousseau ⁶ , Tanja Hartmann ¹ ,

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343	T-Cell Receptor Restriction Is Already Detectable in CLL-LIKE MBL and First Stages of CLL, Supporting Early Selection by Common Antigenic Elements
	Gonzalo Blanco ¹ , Anna Puiggros ¹ , Andrea Gómez-Llonín ¹ , Anna Vardi ² , María Rodríguez-Rivera ¹ , Evangelia Stalika ² , Eugènia Abella ¹ , Alicia Senín ¹ , Xavier Calvo ¹ , Pau Abrisqueta ³ , Francesc Bosch ³ , Ana Ferrer ¹ , Kostas Stamatopoulos ² , Blanca Espinet ¹ ¹ Fundacio Imim, Barcelona, Spain; ² Institute of Applied Biosciences, Center for Research and Technology Hellas (CERTH), Thessaloniki, Greece; ³ University Hospital Vall d'Hebron, Barcelona, Spain
344	Genomic Landscape of Chronic Lymphocytic Leukemia in China by Targeted Gene Sequencing
	Yi Miao, Yi Xia, Chun Qiao, Li Wang, Lei Fan, Wei Xu, Jian-Yong Li The First Affiliated Hospital of Nanjing Medical University, Nanjing, China
345	SLAMF6 Signaling Is Requisite for CLL Progression and Partakes in Therapy by Antibodies Directed Against SLAMF6
	Burcu Yigit ¹ , Elisa ten Hacken ² , Jan Burger ³ , Catherine J. Wu ² , Shih-Shih Chen ⁴ , Nicholas Chiorazzi ⁴ , Ninghai Wang ¹ , Cox Terhorst ¹ ¹ Beth Israel Deaconess Medical Center/Harvard Medical School, Boston, MA; ² Dana-Farber Cancer Institute, Boston, MA; ³ University of Texas MD Anderson Cancer Center, Houston, TX; ⁴ The Feinstein Institute of Medical Research, Manhasset, NY
346	Targeting TLR Signaling in Chronic Lymphocytic Leukemia With a Selective IRAK-4 Inhibitor
	Neus Gimenez ^{1,2} , Laia Rosich ¹ , Eriong Lee ¹ , Morihito Higashi ¹ , Marta Aymerich ^{1,3} , Monica Lopez-Guerra ^{1,3} , Elias Campo ^{1,3} , Dolors Colomer ¹ ¹ Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain; ² Anaxomics Biotech, Barcelona, Spain; ³ Centro de Investigación Biomédica en Red de Cáncer (CIBERONC), Barcelona, Spain
347	CLL Plasma-Derived Exosomes Have Specific Cargo and Mediate Defects in Innate Immunity
	Sara Elgamal, Bethany Mundy, Emanuele Cocucci, Kwang Joo Kwak, L. James Lee, Michael Caligiuri, Natarajan Muthusamy, John Byrd, Amy Johnson The Ohio State University, Columbus, OH
348	Common Non-Mutational NOTCH1 Activation in Chronic Lymphocytic Leukemia
	Giulia Fabbri ¹ , Antony Holmes ¹ , Mara Viganotti ¹ , Claudio Scuoppo ¹ , Laura Belver ¹ , Daniel Herranz ¹ , Joy Yan ² , Davide Rossi ³ , Gianluca Gaidano ⁴ , Nicholas Chiorazzi ² , Adolfo Ferrando ¹ , Riccardo Dalla-Favera ¹ ¹ Columbia University, New York, NY; ² Feinstein Institute for Medical Research, Northwell Health, Manhasset NY; ³ Oncology Institute of Southern Switzerland (IOSI), Bellinzona Switzerland; ⁴ Università del Piemonte Orientale, Novara Italy
350	Quantitative Proteomic Analysis of CLL B-cells From Mutated And Unmutated IgVH Subgroups Using a Label-Free Approach
	Lauren Thurgood, Karen Lower, Timothy Chataway, Bryone Kuss Flinders University, South Australia
351	The Identification of Different Cytokine Patterns in CLL-Like Monoclonal B-Cell Lymphocytosis and Early Stage CLL Points to an Early Inflammatory Response in the Development of CLL
	Gonzalo Blanco ¹ , Pui Yan (Paulina) Chiu ² , Anna Puiggros ¹ , Gerardo Ferrer ² , Yasmine Kieso-Chelico ² , Andrea Gómez-Llonín ¹ , Steven L. Allen ^{2,3,4,5} , Eugènia Abella ¹ , Jonathan E. Kolitz ^{2,3,4,5} , Eva Gimeno ¹ , Xavier Calvo ¹ , Kanti Rai ^{2,3,4,5} , Jacqueline Barrientos ⁶ , Ana Ferrer ¹ , Barbara Sherry ² , Blanca Espinet ¹ , Nicholas Chiorazzi ² ¹ Institut Hospital del Mar d'Investigacions Mèdiques (IMIM), Barcelona, Spain; ² The Feinstein Institute for Medical Research, Manhasset, NY; ³ Hofstra Northwell Health Cancer Institute, New Hyde Park, NY; ⁴ North Shore University Hospital, Manhasset, NY; ⁵ Long Island Jewish Medical Center, Queens, NY; ⁶ CLL Research and Treatment Program, Northwell Health Cancer Institute, New York, NY

352	MicroRNA Induced by DNA Damage Response Regulates the Expression of FOXP1 and Therapy Response in CLL
	Katerina Cerna ^{1,2,3} , Jan Oppelt ^{1,2,3} , Vaclav Seda ^{1,2,3} , Katerina Musilova ^{1,2,3} , Gabriela Pavlasova ^{1,2,3} , Jiri Mayer ^{1,2,3} , Sarka Pospisilova ^{1,2,3} , Marek Mraz ³ ¹ University Hospital Brno, Brno, Czech Republic; ² Masaryk University, Brno, Czech Republic; ³ CEITEC MU, Brno, Czech Republic (CEITEC)
353	Musashi 2, an RNA-binding Protein Over-Expressed in the Proliferative Fraction of CLL Clones, Inhibits Programmed Cell Death and Impairs Migration
	Florencia Palacios ¹ , Joy Yan ¹ , Gerardo Ferrer ¹ , Sophia Yancopoulos ¹ , Jacqueline Barrientos ² , Jonathan E. Kolitz ^{1,3,4,5} , Steven L. Allen ^{1,3,4,5} , Kanti Rai ^{1,3,4,5} , Nicholas Chiorazzi ¹ ¹ The Feinstein Institute for Medical Research, Manhasset, NY; ² CLL Research and Treatment Program, ³ Hofstra Northwell Health Cancer Institute, New Hyde Park, NY; ⁴ North Shore University Hospital, Manhasset, NY; ⁵ Long Island Jewish Medical Center, Queens, NY
354	Phenotype and Function of Natural Killer cells in CLL in Relation to CMV Infection
	Tom Hofland ¹ , Sanne Endstra ¹ , Calum Gomes ¹ , Jurgen Riedl ² , Mark-David Levin ² , Arnon Kater ¹ , Sanne Tonino ¹ ¹ Academic Medical Center, Amsterdam, Amsterdam, Netherlands; ² Albert Schweitzer Hospital, Dordrecht, Netherlands
355	Impaired Glucose Metabolism as a Functional Constraint of T Cells in Chronic Lymphocytic Leukemia
	Armando van Bruggen, Sanne Endstra, Arnon Katter, Rianne van der Windt Lymphoma and Myeloma Center, University of Amsterdam, Netherlands
356	Proteomic Characterization of CLL Plasma Exosomes During Disease Evolution Identify S100-A9 Protein as a Key Molecule in the Activation of the Canonical NF-κB Pathway
	Daniel Prieto ¹ , Noé Seija ¹ , Natalia Sotelo ¹ , Cecilia Abreu ¹ , Claudia Ortega ¹ , Rosario Duran ¹ , Magdalena Gil ¹ , Victoria Irigoien ² , Carolina Oliver ² , Ana Ines Landoni ³ , Raul Gabús ³ , Pablo Oppezzo ¹ ¹ Institut Pasteur de Montevideo, Montevideo, Uruguay; ² Hospital de Clínicas, Universidad de la República, Montevideo, Uruguay; ³ Hospital Maciel, Administración de Servicios de Salud del Estado (ASSE), Montevideo, Uruguay
357	Novel role of Prostate apoptosis response-4 tumor suppressor in B-cell Chronic Lymphocytic Leukemia
	Katie McKenna ¹ , Sunil Noothi ¹ , Sara Alhakeem ¹ , Kathryn Perry ¹ , Frank Frizzera ² , Joseph Greene ² , John C. Byrd ² , Natarajan Muthusamy ² , Vivek Rangnekar ¹ , Subbarao Bondada ¹ ¹ University of Kentucky, Lexington, Kentucky; ² The Ohio State University, Columbus, OH
358	The early specific increase of surface IgM on the circulating CLL cells indicate antigen disengagement in vivo during therapy with ibrutinib
	Samantha Drennan ¹ , Giorgia Chiodin ¹ , Annalisa D'Avola ¹ , Ian Tracy ¹ , Peter Johnson ¹ , Andrew Steele ¹ , Livio Trentin ² , Graham Packham ¹ , Freda Stevenson ¹ , Francesco Forconi ¹ ¹ University of Southampton, Southampton, United Kingdom; ² University of Padova, Padova, Italy
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400	Three-Year Follow-Up of Patients With Previously Treated Chronic Lymphocytic Leukemia (CLL) or Small Lymphocytic Lymphoma (SLL) Receiving Ibrutinib Plus Bendamustine and Rituximab (BR) Versus Placebo Plus BR: An Update of the HELIOS Study
	Graeme Fraser ¹ , Paula Cramer ² , Michael Hallek ² , Fatih Demirkan ³ , Rodrigo Santucci Silva ⁴ , Sebastian Grosicki ⁵ , Ann Janssens ⁶ , Aleksander Pristupa ⁷ , Jiri Mayer ^{8,9} , Marie Sarah Dilhuydy ¹⁰ , Javier Loscertales ¹¹ , Nancy Bartlett ¹² , Abraham Avigdor ¹³ , Simon Rule ¹⁴ , Steven Sun ¹⁵ , Charles Phelps ¹⁵ , Michelle Mahler ¹⁵ , Mariya Salman ¹⁵ , Angela Howes ¹⁵ , Asher Chanan-Khan ¹⁶ ¹ Juravinski Cancer Centre, McMaster University, Hamilton, Ontario; ² University Hospital Cologne, Cologne, Germany; ³ Dokuz Eylul Universit, Izmir, Turkey; ⁴ IEP São Lucas, São Paulo, Brazil; ⁵ Silesian Medical University, Katowice, Poland; ⁶ Universitaire Ziekenhuizen Leuven, Leuven, Belgium; ⁷ Regional Clinical Hospital, Ryazan, Russian Federation; ⁸ University Hospital Brno and Masaryk University (MU), Brno, Czech Republic; ⁹ Central European Institute of Technology (CEITEC) Masaryk University, Brno, Czech Republic; ¹⁰ Hôpital Haut-Lévêque, Bordeaux, France; ¹¹ Hospital Universitario La Princesa, IIS-IP, Madrid, Spain; ¹² Washington University School of Medicine, St Louis, MO; ¹³ Chaim Sheba Medical Center, Ramat-Gan,

	Israel; ¹⁴ Derriford Hospital, Plymouth, Plymouth, United Kingdom; ¹⁵ Janssen Research and Development, Raritan, NJ; ¹⁶ Mayo Clinic Cancer Center, Jacksonville, FL
401	Novel Humanised ROR1 Bispecific T-cell Engager for the Treatment of Chronic Lymphocytic Leukaemia
	Satyen Gohil, Micaela Harrasser, Solange Paredes Moscosso, Amit Nathwani, Marco Della Peruta University College London, London, United Kingdom
402	Targeting SF3B1-Mediated Splicing Control in Chronic Lymphocytic Leukemia
	Rong Chen ¹ , Yuan Qi ¹ , Michaela Gruber ² , Yuling Chen ¹ , Jessica Wong ² , Laura Rassenti ³ , Emanuela Ghia ³ , Thomas Kipps ³ , Catherine J. Wu ² , Xiaoping Su ¹ , Michael Keating ¹ , William Plunkett ¹ ¹ The University of Texas MD Anderson Cancer Center, Houston, TX; ² Dana-Farber Cancer Institute, Boston, MA; ³ University of California, San Diego, San Diego, CA
403	The Novel BTK Inhibitor CC-292 Exerts Antitumor Activity, Inhibits Proliferation, Activation and Migration of Tumor Cells, and Overcomes Stroma-Mediated Chemoresistance to Bendamustine in CLL
	Eriong Lee ¹ , Vanina Rodríguez ¹ , Bola Hanna ² , Haniyeh Yazdanparast ² , Marta Rodríguez ¹ , Virginia Amador ¹ , Arnau Monraveta ¹ , Anna Vidal-Crespo ¹ , Patricia Pérez-Galán ¹ , Elias Campo ¹ , Monica Lopez-Guerra ¹ , Martina Seiffert ² , Dolores Colomer ¹ ¹ Institut d'Investigacions Biomèdiques August Pi i Sunyer (IDIBAPS), Barcelona, Spain; ² German Cancer Research Center (DKFZ), Heidelberg, Germany;
404	TGR-1202 in Combination With Ibrutinib in Patients With Relapsed or Refractory CLL: Updated Results of a Multicenter Phase I/Ib Study
	Matthew S. Davids ¹ , Haesook T. Kim ¹ , Alyssa Nicotra ¹ , Alexandra Savell ¹ , Karen Francoeur ¹ , Jeffrey Hellman ¹ , Hari Miskin ² , Peter Sportelli ² , Asad Bashey ³ , Laura Stampleman ⁴ , Jens Rueter ⁵ , Adam Boruchof ⁶ , Jon Arnason ⁷ , Caron Jacobson ¹ , David Fisher ¹ , Jennifer Brown ¹ ¹ Dana-Farber Cancer Institute, Boston, MA; ² TG Therapeutics, Inc., New York, NY; ³ Northside Hospital, Atlanta, GA; ⁴ Pacific Cancer Care, Monterey, CA; ⁵ Eastern Maine Medical Center, Bangor, ME; ⁶ St Francis Hospital and Medical Center, Farmington, CT; ⁷ Beth Israel Deaconess Medical Center, Boston, MA
405	Activation of p53 by the MDM2 Antagonist RG7388 in CLL Cells: Analyses of Ex Vivo Signaling, Cell Death and Gene Signature
	Elaine Willmore ¹ , Carmela Ciardullo ¹ , Erhan Aptullahoglu ¹ , Laura Woodhouse ¹ , Jonathan Wallis ^{1,2} , Helen Marr ^{1,2} , John Lunec ¹ ¹ Newcastle University, Newcastle upon Tyne, United Kingdom; ² The Freeman Hospital, The Newcastle upon Tyne Hospitals National Health Service Foundation Trust, Newcastle upon Tyne, United Kingdom
406	A Phase I Trial of the PARP Inhibitor Olaparib in Patients With Relapsed Chronic Lymphocytic Leukaemia, T-Prolymphocytic Leukaemia or Mantle Cell Lymphoma
	Tatjana Stankovic ¹ , Christina Yap ¹ , Ceri Oldreive ¹ , Daniel Slade ¹ , Rebecca Bishop ¹ , Mike Griffiths ¹ , Martin Dyer ² , Christopher Fegan ³ , David Oscier ⁴ , Andrew Pettitt ⁵ , Stephen Devereux ⁶ , Adrian Bloor ⁷ , Peter Hillmen ⁸ , George Follows ⁹ , Simon Rule ¹⁰ , Paul Moss ¹ , Guy Pratt ¹ ¹ University of Birmingham, Birmingham, United Kingdom; ² University of Leicester, Leicester, United Kingdom; ³ University of Cardiff, Cardiff, United Kingdom; ⁴ Royal Bournemouth Hospital, Bournemouth, United Kingdom; ⁵ University of Liverpool, Liverpool, United Kingdom; ⁶ King's College Hospital, London, United Kingdom; ⁷ University of Manchester, Manchester, United Kingdom; ⁸ St James's University Hospital, Leeds, United Kingdom; ⁹ Addenbrooke's Hospital, Cambridge, United Kingdom; ¹⁰ Derriford Hospital, Plymouth, United Kingdom
407	TGR-1202—a Novel PI3K-Delta Inhibitor That Differentially Regulates the T Cells in CLL
	Kamira Maharaj ¹ , John Powers ¹ , Renee Fonseca ¹ , Alex Achille ¹ , Susan Deng ¹ , Mibel Pabon Saldana ¹ , Hari Miskin ² , Dave Maryanski ² , Eva Sahakian ¹ , Javier Pinilla-Ibarz ¹ ¹ H. Lee Moffitt Cancer Center and Research Institution, Tampa, FL; ² TG Therapeutics Inc, New York, NY
408	Addition of Obinutuzumab to Ibrutinib Enhances Depletion of CLL Cells in the Peripheral Blood and Bone Marrow After 1 Month and 6 Months of Combination Therapy: Initial Results From the Bloodwise TAP IcICLLE Extension Study
	Andy Rawstron ¹ , Talha Munir ¹ , Samuel Muñoz-Vicente ² , Kristian Brock ² , Francesca Yates ² , Rebecca Bishop ² , Surita Dalal ³ , Ruth de Tute ¹ , Adrian Bloor ⁴ , Oonagh Sheehy ⁵ , Andrew Pettitt ⁶ , Christopher Fox ⁷ , Christopher Fegan ⁸ , Stephen Devereux ⁹ , Donald MacDonald ¹⁰ , Peter Hillmen ^{1,3}

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409	The Prognostic Significance of CLL-IPI After Reduced Intensity Conditioning Allogeneic Stem Cell Transplant in Chronic Lymphocytic Leukemia: The Mayo Clinic Experience
	Theodora Anagnostou, Tait Shanafelt, Mrinal Patnaik, Melissa Larson, Kari Chaffee, Sameer Parikh, Dennis Gastineau, Wei Ding, Timothy Call, Mark Litzow, Neil Kay, Michael Conte, Deborah Bowen, William Hogan, Saad Kenderian Mayo Clinic, Rochester, MN
410	Improved Overall Survival of Relapsed Chronic Lymphocytic Leukemia (CLL) Patients Exhibiting a Complex Karyotype and Treated With Idelalisib Plus Rituximab
	Karl-Anton Kreuzer ¹ , Richard Furman ² , Stephan Stilgenbauer ³ , Ronald Dubowy ⁴ , Yeonhee Kim ⁴ , Veerendra Munugalavada ⁴ , Esther Lilienweiss ¹ , Hans Christian Reinhardt ¹ , Paula Cramer ¹ , Barbara Eichhorst ¹ , Peter Hillmen ⁵ , Susan O'Brien ⁶ , Andrew Pettitt ⁷ , Michael Hallek ¹ ¹ University at Cologne, Cologne, Germany; ² Weill Cornell Medical College, New York, NY; ³ University Hospital of Ulm, Ulm, Germany; ⁴ Gilead Inc., Foster City, CA; ⁵ St James's University Hospital, Leeds, United Kingdom; ⁶ University of California, Irvine, CA; ⁷ University of Liverpool, Liverpool, United Kingdom
411	Natural History of Non-Infectious Ibrutinib-Attributable Adverse Events in Patients With Chronic Lymphocytic Leukemia
	Polina Shindiapina ¹ , Soun Khountham ¹ , Curtis Lachowicz ² , Tracy Wiczer ¹ , Lauren Levine ¹ , Kerry Rogers ¹ , Jeffrey Jones ¹ , Leslie Andritsos ¹ , Jennifer Woyach ¹ , John Byrd ¹ , Stephen Spurgeon ² , Farrukh Awan ¹ ¹ The Ohio State University, Columbus, OH; ² Oregon Health and Science University, Portland, OR
412	The Dual Pim/PI3-Kinase Inhibitor IBL-202 Is Effective Against CLL Cells Cultured Under Conditions That Mimic the Hypoxic Tumour Microenvironment
	Kyle Crassini ¹ , Yandong Shen ¹ , Michael O'Neill ² , Michael O'Dwyer ³ , Stephen Mulligan ⁴ , Giles Best ⁵ ¹ Kolling Institute of Medical Research, University of Sydney, St Leonards, Australia; ² Inflection Bioscience Ltd, Dublin, Ireland; ³ National University of Ireland, Galway, Ireland; ⁴ Royal North Shore Hospital, Sydney, Australia; ⁵ University of Sydney, Sydney, Australia
413	Circulating T-cell Immune Profiles in Patients With CLL/SLL Treated With Ibrutinib or Placebo in Combination With BR From the Phase 3 HELIOS Trial
	Sriram Balasubramanian ¹ , Michael Schaffer ¹ , Rajendra Damle ¹ , Shalini Chaturvedi ¹ , Charles Phelps ¹ , Regina Aquino ¹ , Mariya Salman ¹ , Angela Howes ¹ , Javier Loscertales ² , Marek Trneny ³ , Dina Ben-Yehuda ⁴ , Aleksander Pristupa ⁵ , Asher Chanan-Khan ⁶ , Michelle Mahler ¹ ¹ Janssen Research and Development, Raritan, NJ; ² Hospital Universitario La Princesa, IIS-IP, Madrid, Spain; ³ Charles University and General University Hospital, Prague, Czech Republic; ⁴ Hadassah Medical Center, Jerusalem, Israel; ⁵ Regional Clinical Hospital, Ryazan, Russian Federation; ⁶ Mayo Clinic Cancer Center, Jacksonville, FL
414	A Systematic Review and Meta-Analysis of B-cell Receptor Signaling Inhibitors in Relapsed and Refractory Chronic Lymphocytic Leukemia
	Anna Pula, Konrad Stawiski, Marcin Braun, Elzbieta Iskierka-Jazdzewska, Tadeusz Robak Medical University of Lodz, Lodz, Poland
415	COSMIC, a Phase II Randomised Study Investigating the Efficacy of Standard or High-Dose Ofatumumab in Combination With Chemotherapy in Patients With Relapsed Chronic Lymphocytic Leukaemia
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416	The Role of Splenectomy in the Care and Treatment of the CLL Patient
	Michael Conte, Sameer Parikh, Deborah Bowen, Timothy Call, Wei Ding, Neil Kay, Tait Shanafelt Mayo Clinic, Rochester, MN

417	PD-1 Positive NK Cell Population Is Higher in Patients With Chronic Lymphocytic Leukaemia and Contributes to the Impaired Function of NK Cells
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418	Phase I Trial of Lenalidomide in Combination With Plerixafor For Relapsed/Refractory Chronic Lymphocytic Leukemia (CLL): Follow-Up and Correlative Analysis
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419	Inhibition of MALT1 in Chronic Lymphocytic Leukemia Induces Apoptosis Selectively in Tumor Cells Through Inhibition of NF-κB Signaling
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420	Venetoclax in relapsed/refractory chronic lymphocytic leukemia (CLL) with 17p deletion: outcome and minimal residual disease from the full population of the pivotal M13-982 trial
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421	The Initial Report of the Bloodwise Tap Clarity Study Combining Ibrutinib and Venetoclax in Relapsed, Refractory CLL Shows Acceptable Safety and Promising Early Indications of Efficacy
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