



EuroFlow innovation and standardization of flow cytometric diagnosis, classification and monitoring in hemato-oncology

## PART A

### STANDARDIZED IMMUNOPHENOTYPING FOR DIAGNOSIS AND CLASSIFICATION OF HEMATOLOGICAL MALIGNANCIES

#### **EuroFlow: resetting leukemia and lymphoma immunophenotyping. Basis for companion diagnostics and personalized medicine**

Van Dongen JJM, Orfao A

*Leukemia* 2012; 26: 1899-1907

#### **EuroFlow antibody panels for standardized *n*-dimensional flow cytometric immunophenotyping of normal, reactive and malignant leukocytes**

Van Dongen JJM, Lhermitte L, Böttcher S, Almeida J, Van der Velden VHJ, Flores-Montero J, Rawstron A, Asnafi V, Lécresse Q, Lucio P, Mejstrikova E, Szczepański T, Kalina T, De Tute R, Brüggemann M, Sedek L, Cullen M, Langerak AW, Mendonça A, Macintyre E, Martin-Ayuso M, Hrusak O, Vidriales MB, Orfao A

*Leukemia* 2012; 26: 1908-1975

#### **EuroFlow standardization of flow cytometer instrument settings and immunophenotyping protocols**

Kalina T, Flores-Montero J, Van der Velden VHJ, Martin-Ayuso M, Böttcher S, Ritgen M, Almeida J, Lhermitte L, Asnafi V, Mendonça A, De Tute R, Cullen M, Sedek L, Vidriales MB, Pérez JJ, Mejstrikova E, Hrusak O, Szczepański T, Van Dongen JJM, Orfao A

*Leukemia* 2012; 26: 1986-2010

#### **Introduction to the diagnosis and classification of monocytic-lineage leukemias by flow cytometry**

Matarraz S, Almeida J, Flores-Montero J, Lécresse Q, Guerri V, López A, Bárrena S, Van der Velden VHJ, Te Marvelde JG, Van Dongen JJM, Orfao A

*Cytometry B Clin Cytom* 2017; 92: 218-227

#### **Automated database-guided expert-supervised orientation for immunophenotypic diagnosis and classification of acute leukemia**

Lhermitte L, Mejstrikova E, Van der Sluijs-Gelling A, Grigore GE, Sedek L, Bras A, Gaipa G, Costa E, Novakova M, Sonneveld E, Buracchi C, Bacelar T, Te Marvelde J, Trinquand A, Asnafi A, Szczepanski T, Matarraz S, Lopez A, Vidriales M-B, Balsa J, Hrusak O, Kalina T, Lecresse Q, Martin Ayuso M, Brüggemann M, Verde J, Fernandez P, Burgos L, Paiva B, Pedreira C, Van Dongen JJM, Orfao A, Van der Velden VHJ

*Leukemia* 2018; 32: 874-881

## PART B

### IMMUNOBEAD ASSAY FOR DETECTION OF FUSION PROTEINS

#### **Flow cytometric immunobead assay for the detection of BCR-ABL fusion proteins in leukemia patients**

Weerkamp F, Dekking E, Ng YY, Van der Velden VHJ, Wai H, Böttcher S, Brüggemann M, Van der Sluijs AJ, Koning A, Boeckx N, Van Poecke N, Lucio P, Mendonça A, Sedek L, Szczepański T, Kalina T, Kovac M, Hoogeveen PG, Flores-Montero J, Orfao A, Macintyre E, Lhermitte L, Chen R, Brouwer-De Cock KAJ, Van der Linden A, Noordijk AL, Comans-Bitter WM, Staal FJT, Van Dongen JJM

*Leukemia* 2009; 23: 1106-1117



### **Flow cytometric immunobead assay for fast and easy detection of PML-RARA fusion proteins for the diagnosis of acute promyelocytic leukemia**

Dekking EHA, Van der Velden VHJ, Varro R, Wai H, Böttcher S, Kneba M, Sonneveld E, Koning A, Boeckx N, Van Poecke N, Lucio P, Mendonça A, Sekek L, Szczepański T, Kalina T, Kanderová V, Hoogeveen P, Flores-Montero J, Chillón MC, Orfao A, Almeida J, Evans P, Cullen M, Noordijk AL, Vermeulen PM, De Man MT, Dixon EP, Comans-Bitter WM, Van Dongen JJM

*Leukemia 2012; 26: 1976-1985*

### **Detection of fusion genes at the protein level in leukemia patients via the flow cytometric immunobead assay**

Dekking E, Van der Velden VHJ, Böttcher S, Brüggemann M, Sonneveld E, Koning-Goedheer A, Boeckx N, Lucio P, Sedek L, Szczepański T, Kalina T, Kovac M, Evans P, Hoogeveen PG, Flores-Montero J, Orfao A, Comans-Bitter WM, Staal FJT, Van Dongen JJM

*Best Pract Res Clin Haematol 2010; 23: 333-345*

## **PART C**

### **STANDARDIZED IMMUNOPHENOTYPING FOR DETECTION OF MINIMAL RESIDUAL DISEASE**

#### **Minimal residual disease diagnostics in acute lymphoblastic leukemia: need for sensitive, fast, and standardized technologies**

Van Dongen JJM, Van der Velden VHJ, Büggemann M, Orfao A

*Blood 2015; 125: 3996-4009*

#### **Standardized flow cytometry for highly sensitive MRD measurements in B-cell acute lymphoblastic leukemia**

Theunissen P, Mejstrikova E, Sedek L, Van der Sluijs-Gelling AJ, Gaipa G, Bartels M, Sobral da Costa E, Kotrová M, Novakova M, Sonneveld E, Buracchi C, Bonaccorso P, Oliveira E, Te Marvelde JG, Szczepanski T, Lhermitte L, Hrusak O, Lecrevisse Q, Grigore GE, Fronková E, Trka J, Brüggemann M, Orfao A, Van Dongen JJM, Van der Velden VHJ

*Blood 2017; 129: 347-357*

#### **New criteria for response assessment: role of minimal residual disease in multiple myeloma**

Paiva B, Van Dongen JJM, Orfao A

*Blood 2015; 125: 3059-3068*

#### **Next Generation Flow for highly sensitive and standardized detection of minimal residual disease in multiple myeloma**

Flores-Montero J, Sanoja-Flores L, Paiva B, Puig N, García-Sánchez O, Böttcher S, Van der Velden VHJ, Pérez-Morán JJ, Vidriales MB, García-Sanz R, Jimenez C, González M, Martínez-López J, Corral-Mateos A, Grigore GE, Fluxá R, Pontes R, Caetano J, Sedek L, Del Cañizo MC, Bladé J, Lahuerta JJ, Aguilar C, Báñez A, García-Mateo A, Labrador J, Leoz P, Aguilera-Sanz C, San-Miguel J, Mateos MV, Durie B, Van Dongen JJM, Orfao A

*Leukemia 2017; 31: 2094-2103*