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Autor(en) des Beitrags:
Böttcher, S; Stilgenbauer, S; Busch, R; Brüggemann, M; Raff, T; Pott, C; Fischer, K; Fingerle-Rowson, G; Döhner, H; Hallek, M; Kneba, M; Ritgen, M

Titel des Beitrags:
Standardized MRD flow and ASO IGH RQ-PCR for MRD quantification in CLL patients after rituximab-containing immunochemotherapy: a comparative analysis.

Abstract:
Rituximab-containing regimens are becoming a therapeutic standard in chronic lymphocytic leukemia (CLL), so that a validation of flow cytometric minimal residual disease (MRD) quantification (MRD flow) in the presence of this antibody is necessary. We therefore compared results obtained by real-time quantitative (RQ)-PCR to MRD flow in 530 samples from 69 patients randomized to receive chemotherapy or chemotherapy plus rituximab. Quantitative MRD levels assessed by both techniques were closely correlated irrespective of therapy (r=0.95). The sensitivity and specificity of MRD flow was not influenced by the presence of rituximab. With 58.9% positive and 26.4% negative samples by both techniques, 85.3% of assessments (452/530) were qualitatively concordant between MRD flow and RQ-PCR. Discordant samples were typically negative by MRD flow and simultaneously positive close to the detection limit of the PCR assays, indicating a higher sensitivity of PCR for very low MRD levels. However, 93.8% of all samples were concordantly classified by both methods using a threshold of 10(-4) to determine MRD positivity. MRD flow and PCR are equally effective for MRD quantification in rituximab-treated CLL patients within a
sensitivity range of up to 10(-4), whereas PCR is more sensitive for detecting MRD below that level.