

Title Evaluation of a worldwide EQA scheme for complex clonality analysis of clinical lymphoproliferative cases demonstrates a learning effect.

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Supplemental Table 3. Overview of tubes and reagents used by the EQA participants.

| Target | PCR test (described according to the EC assays) | All years | | 2018 (N=55 laboratories) | | | | | | |
|--------|---|-----------------|--------------------------------|--------------------------|--------------------------------|---|----------------------------------|--|---|--|
| | | # tests (n=533) | % of tube included in analyses | # tests (n=110) | % of tube included in analyses | # laboratories who did not use the tube | # laboratories using non-EC LDTs | # laboratories using EC LDT (no commercial primer mixes) | # laboratories using commercialized EC tests (Invivoscribe) | # laboratories using Invivoscribe NGS assays |
| IG | IGH-VJ FR1 (tube A) | 504 | 94.6 | 108 | 98.2 | 0 | 1 | 23 | 30 | 1 |
| | IGH-VJ FR2 (tube B) | 526 | 98.7 | 108 | 98.2 | 0 | 1 | 23 | 30 | 1 |
| | IGH-VJ FR3 (tube C) | 527 | 98.9 | 107 | 97.3 | 0 | 1 | 23* | 30 | 1 |
| | IGH-DJ (tube D) | 242 | 45.4 | 49 | 44.5 | 28 | 0 | 14 | 13 | 0 |
| | IGH-DJ (tube E) | 146 | 27.4 | 26 | 23.6 | 39 | 0 | 6 | 10 | 0 |
| | IGK-VJ (tube A) | 476 | 89.3 | 100 | 90.9 | 4 | 0 | 25 | 25 | 1 |
| | IGK-V/intron-Kde (tube B) | 479 | 89.9 | 100 | 90.9 | 4 | 0 | 25 | 26 | 0 |
| | IGL-VJ | 111 | 20.8 | 24 | 21.8 | 39 | 0 | 9 | 7 | 0 |

Supplemental Table 3 (Continued). Overview of tubes and reagents used by the EQA participants.

| Target | PCR test (described according to the EC assays) | All years | | 2018 (N=55 laboratories) | | | | | | |
|--------|---|-----------------|--------------------------------|--------------------------|--------------------------------|---|----------------------------------|--|---|--|
| | | # tests (n=524) | % of tube included in analyses | # tests (n=165) | % of tube included in analyses | # laboratories who did not use the tube | # laboratories using non-EC LDTs | # laboratories using EC LDT (no commercial primer mixes) | # laboratories using commercialized EC tests (Invivoscribe) | # laboratories using Invivoscribe NGS assays |
| TR | TRD | 69 | 13.2 | 20 | 12.1 | 43 | 3 | 4 | 5 | 0 |
| | TRG-VJ (tubes A and B) | 511 | 97.5 | 159 | 96.4 | 1 | 2 | 22 | 29 | 1** |
| | Additional TRG (one tube) test used | / | / | 9 | 5.5 | 0 | 1° | 1° | 1° | 0 |
| | TRB-VJ (tubes A and B) | 453 | 86.5 | 144 | 87.3 | 6 | 2 | 16 | 31 | 0 |
| | TRB-DJ (tube C) | 449 | 85.7 | 143 | 86.7 | 6 | 2 | 16 | 31 | 0 |

Tubes used for analysis were requested during all scheme years. Detailed information on the reagents used was only requested in 2018, which is why the information on additional TRG tubes used is not available for all scheme years. Analysis of IGL and TRD rearrangements is not necessary for all lymphomas, hence explaining the reduced number of tests. Commercialized EC tests (Invivoscribe) included the Invivoscribe IdentiClone Gene Clonality Assays, Invivoscribe Individual Master Mixes and Invivoscribe RUO IGH/IGK/IGL/TRCB/TCRG/TCRD Gene Clonality Assays. Invivoscribe NGS assays included the Invivoscribe LymphoTrack® Assays PGM.

*One participant used, in addition to the EC-LDT, a non-EC LDT primer mix for IGH-C FR3. **The Invivoscribe NGS assay is a TRG one tube test.

°One participant used an alternative TRG assay, non-EC LDT. °° One participant used the TRG one tube assay designed by EC [1], which interrogates the TRG rearrangements in one tube. °°°One participant used the Invivoscribe TRG 2.0 assay [1].

Abbreviations: #, number; EC, EuroClonality; IG, immunoglobulin gene; LDT, laboratory-developed test; N, number; NGS, next-generation sequencing; TR, T-cell receptor gene.

1. Armand M, Derriex C, Beldjord K, Wabeke T, Lenze D, Boone E, Bruggemann M, Evans PAS, Gameiro P, Hummel M, Villarese P, Groenen PJTA, Langerak AW, Macintyre EA, Davi F (2019) A New and Simple TRG Multiplex PCR Assay for Assessment of T-cell Clonality: A Comparative Study from the EuroClonality Consortium. *Hemasphere* 3(3):e255. [https:// doi.org/10.1097%2FHS9.000000000000255](https://doi.org/10.1097%2FHS9.000000000000255).