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Chronic lymphocytic leukemia and Chronic Lymphoproliferative Disorders

A PROSPECTIVE STUDY ON HIGH RESOLUTION ULTRASOUND ASSESSMENT OF SUPERFICIAL LYMPHONODES OF CLL PATIENTS DURING BTKI TREATMENT: COMPARISON OF DIMENSIONAL RESPONSE VS OVERALL ULTRASOUND ASSESSMENT IN GENERAL PRACTICE

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Introduction: IWCC and ESMO guidelines suggest abdominal ultrasound (US) and superficial lymphonodes (SLN) palpation to assess patients with chronic lymphocytic leukemia (CLL) in general practice (GP). Computed tomography (CT) is generally not indicated out of a clinical trial. The CLL expert Tuscany panel included SLN ultrasound (SLNUS) in GP (doi10.1007/s10238-023-01244-5). SLN US assessment in CLL patients has been previously published and CLL SLN US-characteristics have been described (doi: 10.3390/jcm11113206). Ultrasound over palpation has resulted to be more accurate to define the number and the characteristics of CLL SLN (doi: 10.3390/jcm11113206).

Methods: We performed N=320 US examinations. Sixty patients were prospectively enrolled in the study (IRB approved): Ibrutinib (N=20 patients), Acalabrutinib (N=20 patients), and Zanubrutinib (N=20 patients). Over 800 SLN were assessed with US. Median follow up was 18 months (range: 9 to 24 months). We compared BTKi response based on SLN dimensions, as suggested by the IWCC and ESMO guidelines, vs an overall SLN US-characteristics evaluation as previously described (doi: 10.3390/jcm11113206).

Results: Best SLN response was obtained at a median of 9, 9, and 6 months for patients treated with Ibrutinib, Acalabrutinib, and Zanubrutinib, respectively. SLN response based on SLN dimensions was complete remission (CR) in N=24 patients (40%); partial remission (PR) in N=15 patients (25%); stable disease (SD) in N=16 patients (27%); and progressive disease (PD) in N=5 patients (8%). UScharacteristics evaluation assessment of SLN response was CR in N= 30 patients (50 %); PR in N=24 patients (48%); SD in N=2 patients (3%); and PD in N=4 patients (7%). There was a statically significant difference between patients obtaining SD and a strong trend for patients obtaining PR using SLN dimensions vs US-characteristics evaluation (p=0.0002, and p=0.009, respectively). No statistically significant difference was found in patients in CR or PD (p= 0.272, and p= 0.835, respectively).

Conclusions: SLN US analysis of SLN characteristics allows to better define CLL patients response to BTKi in respect to only SLN dimensions assessment with a potential impact on treatment decisions. These preliminary results suggest a role of SLNUS to help defining response to BTK inhibitors in general practice