Introduction: Aggressive non-Hodgkin lymphoma (aNHL) relapsing after high-dose therapy or, in not transplant-eligible patients (pts), after 1st-line chemotherapy, represents an unmet clinical need. Therefore, we aimed at evaluating a salvage combination regimen (PREBEN/PEBEN) based on pixantrone, anaza-anthracenadione recently approved in Europe for pts with multiply relapsed or refractory aNHL, etoposide, bendamustine and, in CD20+ tumors, rituximab. A preliminary pre-trial experience on heavily pre-treated pts with relapsed aNHL of B- or T-cell phenotype showed good feasibility and efficacy and was previously reported. On this background, the Nordic Lymphoma Group launched an open label phase 1 (dose finding)/2 study (EudraCT no.2015-000758-39) testing the feasibility and efficacy of the PREBEN regimen in relapsed aNHL of B- or T-cell phenotype.

Here, we present the preliminary data of the first 12 enrolled pts.

Methods: The trial design subdivides pts in ‘fit’ and ‘frail’ according to predefined criteria. ‘Fit’ patients enter phase 1 with a phase 2 expansion at maximum tolerated dose (MTD) level. ‘Frail’ patients enter directly phase 2 at baseline dose level. This consists of PixaXtrone 50 mg/m² i.v. day 1 + 8, Etoposide 100 mg i.v. day 1, Bendamustine 90 mg i.v. day 1 with or without the addition of Rituximab 375 mg/m² i.v. day 1. A maximum of 4–6 three-weekly cycles is given. PET/CT is performed after cycle 2 and at the end of therapy. Dose escalation is done according to a Bayesian design. Primary end-points are MTD (phase 1) and overall response rate (ORR) (phase 2).

Results: Of the 12 pts enrolled, 8 are males and 4 females. The age range is 39–80 yrs. The histological diagnosis at relapse was diffuse large B-cell lymphoma (DLBCL) in 8 pts and peripheral T-cell lymphoma in 4 pts. Two pts entered the phase 1 ‘fit’ trial at baseline level and 10 entered the phase 2 ‘frail’ part of the trial. All pts had IPI > 2 prior to salvage start. The mean N of previous regimens was 3 (range 1–5). Three pts had previously undergone autologous stem cell transplant. Ten pts have initiated/undergone therapy; two patients have not initiated their 1st cycle yet. Of the 10 treated pts, all had a partial (N = 6, 60%) or complete (N = 4, 40%) metabolic response (ORR 100%) after 2 cycles. One of the complete responses was seen in a previously transplanted pt with stage IV relapse including bone lesions. Response durations range between 4 and 7+ months. The treatment schedule was feasible and most patients received it on an outpatient basis. The most common grade 3–4 toxicity was of hematological type (mainly neutropenia and thrombocytopenia). At the now completed first dose level of phase 1, one MTD was recorded due to grade 4 neutropenia. Grade 3–4 infections were seen in 2 pts and were manageable.

Conclusions: In this high-risk population of relapsed aNHL, the PREBEN/PEBEN salvage schedule is feasible (outpatient regimen) and the preliminary efficacy data are promising.

Keywords: diffuse large B-cell lymphoma (DLBCL); peripheral T-cell lymphomas (PTCL); salvage treatment.

OT09
DEVEC: A PHASE II STUDY OF METRONOMIC CHEMOTHERAPY IN ELDERLY NON-FIT PATIENTS WITH AGGRESSIVE B-CELL LYMPHOMAS (PROMOTED BY FIL)


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infections. Only 3/42 (7%) pts discontinued treatment because of toxicity or death. The overall response rate (ORR) was 64.3% including 23.8% CR, 4.7% unconfirmed CR (uCR) and 38% PR. The median overall survival (OS) and progression free survival (PFS) were 15 (95% CI = 8.645–21.355) and 10 (CI 95% = 5.520–14.480) months, respectively. On the basis of these results, and giving the lack of MTN-CHT trials in lymphoma patients, the elderly commission of the FIL released in November 2016 the DEVEC trial (EUDRACT 2016-003703-02).

**Methods/Design:** This is an open label, non-randomized, multicentre, phase II study, to evaluate the efficacy and safety of DEVEC oral schedule (fig1) in large B-cell (LBCL) and Burkitt lymphoma (BL) diagnosed in elderly unfit and frail patients who are R/R after previous treatment, and in super-frail patients at disease onset. Patients will be enrolled according to Bryant & Day two-stage optimal design.

**Primary Objectives:**
1. To explore the activity of the DEVEC induction + maintenance schedule;
2. To explore the safety of the DEVEC induction + maintenance schedule.

**Secondary Objectives:** To evaluate the ORR (CR, Cru, PR) and the Clinical Benefit evaluated at the end of induction (EOI) cycles. OS, PFS, EFS, DFS, to assess QoL.

**Treatmet Schedule:**

A) Induction phase: six courses (q 28 days) of PDN + ETO + VRN + CTX, ±RTX. Patients in PR and SD after 2 cycles will continue with additional 4 courses. At the end of the induction phase patients in ≥PR will continue treatment with

B) Maintenance phase: six courses of PDN + VRN + CTX. (q28 days).

**Primary Endpoints:** The primary efficacy endpoint is defined in terms of CRR (CR + Cru rate). The primary safety endpoint is defined as incidence, nature, and severity of adverse events.

**Keywords:** Chemotherapy; diffuse large B-cell lymphoma (DLBCL); elderly.

**OT10 PET/CT-GUIDED BIOPSY FOR THE DIAGNOSIS OF LYMPHOMA**

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**Introduction:** Biopsy of affected tissue is required for lymphoma diagnosis at onset and relapse and to plan adequate treatment. Open incisional biopsy is traditionally the method of choice, with an accuracy of approximately 100%. Nevertheless, it requires hospitalization, availability of an operating room and sometimes general anesthesia and is associated with several drawbacks (morbidity, surgical complications, tumor contamination of surrounding tissues). The development of ultrasound and computed tomography (CT)-guided biopsies has almost overcome these disadvantages. However, a variable proportion of non-diagnostic procedures is reported, leading to an accuracy that ranges between 50% and 80%. Functional imaging, such as fluorodeoxyglucose (FDG) positron emission tomography (PET)/CT, is a procedure which can potentially be used to drive biopsy to the most metabolically active area within a lymph node (figure) or extranodal masses which sometimes show no morphologically detectable changes on CT scan.

**Methods:** One hundred patients with suspect lymphoma at onset or relapse are expected to be enrolled in 3 years, provided they show FDG-avid findings. Patients are excluded if pregnant, breastfeeding or in case fine-needle PET/CT-guided biopsy is contraindicated. Diagnostic accuracy will be compared to published data concerning conventional imaging. Specimen adequacy will also be evaluated. The trial is supported by the Italian Association for Cancer Research (Progetto AIRC IG 2015 Id 17781).

**Results:** Data are available for the first 32 patients. Thirty-four procedures have been performed: 3 (8.8%) were interrupted because of pain but could be successfully repeated in 2 cases. Biopsy target was lymph node in 19 cases and extranodal site in 13 (bone in 8 cases, soft tissue in 3, liver and kidney in 1 each). Median SUVmax of target lesions was 11.5 (4.9–37.7). Insufficient samples were obtained in 9.7% of cases (3 out of 31 successful procedures), whereas in all other instances the tissue was considered adequate to formulate a diagnosis (table).

| Diffuse large B-cell lymphoma | 10 |
| Follicular lymphoma | 7 |
| Metastases of carcinoma | 3 |
| Hodgkin lymphoma | 2 |
| Normal tissue/Inflammation | 2 |
| Anaplastic large T-cell lymphoma | 1 |
| Acute lymphoblastic leukemia | 1 |
| Marginal zone lymphoma | 1 |
| Mantle cell lymphoma | 1 |

Mean sample length was 10 mm (standard deviation ±6 mm). The mean amount of affected tissue in collected samples was 56% (±33%) and the mean proportion of fibrosis/bone was 37% (±32%). No severe adverse events were reported during or after each procedure.

**Conclusions:** Patients can benefit from a minimally invasive procedure which allows a timely and accurate diagnosis of lymphoma at onset or relapse. Cost and time savings will be evaluated once enrolment is fully completed.

**Keywords:** positron emission tomography (PET).