SUPPLEMENTARY MATERIAL

Supplementary methods

Inclusion criteria

- Signed informed consent form
- Age ≥18 years
- Eastern Cooperative Oncology Group performance status of 0, 1, or 2
- For patients enrolled in the safety run-in phase: lymphoma classified as either of the following:
    - Relapsed or refractory follicular lymphoma (FL) after treatment with at least one prior chemoimmunotherapy regimen
    - Previously untreated Grade 1, 2, or 3a FL that requires treatment, defined as meeting at least one of the Groupe d'Etudes des Lymphomes Folliculaires (GELF) criteria
- For patients enrolled in the expansion phase: lymphoma classified as either of the following:
    - Previously untreated Grade 1, 2, or 3a FL that requires treatment, defined as meeting at least one of the GELF criteria
    - Previously untreated advanced diffuse large B-cell lymphoma (DLBCL), defined as stage III or IV with an internal prognostic index ≥2 or stage II with bulky disease (defined as at least one lesion ≥7 cm)
- Histologically documented CD20-positive lymphoma, as determined by the local laboratory
- Fluorodeoxyglucose-avid lymphoma (i.e., positron emission tomography [PET]-positive lymphoma)
- At least one bi-dimensionally measurable lesion (>1.5 cm in its largest dimension by computed tomography [CT] scan or magnetic resonance imaging)
- Availability of a representative tumor specimen and the corresponding pathology report for retrospective central confirmation of the diagnosis of FL

- For women who were not postmenopausal (≥12 consecutive months of non-therapy-induced amenorrhea) or surgically sterile (absence of ovaries and/or uterus): agreement to remain abstinent (refrain from heterosexual intercourse) or use contraceptive methods that result in a failure rate of <1% per year during the treatment period and for at least 18 months after the last dose of study treatment for patients in the atezolizumab-obinutuzumab-bendamustine and atezolizumab-obinutuzumab-cyclophosphamide, doxorubicin, vincristine and prednisone (CHOP) treatment groups or for at least 12 months after the last dose of study treatment for patients in the atezolizumab-R-CHOP treatment group
- For men: agreement to remain abstinent (refrain from heterosexual intercourse) or use contraceptive measures and agreement to refrain from donating sperm

Exclusion criteria

- Histological evidence of transformation of FL into high-grade B-cell non-Hodgkin lymphoma
- Central nervous system lymphoma or leptomeningeal infiltration
- Preplanned consolidative radiotherapy
- Treatment with systemic immunosuppressive medications, including, but not limited to, prednisone, azathioprine, methotrexate, thalidomide, and anti-tumor necrosis factor agents within 2 weeks prior to Day 1 of Cycle 1
- History of solid organ transplantation
- History of severe allergic or anaphylactic reaction to humanized, chimeric, or murine monoclonal antibodies
- Known sensitivity or allergy to murine products
- Known hypersensitivity to biopharmaceuticals produced in Chinese hamster ovary cells or any component of the atezolizumab, obinutuzumab, rituximab, or bendamustine formulation, including mannitol

- Known history of idiopathic pulmonary fibrosis, organizing pneumonia (e.g., bronchiolitis obliterans), drug-induced pneumonitis, or evidence of active pneumonitis on screening chest CT scan
- Active bacterial, viral, fungal, or other infection or any major episode of infection requiring treatment with IV antibiotics within 4 weeks of Day 1 of Cycle 1
- Positive for hepatitis B surface antigen, total hepatitis B core antibody, or hepatitis C virus antibody at screening
- Known history of HIV positive status
- History of progressive multifocal leukoencephalopathy
- Vaccination with a live virus vaccine within 28 days prior to Day 1 of Cycle 1 or anticipation that such a live, attenuated vaccine will be required during the study
- History of other malignancy that could affect compliance with the protocol or interpretation of results
- History of autoimmune disease including but not limited to myasthenia gravis, myositis, autoimmune hepatitis, systemic lupus erythematosus, rheumatoid arthritis, inflammatory bowel disease, vascular thrombosis associated with antiphospholipid syndrome, Wegener's granulomatosis, Sjögren's syndrome, Guillain-Barré syndrome, multiple sclerosis, vasculitis, or glomerulonephritis
- Evidence of any significant, uncontrolled concomitant disease that could affect compliance with the protocol or interpretation of results
- Major surgical procedure other than for diagnosis within 28 days prior to Day 1 of Cycle 1, or anticipation of a major surgical procedure during the course of the study
- Inadequate hematologic, renal or liver function (unless due to underlying lymphoma)
- Any of the following abnormal laboratory values (unless due to underlying lymphoma):

- Creatinine >1.5 times the upper limit of normal (ULN; unless creatinine clearance is normal) or calculated creatinine clearance <40 mL/min (using the Cockcroft-Gault formula)
- Aspartate transaminase or alanine aminotransferase >2.5 x ULN
- Serum total bilirubin >1.5 x ULN (or >3 x ULN for patients with Gilbert syndrome)
- International normalized ratio or *prothrombin time* >1.5 x ULN in the absence of therapeutic anticoagulation
- Partial thromboplastin time or activated partial thromboplastin time >1.5 x ULN in the absence of a lupus anticoagulant

- Pregnant or lactating, or intending to become pregnant during the study
- Left ventricular ejection fraction <50% by multiple-gated acquisition scan or echocardiogram
- Unable to comply with the study protocol, in the investigator's judgment

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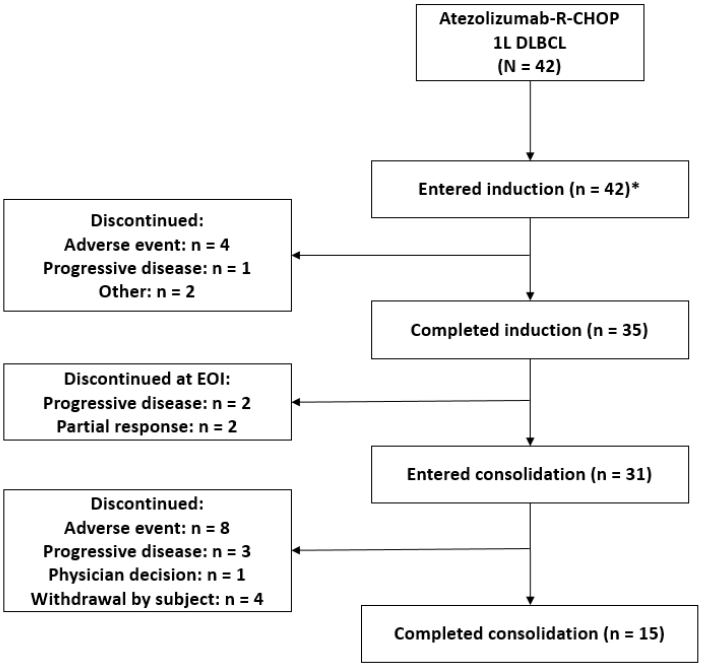
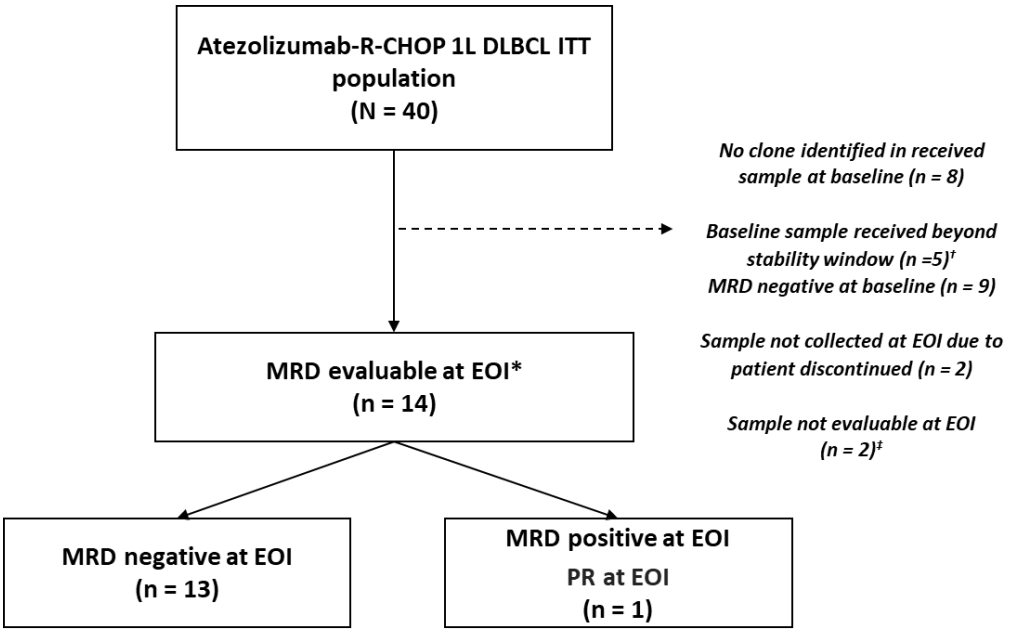
Supplementary Figure S1. Patient disposition



*One patient received a single dose of study treatment before discontinuation and is considered as having entered induction.

1L, first-line; CHOP, cyclophosphamide, doxorubicin, vincristine, and prednisone; DLBCL, diffuse large B-cell lymphoma; EOI, end of induction; R, rituximab.

Supplementary Figure S2. Patient flow for MRD analysis and MRD levels at baseline

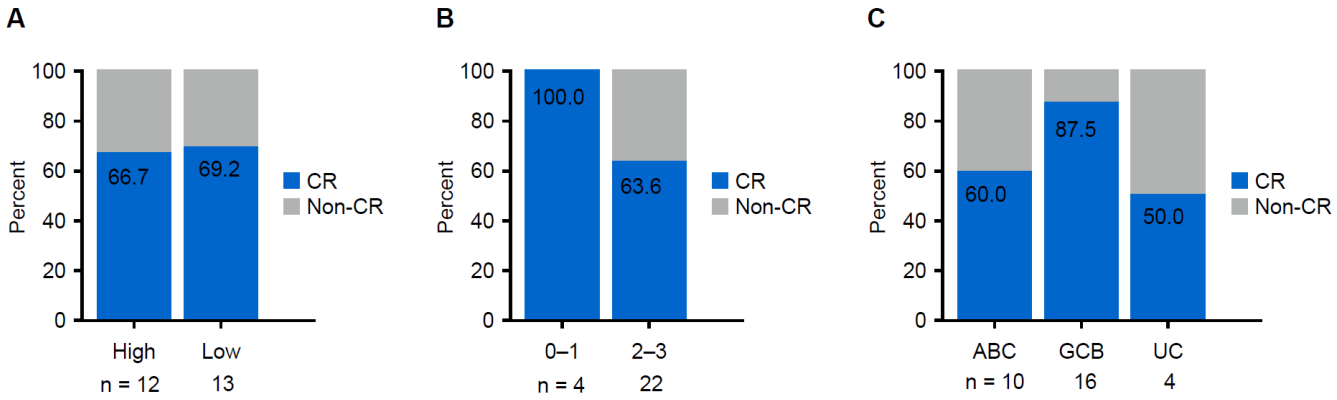


Patient MRD levels at baseline				
Mean	**Standard deviation**	**Median**	**Minimum**	**Maximum**
24576.15	85761.26	151.59	4.41	309976.16

*MRD values that were negative/blank at baseline AND blank (not done) at EOI were not accounted for here; †No clone was identified at baseline, therefore MRD was not tested at EOI; ‡No blood samples were available for the Cycle 1 Day 1 or EOI visits for the MRD assay. One patient discontinued early due to an AE; the second patient had a CR at EOI.

1L, first-line; CHOP, cyclophosphamide, doxorubicin, vincristine, and prednisone; CR, complete response; DLBCL, diffuse large B-cell lymphoma; EOI, end of induction; ITT, intention to treat; MRD, minimal residual disease; NE, not evaluable; PR, partial response; R, rituximab.

Supplementary Figure S3. EOI response according to expression of (A) PD-L1 mRNA* (B) PD-L1 SP263 0 + 1 versus 2 + 3 and (C) COO subtypes measured using IHC



*The cut-off for high/low was the median expression value.

ABC, activated B-cell-like; COO, cell of origin; CR, complete response; EOI, end of induction; GCB, germinal center B-cell-like; IHC, immunohistochemistry; PD-L1, programmed death-ligand 1; UC, unclassified.