**Supplementary Table 1: Baseline patient characteristics.**

|  |  |  |
| --- | --- | --- |
|  |  | **Total (N=30)** |
| Age at start of treatment | Median (range) | 35 years (18-72 years) |
| Sex | Female | 11 (37%) |
|  | Male | 19 (63%) |
| Primary refractory disease | Yes | 18 (60%) |
|  | No | 12 (40%) |
| Clinical stage | I | 1 (3%) |
|  | II | 5 (17%) |
|  | III | 2 (7%) |
|  | IV | 22 (73%) |
| B symptoms | Yes | 18 (60%) |
|  | No | 12 (40%) |
| Stage shift from initial diagnosis | Higher stage at relapse | 19/29 (66%) |
|  | Same stage at relapse | 6/29 (21%) |
|  | Lower stage at relapse | 4/29 (14%) |
| Relapse localization (multiple answers possible) | Bone marrow involvement | 9/30 (30%) |
| Extranodal involvement  | 20/29 (69%) |
| Pulmonary involvement | 12/29 (41%) |
| International prognostic score | 0-2 | 19 (63%) |
|  | 3-7 | 11 (37%) |
| ECOG performance status | 0 | 16 (53%) |
|  | 1 | 14 (47%) |
| Prior lines of therapy | Median (range) | 4 (2-10) |
| Prior therapies (multiple answers possible) | Prior BV therapy | 23 (77%) |
| Prior radiotherapy | 22 (73%) |
| Prior ASCT | 30 (100%) |

Data are n (%) or n/N (%) unless otherwise indicated. ECOG = Eastern Cooperative Oncology Group. BV = brentuximab vedotin. ASCT = autologous hematopoietic cell transplantation.

|  |  |  |
| --- | --- | --- |
|  | Investigator assessment | IRC assessment |
|  | Number of patients (% of total) | Number of patients (% of total) |
| Complete response | 8 (27%) | 4 (13%) |
| Partial response | 17 (57%) | 17 (57%) |
| Stable disease | 4 (13%) | 6 (20%) |
| Progressive disease | 1 (3%) | 3 (10%) |
| Total | 30 (100%) | 30 (100%) |

**Supplementary Table 2: Best response.**

**Supplementary Table 3: Details of nivolumab therapy**

|  |  |  |
| --- | --- | --- |
|  |  | **Total (N=30)** |
| Number of nivolumab infusions | Median (range) | 47 (4-110) |
| Treatment duration | Median (range) | 110 weeks (18-223) |
| Progressive disease during nivolumab therapy | Yes | 19 (63%) |
| No | 11 (37%) |
| Treatment beyond progression | Yes | 15/19 (79%) |
|  | No | 4/19 (21%) |
| Best response beyond progression (investigator assessment) | Partial remission | 2/12 (17%) |
| Stable disease | 3/12 (25%) |
| Progressive disease | 7/12 (58%) |
| Duration of treatment beyond progression | Median (range) | 25.1 weeks (6-177) |

Data are n (%) or n/N (%) unless otherwise indicated.

**Supplementary Table 4: Analysis of adverse events (AEs) according to severity**

|  |  |  |
| --- | --- | --- |
| **Adverse event (AE)** |  | **Number of patients experiencing one of the respective AEs (N=30)** |
| Occurrence of any nivolumab-related adverse event  | Yes | 27 (90%) |
| No | 3 (10%) |
| Occurrence of any nivolumab-related non-serious adverse event | Yes | 27 (90%) |
| No | 3 (10%) |
| Occurrence of nivolumab-related serious adverse event | Yes | 5 (17%) |
| No | 25 (83%) |
| In-patient treatment because of a  | Yes | 5 (17%) |
| Nivolumab-related adverse event  | No  | 25 (83%) |
| Highest CTCAE grade | 1 | 2/27 (7%) |
| 2 | 18/27 (67%) |
| 3 | 5/27 (19%) |
| 4 | 2/27 (7%) |
| **Number of non-serious adverse events by patient** | Median (range) | 3 (0-14) |
| **Number of serious adverse events by patient** | Median (range) | 0 (0-1) |

Data are n (%) or n/N (%) unless otherwise indicated. CTCAE = Common Terminology Criteria for Adverse Events.

**Supplementary Table 5: Differentiation of treatment-related adverse events**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  |  | **Non-serious adverse event (N=120)** | **Serious adverse event (N=5)** | **Total (N=125)** | **Number of patients experiencing one of the subsequent adverse events****(N (%) )**  |
| Type of event | Autoimmune reaction  | 91 (76%) | 2 (40%) | 93 (74%) | 24 (80%) |
|  | Infusion-related reaction | 24 (20%) | 3 (60%) | 27 (22%) | 20 (67%) |
|  | Fatigue | 5 (4%) | 0 | 5 (4%) | 4 (13%) |
| Type of autoimmune reaction | Rash | 20/91 (22%) | 0 | 20/93 (22%) | 7 (23%) |
| Thyroiditis | 17/91 (19%) | 0 | 17/93 (18%) | 14 (47%) |
| Hepatitis | 15/91 (16%) | 1/2 (50%) | 16/93 (17%) | 3 (10%) |
|  | Arthritis | 9/91 (10%) | 0 | 9/93 (10%) | 6 (20%) |
|  | Asymptomatic lipase increase | 6/91 (7%) | 1/2 (50%) | 7/93 (8%) | 6 (20%) |
|  | Colitis | 6/91 (7%) | 0 | 6/93 (7%) | 1 (3%) |
|  | Conjunctivitis/Iritis | 3/91 (3%) | 0 | 3/93 (3%) | 3 (10%) |
|  | Polymyalgia | 3/91 (3%) | 0 | 3/93 (3%) | 3 (10%) |
|  | Peripheral neuropathy | 5/91 (6%) | 0 | 5/93 (5%) | 3 (10%) |
|  | Pneumonitis | 3/91 (3%) | 0 | 3/93 (3%) | 2 (8%) |
|  | Inflammation of salivary glands | 1/91 (1%) | 0 | 1/93 (1%) | 1 (3%) |
|  | Neutropenia | 3/91 (3%) | 0 | 3/93 (3%) | 1 (3%) |