

#### **Data S1. Protocols for immunohistochemical (IHC) and hematoxylin and eosin (H&E) staining**

*H&E staining.* The resected samples were formalin-fixed, paraffin-embedded, sliced, deparaffinized and rehydrated with distilled water. The tissue sections were covered completely with hematoxylin and incubated for 5 min. The slides were rinsed by 2 changes of distilled water (15 sec each) to remove excess stain. Adequate bluing reagent was applied to completely cover tissue sections and incubate for 10-15 sec. Slides were rinsed with 2 changes of distilled water (15 sec each) and then dipped in 100% ethanol (10 sec) and excess liquid was blotted off. Eosin Y solution was applied to completely cover tissue sections and incubated for 2-3 min. The slides were then rinsed with 100% ethanol for 10 sec. Slides were dehydrated with 3 changes of 100% ethanol (1-2 min each) and mounted with the coverslips, followed by light microscopic observation.

*IHC staining.* The resected samples were embedded in paraffin blocks and sectioned. Sections (4 mm) of the tissue microarray blocks were cut to adhesive-coated slides and stained using standard procedures. The sections were incubated overnight at 4°C with the following primary antibodies: CD3 (polyclonal rabbit anti-human; cat. no. A0452; final dilution, 1:50), CD5 (monoclonal mouse anti-human; cat. no. M3641; final dilution, 1:50), CD20 (monoclonal mouse anti-human; cat. no. M0755; final dilution, 1:200), CD23 (monoclonal mouse anti-human; cat. no. IR781; final dilution, 1:50), CD43 (monoclonal mouse anti-human; cat. no. GA636; final dilution, 1:50), Bcl-2 (monoclonal mouse anti-human; cat. no. M0887; final dilution, 1:50), CD79a (monoclonal mouse, anti-human; cat. no. GA621; final dilution, 1:1,000),

Cyclin D1 (monoclonal rabbit anti-human; cat. no. GA083; final dilution, 1:500; all from DAKO; Agilent Technologies, Inc.). Following washing with PBS, the slides were incubated with biotinylated secondary antibodies [polyclonal mouse anti-rabbit IgG (cat. no. 31213; Thermo Fisher Scientific, inc.) for CD3 and cyclin D1; polyclonal rabbit anti-mouse IgG (cat. no. A16170; Thermo Fisher Scientific, Inc.) for CD5, CD20, CD23, CD43, Bcl-2 and CD79a] (diluted 1:100) for 30 min at 37°C, followed by a streptavidin-peroxidase (1:100 dilution) incubation at 37°C for 30 min. Immunolabeling was visualized with a mixture of 3,3'-diaminobenzidine solution. Counterstaining was performed with hematoxylin. The stained slides were observed under a light microscope.

#### **Data S2. Protocol for 18F-fludeoxyglucose-positron emission tomography/computed tomography (18F-FDG-PET/CT)**

The patient was required to fast, except for water for 6 h before 18F-FDG-PET/CT scanning. The patient was asked to be placed in the supine position. Following intravenous injection via the anterior-median vein of ~10 mCi of 18F-FDG (supplied by the Institute of Nuclear Energy Research of Taiwan), a whole-body PET/CT scan was performed using the Discovery PET/CT 710 system (GE Healthcare) 60 min after radiotracer injection. Prior to PET imaging acquisition, non-contrast and low-dose spiral CT with 3.75 mm-thickness per slice was performed from head to thigh, and subsequently, reconstructed CT imaging was used to generate the parameters required for PET imaging attenuation correction. A whole-body PET scan was then performed for 25 min. All PET/CT data analyses, including imaging fusion, were performed using Xeleris (version 3.1) software (GE Healthcare).

Figure S1. Hematoxylin and eosin stains of the left inguinal lymph node biopsy. Generally, the lymph node is penetrated by numerous afferent lymph vessels, which extend to the deeper areas of the lymph node by way of the trabecular extensions of the cortex. The paracortical region, the periphery of a lymph node, is the lymphoid follicle. However, in these slices there is infiltration of homogenous hyperchromatic cells in almost the entire field of view. The lymph vessels and trabecular structures could merely be seen in these slices. (A) Magnification, x40; (B) magnification, x100; (C) magnification, x200.

