Supplementary methods

Screening for apoptosis by fluorescence microscopy

Fluorescence microscopy of unfixed/unpermeabilised adherent cells stained with Hoechst 33342 (20-(4-ethoxyphenyl)-5-(4-methyl-1-piperazinyl)-2.50-bi-1-1H-benzimidazole; HT) and propidium iodide (PI) was performed as previously described (*1*).

Small particle Flow cytometry analyses of EVs

The flow cytometry analyses were done as previously described (*2*). In short, fluorescence was used as trigger signal and positive fluorescent events were plotted on an SSC/FSC-PMT graph. The nanovesicle gate of detection was determined based on the acquisition of Sky blue and yellow-green microspheres of 90, 450, 840, 1000 and 3200 nm (Supplementary Figure 1) and 1000 microspheres were acquired. Conditioned media were labeled for 30 min with V450 probe-conjugated Annexin-V, diluted 1:50, (BD bioscience) at room temperature in the dark. Since Annexin-V recognizes PS in a calcium dependent manner, we confirmed its specific recognition of EVs by chelating Ca2+ ions using samples detection in presence of 50 µM EDTA as a baseline (*2*). To process the data quantitatively, a known number of polystyrene microspheres (15 um diameter; Polysciences, PA, USA) were added to each tube as already described (*2*). To confirm that events detected were genuine extracellular vesicles and not protein aggregates, their sensitivity to 0.05% Triton X-100 detergent was assessed.

Supplementary Figure Legends

Supplementary Figure 1 (a) Evaluation of apoptotic or necrotic cells in serum-starved murine ECs using Hoescht 33342 and propidium iodide (HO/PI) staining. **(b)** ApoExo concentration measured by Small particle Flow cytometry in the supernatant of serum-starved murine ECs from wild-type or caspase-3 knockout mice.

Supplementary Figure 2.

C57Bl/6 mice were grafted with an aortic segment from allogeneic (from BALB/c) (n=7) or syngeneic (n=9) source and injected with ApoExo from syngeneic (C57Bl/6) mice for 3 weeks post transplantation: (a) Adjacent isogenic aorta, aortic allograft, and syngeneic graft sections stained with H&E. (magnification: 5X). (b) Ratio intima/media in the aortic sections. (c) Mean number of TLS per aortic sections. DSA (d) Anti-LG3 (e) and ANA (f) IgG levels in sera from recipient of an allograft or a syngeneic graft after 3 weeks of intravenous injections with ApoExo from syngeneic (C56Bl/6) mice. Data are expressed as means ± SEM. Comparison are done with a Student's t-test.

Supplementary Figure 3.

Mice were injected with ApoExo from syngeneic (C57Bl/6) (n=7) or from allogeneic (BALB/c) (n=7) mice for 3 weeks post transplantation: (a) Aortic allograft sections stained with H&E, CD20 or CD3 (magnification: 5X). (b) Ratio intima/media in the allografts. (c) Mean number of TLS per allograft. (d) Neointima-media and perivascular quantification of CD20+ B cells and (e) CD3+ T cells staining in each high-power field of the allografts. DSA (f) Anti-LG3 (g) and ANA (h) IgG levels in sera from allografted mice after 3 weeks of intravenous injections with ApoExo from syngeneic (C56Bl/6) or from allogeneic (BALB/c) mice. Data are expressed as means ± SEM. Comparison are done with a Student's t-test.

Supplementary Figure 4

Density plot for the detection of CD3+/TCR beta+ cells that also express RORγ and/or IL-17.

Supplementary Figure 5

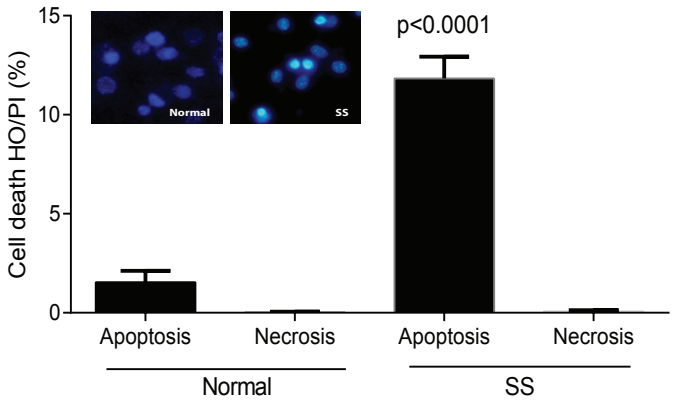
ApoExo concentration measured by Small particle Flow cytometry in the supernatant of serum-starved murine ECs that were treated with bortezomib or vehicle.

1. N. Pallet, I. Sirois, C. Bell, L. A. Hanafi, K. Hamelin, M. Dieude, C. Rondeau, P. Thibault, M. Desjardins, M. J. Hebert, A comprehensive characterization of membrane vesicles released by autophagic human endothelial cells. *Proteomics* **13**, 1108-1120 (2013).

2. M. Rousseau, C. Belleannee, A. C. Duchez, N. Cloutier, T. Levesque, F. Jacques, J. Perron, P. A. Nigrovic, M. Dieude, M. J. Hebert, M. H. Gelb, E. Boilard, Detection and quantification of microparticles from different cellular lineages using flow cytometry. Evaluation of the impact of secreted phospholipase A2 on microparticle assessment. *PLoS One* **10**, e0116812 (2015).

Supplementary figure 1

a



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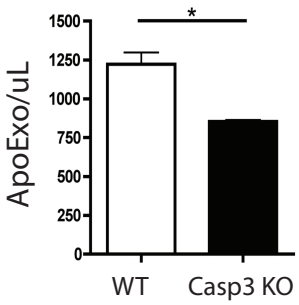
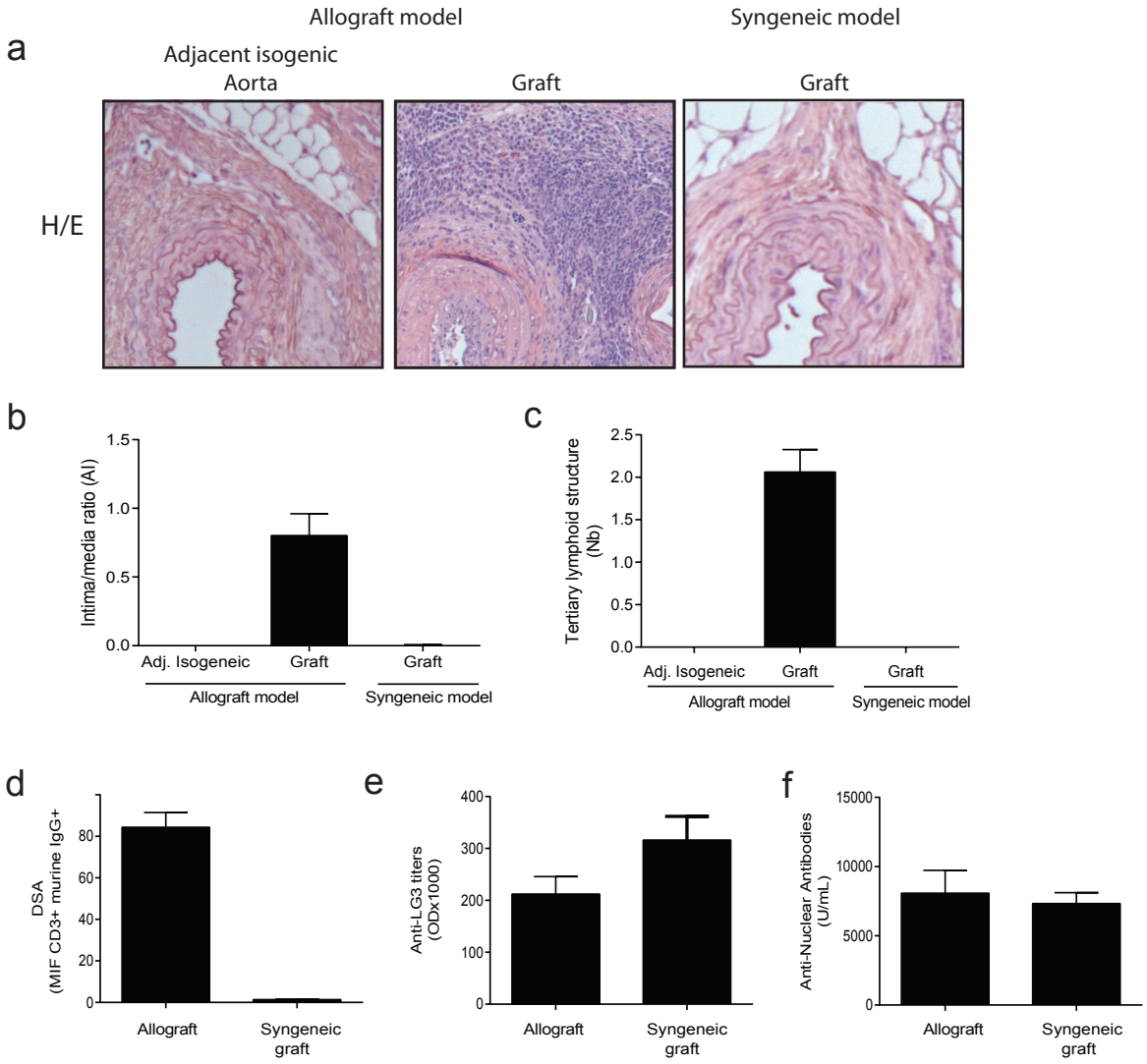
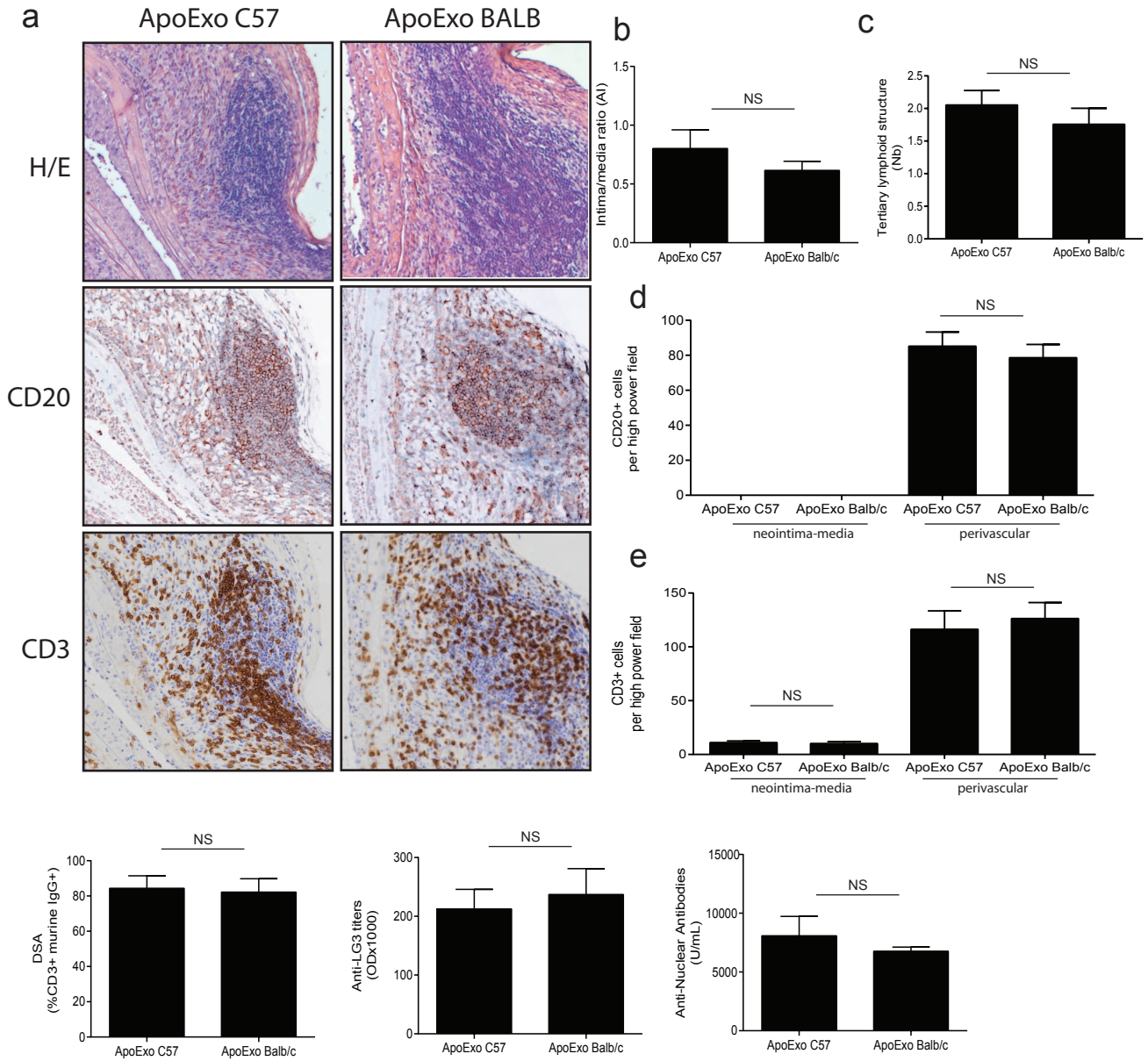


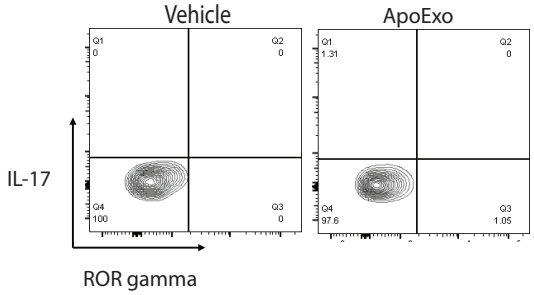
Supplementary Figure 2



Supplementary figure 3



Supplementary figure 4



Supplementary figure 5