WASHINGTON STATE UNIVERSITY
Department of Veterinary Clinical Sciences

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March 29, 2017

Julie Woodyer,

I am writing to you in reference to a cardiovascular examination performed on a polar bear named Yupik on March 22, 2017 in Morelia, Mexico. I am an American College of Veterinary Internal Medicine (ACVIM) board certified cardiologist and internal medicine specialist with 27 years of experience in veterinary medicine. I have an active research program investigating cardiovascular function adaptation in healthy bears and in bears with cardiac disease. I have performed over 200 echocardiograms on ursids and am well published on this topic. I also run a cardiopulmonary clinic within the Veterinary Teaching Hospital at Washington State University treating naturally occurring cardiopulmonary disease in all species (domestic, exotic and wildlife). I feel I am well-qualified to render an opinion on the cardiovascular status of the polar bear named Yupik.

On March 22, 2017 Yupik was anesthetized for a complete health examination. At this time, I performed an echocardiogram with 2D, M-mode and Doppler modalities. I found Yupik's heart size and function to be normal. I do not see any indication for cardiac medications. I see no cardiovascular contraindication to transporting Yupik to a different location.

Yupik has evidence of mild increases in lung pressures that may be seen with inflammatory or allergic lung conditions, or may be seen in animals of advanced age. The clinical significance of this finding it is unknown at this time. Occult lung or airway inflammation is not unusual in animals (of all species) living in warmer climates. We often identify more airway diseases (clinical and occult) in animals living warmer environs due to greater dust, molds, infectious and parasitic organisms. It is likely that Yupik may benefit form a cooler climate in this regard as a polar bear is not evolutionarily adapted to the types of respiratory antigenic challenges of a subtropical highland climate. I do not feel the lung condition would be an obstacle in moving Yupik, and in fact, a cooler climate could be beneficial for her pulmonary health. In my professional opinion, Yupik would benefit in general (physical and behavioral health) by living in a facility with a colder climate with additional space and a more natural environment.

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I am happy to answer any questions you may have regarding Yupik's cardiovascular health. Please let me know what I can provide.

Sincerely,

O Lynne Nelson, DVM, MS, Diplomate ACVIM (Internal Medicine & Cardiology)
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