

LEAP Response to the Recent Medical Evaluations of Lucy

As you all know in the Spring of 2019, LEAP reached out to newly hired Zoo Director Lindsey Galloway. Mr. Galloway was receptive to having a dialogue with us about Lucy and discussing possible options for her future. In June 2019, LEAP President Mary-Ann Holm personally met with Mr. Galloway. It was a lengthy, cordial discussion and as a result there was renewed hope that the long standing request to bring in a team of independent species experts to examine Lucy and provide an unbiased second opinion on whether Lucy could be safely relocated to sanctuary, might finally happen. Our hope was based on several commitments made during the meeting and afterwards in emails and phone calls with Mr. Galloway, including:

- 1) Mr. Galloway's statement that he agreed species not appropriate for zoo captivity included **elephants**, primates and orcas.
- 2) His statement that caring for Lucy's specialized needs is a **growing and significant challenge** for the Edmonton Valley Zoo.
- 3) A written statement that he wants to ensure that the zoo obtains fresh information on Lucy's prognosis and to seek out updated assessments in the coming months by **impartial** authorities about her condition. He assured us that there would be **"no predetermined outcomes" and that he is looking at the new evidence with "fresh eyes"**. He also committed to **full zoo transparency** and has committed to keeping us in the loop going forward.

During our conversations, when it was pointed out to him that previous consultants had made some recommendations that the Valley Zoo never followed up on, he agreed that this was not acceptable. Specifically mentioned were the recommendations from CAZA's hired consultant Dr. Cracknell, who recommended that EVZ should among other things:

Aim to reduce her weight to facilitate the osteoarthritis and respiratory support – in the region of 3,600-3,700 kg would be ideal. Lucy's weight at this time was 3992 kgs (8782 lbs) Lucy's weight in June of 2019 at 4112 kgs (9048 lbs)

Attempt to develop qualitative and quantifiable methods of assessing oxygenation to allow accurate assessment of respiratory compromise during rest or exercise.

LEAP pointed out that attempts to reduce Lucy's weight continue to be unsuccessful. In fact, Lucy's weight has increased since Cracknell's examination. That her ability to exercise is restricted by climate and space, should be reason alone to recognize that a move to sanctuary would be beneficial to her breathing and arthritis. It should be noted this isn't the first time EVZ has not followed their own consultant's recommendations. The regular consulting vet Dr. James Oosterhuis also recommended Lucy have a larger enclosure and rubber matting on the floor back in 2009, but it required a formal complaint to The Edmonton Humane Society in 2011 before either of these were done. The larger enclosure was actually just the exercise tent set-up behind Lucy's barn and still requires her to traverse through the cold weather and snow to get there. Despite this, the EVZ rejected the offer of an insulated coat for Lucy to use on her walks. <https://www.cbc.ca/news/canada/edmonton/edmonton-valley-zoo-turns-down-coat-for-aging-elephant-lucy-1.2947098>

LEAP also pointed out that there still had been no attempts to measure Lucy's oxygenation in any capacity despite it being a simple, readily available non-invasive test. A renowned elephant specialist Dr. Susan K. Mikota has stated regarding Lucy's respiratory condition, that mouth breathing should not preclude her from transport, the important factor to consider is what happens to her oxygenation during times of mouth breathing. Mr. Galloway gave some reassurance that these measurements would be done during these next assessments, but they were not. Yet it is the most valuable piece of information to gauge Lucy's respiratory status and the risks involved with transporting her.

LEAP provided a list of recommended experts to the Valley Zoo which Mr. Galloway stated was a solid list although he did not select even one of them. The three vets chosen for the recent examinations were not what they were promised to be, for example:

--Dr's Oosterhuis and Wiedner were not **fresh eyes** nor were they **impartial**. They were certainly not independent second opinions. Both vets have examined Lucy in the past and had opined that she could not be moved safely. Both have shown a clear bias against moving elephants to sanctuaries. Dr. Oosterhuis was the only vet out of 11 who said Alaska's elephant Maggie couldn't be moved 13 years ago because she wouldn't survive the trip. She did survive and is still alive and thriving at Sanctuary. Dr. Oosterhuis became the Valley Zoo's primary consultant after rendering his opinion about Maggie. Dr. Wiedner in her report made some erroneous negative claims about sanctuaries and inaccurate statements about the life expectancy of elephants and the death of sanctuary elephants after transport. Both Dr's Oosterhuis and Weidner work in the zoo/circus industry and have made errors in judgement on a number of cases involving sick elephants.

--The third Vet Dr. Leguillette is an equine vet from the University of Calgary. He has no experience with elephants. Mr. Galloway stated he chose him due to "some out of the box thinking" because he was a large animal vet but out of the industry altogether. Aside from elephants and horses being large animals, they have very little in common with each other from a respiratory anatomy standpoint. Considering the goal of these exams was to assess Lucy's breathing as it relates to potential transport, this was a bizarre choice. Lucy is noted to have an undiagnosed obstruction occluding one side her trunk (nose) causing her to mouth breathe during times of exertion. Horses do not have the ability to breathe through their mouth at anytime. Horses can live and thrive in northern climates while elephants cannot. We are astounded by the inclusion of Dr. Leguillette. (more detailed information can be found on page 3)

To review the veterinary reports in their entirety, click this link

https://www.edmonton.ca/attractions_events/edmonton_valley_zoo/lucy-news.aspx

The Zoo claims that transporting her would be an "unkindness" and could be potentially sending her to her death. The manner in which Lucy has been kept is an unkindness and will inevitably lead to her premature death. Examples:

--Climate is not only aggravating Lucy's painful arthritis and cold dry air detrimental to her breathing issues, but also limits her exercise significantly. Lucy spends as much as 2/3rds of her life inside her tiny barn.

--Loneliness and solitude: Lucy exhibits the typical signs of Zoochosis (stereotypical repetitive movements due to psychological stress from boredom, loneliness and lack of species appropriate conditions).

--No place to swim to allow increased exercise indoors (weight loss), hydrotherapy to relieve painful pressure on her arthritic joints and help alleviate boredom. Most zoos will provide this minimum comfort. Arthritis is a leading cause of death in captive elephants.

--No access to trees, a mud pit or anything resembling a natural habitat.

--Inappropriate unvaried diet and no access to water at all times which will aggravate her symptoms of colic, which has been worsening in the past few years and can lead to premature death. We have noted on several visits that Lucy's water troughs are empty and that she is given a hose for drinking. Since she is alone for 12 hours a day, that severely limits her ability to hydrate as does her diet which primarily consists of hay and dried kibble. Dehydration is a contributing cause of colic. Lucy's teeth have been in horrible condition and has caused her much pain and it prevents her from being able to chew properly to aid in digestion. This will also aggravate her colic. Dental issues are commonly seen in captive elephants who don't get branches and fresh browse to chew on to keep their teeth healthy.

After reviewing the recent veterinary reports, LEAP president Mary-Ann Holm spoke on the telephone with Mr. Galloway to express her disappointment with the vets chosen and the lack of analysis of Lucy's oxygenation yet again. Mary-Ann asked if the zoo would consider allowing in a few of LEAP's recommended vets if LEAP covered the associated costs. She assured Mr. Galloway that Lucy would not need to have more invasive testing done again e.g. Scoping of her trunk, and that LEAP's consultants could just review the films and results already obtained. Mary-Ann again mentioned that Lucy's respiratory compromise and the potential risk for transport could not be determined without the analysis of Lucy's oxygenation, which could finally be assessed if he agreed to further examinations. Mr. Galloway's response was an emphatic NO. Mary-Ann mentioned that his response implies a lack of confidence in the vet exams recently done and indicates a concern that they would not hold up to peer review. A long conversation ensued but, in the end, Mr. Galloway would not change his mind.

FURTHER INFORMATION

In mid September during a telephone conversation with Mary-Ann Holm, Mr. Galloway stated he had arranged 3 veterinarians to assess Lucy. He would not disclose the name of the vets citing a risk of repercussions from activists to these vets. This has been a claim stated by EVZ on many occasions but as was reported by the *Globe and Mail* in 2016 who reached out to the Edmonton Police Service, "Edmonton Police Service spokesman Scott Pattison said no incidents of harassment or threats have been reported to police in relation to Lucy". This was conveyed to Mr. Galloway who maintained that in the interest in their privacy and protection their names would not be released. This was when we first realized Mr. Galloway was misleading when he promised full transparency going forward. A request was made by Ms. Holm to be an observer during the examinations and was told that she would not be allowed to attend.

Ms. Holm reminded Mr. Galloway about the importance of obtaining measurements of Lucy's

oxygenation as was discussed during the meeting, he agreed that he would mention that to the consulting vets. Mr. Galloway was asked if the vet reports indicate that Lucy can be moved whether retirement to a sanctuary was on the table? Mr. Galloway stated the purpose of the examinations was only to assess Lucy's fitness for transportation and if it was determined she could be relocated, where she would go would have to be researched fully. Mr. Galloway also stated that if Lucy was to be moved, ground transportation would not be considered due to the length of the trip and that EVZ would undertake moving Lucy by air. We were pleased to hear he had made this decision and felt it indicated he was indeed interested in relocating Lucy if possible. We were told initially the reports would be completed by the end of October but later learned that due to a scheduling conflict with the consultants the completion of the exams would not happen until the end of November 2019.

On November 18, 2019, Mary-Ann received an email from Mr. Galloway stating "Hi, Mary-Ann -- just a quick update...we had the third independent evaluation of Lucy last week...we are now awaiting the final reports. I expect to have everything by the end of the month. I will communicate more then...perhaps over a coffee. Regards, Lindsey.

Ms. Holm waited to hear back about setting up a time to meet as Mr. Galloway had stated. Instead on December 10th Ms. Holm received a telephone call from Mr. Galloway. He informed her that the reports were now complete and stated the zoo would be releasing them online in the morning. He stated that the news was not good, the consulting vets had unanimously agreed with previous assessments that Lucy's life would be at risk if she was moved. He stated it was determined Lucy's respiratory condition has worsened making it now a certainty that Lucy would have to live out her remaining years at EVZ. He encouraged us to read the reports closely and stated he was certain that would we find the reports detailed and convincing. Ms. Holm expressed her disappointment at the results but was unable to comment further since she hadn't yet been able to review them. Again, he did not share the name of the consulting vets aside from Dr. Oosterhuis, who was again brought in to examine Lucy as one of the 3 chosen consultants. We fully expected this but held out some hope that the other 2 vets would be qualified and hoped they had chosen at least one of our suggested consultants. Ms. Holm stated she would view the reports and said she would be in contact after that.

December 11th – The reports were released and can be found on this link
https://www.edmonton.ca/attractions_events/edmonton_valley_zoo/lucy-news.aspx

Upon reviewing the reports we were flabbergasted to say the least. Aside from the findings which we will discuss later, but by the chosen vets. In addition to Dr. Oosterhuis, Lucy was examined by a vet named Dr. Weidner with Dr. Oosterhuis in attendance, and by an Alberta Equine vet from the University of Calgary, Dr. Leguillette. We learned that Dr. Wiedner had also examined Lucy in the past and neither her nor Dr. Leguillette, who had no experience with elephants, could be considered elephant species experts. These were hardly the "fresh eyes" we had been promised considering 2 of the 3 vets had examined Lucy previously. Mary-Ann immediately sent an email to Mr. Galloway asking if they could have a meeting to discuss the reports. Mr. Galloway responded that he was unavailable that week and asked if they could chat by telephone the following week.

Consultants

Dr. Oosterhuis:

Is considered an elephant species expert and is known for his expertise in elephant dental issues. This fact we don't dispute but he has a rather dubious reputation in the elephant community and is well known to side with zoos and circuses when asked to opine on whether an elephant can and should be retired to a sanctuary. Dr. Oosterhuis has been asked to assess Lucy regularly over a number of years and his opinion on transporting Lucy to a facility with other elephants in a more appropriate climate, has always been that Lucy's life would be at risk if she was to be transported and that she is better off remaining at EVZ.

His involvement with Lucy dates back to 2002 when he was first brought in regarding a tooth issue. His regular examinations with Lucy started after 2009 when he first stated that Lucy's breathing problem prevents her from being safely moved. In a letter to then zoo supervisor Dean Treichel, dated September 10, 2009, he states "I'm sending this letter to you in advance of my complete report because I know you are going to have a meeting next week with some folks that are insisting you send Skanik (Lucy) to some other facility. Her current respiratory problems preclude any thought of moving her and in fact it would be life threatening to her to be placed under that kind of stress. It is my opinion that it would be unethical for any veterinarian to recommend moving her and in fact would be malpractice to sign a health certificate for her at this time." Two years later he sent the identical letter to then Zoo Director, Denise Prefontaine. It is also noted in his examination report in 2009 that "the indoor facilities restrict the ability to maintain a good exercise program during the winter months. In his recommendations he suggests that there is a facilities modification and that the indoor facilities need to be enlarged to facilitate exercise in the winter. He also suggests the possibility of using an elephant treadmill. He recommended rubber mats for the indoor facilities in preparation for winter and develop a plan for the modification of the indoor facilities to meet the industry standards and to enlarge the indoor and covered areas. It is interesting to note that EVZ did not follow through on modifying and improving Lucy's indoor facility in terms of size or rubber flooring until a formal complaint was made to the Edmonton Humane Society in 2011 by Zoocheck. After this, rubber matting was installed and an "exercise tent" erected behind Lucy's barn. This shows the beginning of a pattern where the zoo brings in consultants but does not follow through with their recommendations especially where increased costs are required.

Dr. Oosterhuis examined Lucy again in 2011, 2013, 2015, 2018 and 2019 and in each report he claims that Lucy's respiratory condition is the issue that poses the significant risk of moving her. So, it comes as no surprise that in the most recent report he has made this claim again.

Dr. Oosterhuis has been incorrect in his assessments on several occasions. The example most relevant to Lucy's situation is his opinion on Maggie, Alaska's lone elephant. He was one of 11 vets asked to opine on whether Maggie could survive a transport to sanctuary. Maggie was a very sick elephant that had collapsed on more than one occasion. She could not get back up on her own, It took zookeepers, firefighters, and a towing company 19 hours to get Maggie on her feet again (she was much sicker than Lucy by all accounts but recently Lucy has also gone down due to colic but thankfully she has been able

to get back up again, so far). Once Maggie had deteriorated to this point, the zoo finally agreed to allow the team of experts in to examine her. This is what we and many others have been asking for in Lucy's case. Oosterhuis was the only vet out of the 11 who said Maggie wouldn't make the trip. Instead he recommended the Alaska Zoo build her a treadmill. Thankfully the other 10 vets said Maggie's only hope was to be relocated to PAWS sanctuary. That was nearly 13 years ago, and Maggie is still alive and thriving at PAWS. It's interesting to note that after this, instead of choosing one of the other consulting vets used to examine Maggie, EVZ chose to hire Oosterhuis as their regular consultant.

Then there was the beating of an elephant named Dunda by a keeper at Oosterhuis's Zoo, The San Diego Wild Animal Park. As reported by the LA Times, "Dr. James Oosterhuis, a Wild Animal Park veterinarian testified on behalf of the keeper stating it is acceptable to strike an elephant on the head. It's important to remember that the elephant skull is 6 inches thick at this point and the skin is an inch thick. There is limited blood flow and nerve presence here, which means the area is slow to heal. In my view, it is an appropriate and non-harmful place in which to administer required discipline"

<https://www.latimes.com/archives/la-xpm-1988-07-30-me-6519-story.html>

He was also the veterinarian on record, when the Hawthorne Circus was found in violation of the Animal Welfare Act, and convicted on 19 counts of elephant abuse. As well, Dr Oosterhuis was the veterinarian who had examined two Hawthorne elephants, and deemed them healthy enough to continue performing only days before they died of tuberculosis. In 1996, Dr. Oosterhuis determined that the Hawthorne Corporation's elephant Joyce only suffered from a tooth problem. Joyce died weeks later with advanced tuberculosis and severe foot complications. When the USDA cited the Clyde Beatty-Cole Brothers circus in 1998 for keeping their elephants in poor condition, they called upon Dr. Oosterhuis to inspect the circus' six elephants. He determined they were all healthy enough to continue working. He claimed that elephant Pete was likely faking his injuries, and that although elephant Helen had a "trick" knee, she could still work with it. Pete died the following year after suffering with severe hip degeneration and chronic pneumonia. Elephant Helen was euthanized because of severe joint deterioration. Elephant Conti, known to have a kidney infection, also died within the year. These elephants were all forced to continue working to the end as even weeks before, Dr. Oosterhuis still contended that they were fine. <https://www.zoocheck.com/wp-content/uploads/2015/07/ZimLucyReportJune2009.pdf>

Dr. Ellen Wiedner

Past Professional Activities

- Staff Veterinarian, Los Angeles, Zoo
- 2004-2011: Director of Veterinary Care, Ringling Bros. and Barnum & Bailey
- Private Practice - 2002-2004

There are many red flags in Ellen Wiedner's assessment of Lucy. As mentioned, she had previously examined Lucy so therefore was not a new evaluation as we were led to believe these new exams would

be.

Mr. Galloway indicated that the vets found that Lucy's respiratory condition had worsened. Dr. Wiedner's statement in her report seems to refute that "CV/Respiratory: Skanik/Lucy's respiratory abnormalities are unchanged since 2016. "

Also, she notes "Staff reports that she lies down on both sides to sleep and is sleeping well." We understand from a local vet that spoke with previous EVZ consulting vet Dr. Cracknell, that some years ago, Lucy was unable to lie down due to breathing issues. We also note in Lucy's records that in the past she had significant issues with secretions/white foamy exudate coming from her trunk that were so profuse that they had difficulty visualizing anything when scoping her trunk. It now seems that Lucy has much less secretions coming from her respiratory tract as even noted in the recent exams. Mr. Galloway stated to Ms. Holm that there is concern that Lucy is suffering from Sleep Apnea but Dr. Wiedner makes no mention of this. If indeed Lucy is suffering from Sleep Apnea, weight loss would be the most important factor is lessening the symptoms of this condition.

Dr. Wiedner also notes Lucy has **not** lost weight "Lucy has had bouts of colic, and staff feels that they are increasing. She has also had bouts of inappetance. Nevertheless, Lucy has not lost weight, and in fact, is currently slightly overweight. Current weight is 8915 lb." We would argue that Lucy is more than slightly overweight and as previous EVZ consultant Dr. Cracknell noted, this can have a negative effect on Lucy's respiratory and arthritic conditions. Of course, this lends itself to the assumption that because of climate and the extremely limited size of Lucy's area that she does not get the exercise required to maintain a healthy weight. Something that could be easily rectified if she was relocated to an expansive warm climate sanctuary.

Dr. Wiedner stated "*She continues to receive ample enrichment ranging from painting, to sensory stimulation*" an elephant species expert would most certainly not consider painting to be an enrichment. In a study published out of Australia in 2014, it found "Painting by elephants in zoos is commonly believed to be a form of enrichment, but this assumption had not been based on any systematic research. If an activity is enriching, we would expect stress-related behaviour to be reduced but we found no evidence of the elephants anticipating the painting activity and no effect on the performance of stereotyped or other stress-related behaviour either before or after the painting session. This indicates that the activity does not fulfil one of the main aims of enrichment."

Excerpts from Dr. Wiedner's report:

*"Assessment Despite Lucy/Skanik's chronic, severe, progressive respiratory and dental disease, this elephant is continuing to thrive, which in no small way is due to excellent veterinary and husbandry care. Lucy could stand to lose some weight, which will improve her well-being. At 44 years of age, Lucy/Skanik is **geriatric**, since life expectancy in Asian elephants, both wild and in human care is between **37 and 40 years**." We fervently disagree with claims that Lucy is a geriatric elephant and we question Dr. Weidner's claim of the life expectancy of elephants*

General recommendations - Lucy should remain at the Edmonton Zoo. First, her respiratory condition is

*so severe that she might not survive the trip. **Furthermore, in the past several years, many healthier elderly elephants have been transported to other facilities, including sanctuaries, only to die within one year of arrival.** Second, no elephant facility exists that has special expertise or experience with the types of issues that this elephant has or that could improve her care beyond what she receives now. Lucy/Skanik is the only elephant looked after by multiple people. She gets constant attention every day of the week. The elephant is deeply bonded to her caretakers and vice versa, and the zoo is clearly committed to this elephant and her well-being which they have demonstrated by building her an indoor arena, bringing in veterinary specialists to evaluate her, and allowing her to enjoy her **old age.** The zoo has also **followed up on recommendations given by veterinary specialists.** This has likely already extended Lucy/Skanik's life by several years. Moving Lucy/Skanik to another facility would not be in her best interests. Furthermore, it would constitute a great unkindness. To force this elderly elephant to leave her home and the people to whom she is bonded for a trip which could potentially ruin her health further or even kill her is the antithesis of animal welfare. Sanctuaries have repeatedly shown themselves incapable of providing the one-on-one care this elephant requires and **large number of deaths of elephants, most of whom were far healthier than Lucy, at sanctuaries shortly after arrival attest to that fact.** How long Lucy/Skanik will continue to do well is unknown. Her disease processes are multiple, untreatable, and very severe. Yet she is clearly well-adjusted, content, and even comfortable. Veterinary and caretakers respond to her problems as they occur and monitor her comfort. Quality of life and long-term management are clearly priorities for the Edmonton zoo, and Lucy demonstrates this by thriving despite her health concerns.*

We disagree with virtually everything stated here and the comments regarding sanctuaries are not founded in fact in any way. It does however show that this circus/zoo vet does have a clear bias against sanctuaries which again demonstrates that this vet was not chosen in good faith to provide an assessment with no "predetermined outcomes".

There is a disturbing history related to Dr. Wiedner's reputation for elephant management during her time with Ringling. One such example which is very disturbing, is reported here:

RE: City of Chicago Animal Inspection Report Date: November 18, 2010 Event location: Ringling Brothers Barnum and Bailey Circus Inspection- United Center – Attending vet Ellen Wiedner

<https://www.mediapeta.com/peta/PDF/ReportAudreyKellerDVMChicagoACC.pdf>

Dr. Leguillette - Calgary Chair in Equine Sports Medicine Professor, Equine Medicine, University of Calgary Veterinary Medicine

In his report he stated "The soft palate being complete in elephants (similar to horses), they are obligate nasal breathers. In the case of Skanik, the resistance through the nasal passages is too high and she is using an oral breathing strategy"

As previously mentioned, according to elephant expert Dr. Susan Mikota, elephants are not obligate nose breathers. On the contrary horses can only breathe through their noses. If their nose is blocked, they will die. It would seem comparing these 2 species is like comparing apples to oranges. As Mr.

Galloway stated it was some "out of the box thinking" when he chose Dr. Leguillette and we agree it was definitely out of the box.

Local vet Dr. Debi Zimmermann who has worked with horses offered these comments regarding Dr. Leguillette's response to an email where he stated: *"I am obviously not an elephant specialist, but do have an extended respiratory physiology training: From a physiological point of view, I actually think that the number one climate enemy for Lucy would be a hot climate: A hot climate would require eliminating more heat from her body, which would in part be done by the respiratory system, and therefore put more stress on her already compromised respiration. A colder climate does not put stress on the respiratory system, since it requires more heat production, which does not tax the respiratory system. In addition, there are usually some progressive physiological mechanisms that allow some adaptation to the environmental temperatures, and a sudden change in environment is definitely putting more stress on the body which needs to "reset" and get used to the new temperatures."*

Dr. Debi Zimmermann response:

HORSES: Around 30 million years ago, the climate in North America was becoming dryer and colder... and in response, many animals started adapting to these new conditions, early horses among them.

<https://www.quora.com/Where-did-horses-come-from-originally>

ASIAN ELEPHANTS: Lucy's ancestors evolved over millions of years in the tropical climes of Sri Lanka where "the average temperature ranges from 28 – 32 degrees Celsius".

<https://lanka.com/about/climate/>

The point being—elephants evolved to specifically live in the warm moist tropics, so unlike horses, Lucy is perfectly equipped to eliminate heat without a stress to her system. In fact—keeping a tropically adapted animal in temperate conditions puts them under certain physiological stress. And most definitely, the dry cold temperatures exacerbate her advanced arthritis which may be even more of a quality-of-life limiting factor than her respiratory issue.

Secondly, Lucy suffers from an obstructive disease of her upper airways, not from lower airway disease as in Chronic Obstructive Airway Disease (COPD). Inhaling hot air is known to promote *lower* airway inflammation and can exacerbate lower respiratory disorders like COPD and asthma. The fact that she can and does mouth breathe, means that she can compensate for the restricted airflow into her trunk and maintain normal air exchange.

<https://www.lung.org/about-us/blog/2016/02/weather-and-your-lungs.html>

And thirdly, as Dr. Renaud Leguillette admitted, he is not an elephant specialist. Dr. Phillip Ensley is a veterinarian whose professional experience includes 29 years at the San Diego zoo working with elephants.

The following quote is from his 53-page affidavit: "While I have not seen respiratory signs in an Asian elephant similar to what Lucy exhibits, it is reasonable to assume that the freezing cold temperatures in Edmonton during winter further aggravate this condition."