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PEER REVIEW NOTES
USING THE LIVE TELEPATHOLOGY TECHNOLOGY

Study Title

XXXXX

Project-Study Number

XXXXX

Study Pathologist

XXXXX

Peer Reviewer Pathologist

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Date:

Performing Laboratory

XXXXX

Sponsor

Sponsor Name: XXXXX

The information included in this peer review summary consists of pathology notes and does not represent raw data. It is provided to assist the study pathologist in finalizing the data for the study report.

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Introduction

A pathology peer review of selected histopathology findings from a study entitled “xxxxx” was conducted by Dr. Abraham Nyska, DVM, Diplomate ECVF, Fellow IATP, from Timrat, Israel.

Purpose of the study:

Experimental design:

xxxxx

xxxxx

Methods

xxxxx

The peer review was accomplished at Timrat, Israel, on July 15-16, 2018.

List of reviewed animals:

Group 1 - M: 001 – 005 ; F: 011 - 015

Group 2 - M: 021 - 025; 14; F: 031- 035

Citation from the draft pathology report is as follows:

A note: Following the peer review a live telepathology session was convened for (%%DATE%%), (%%TIME%%), to review selected slides. The documentation of the live-telepathology review session is presented on Page 5 and on Appendix A.

Results

SEE Appendices as follows:

Appendix A: Representative photos – pages

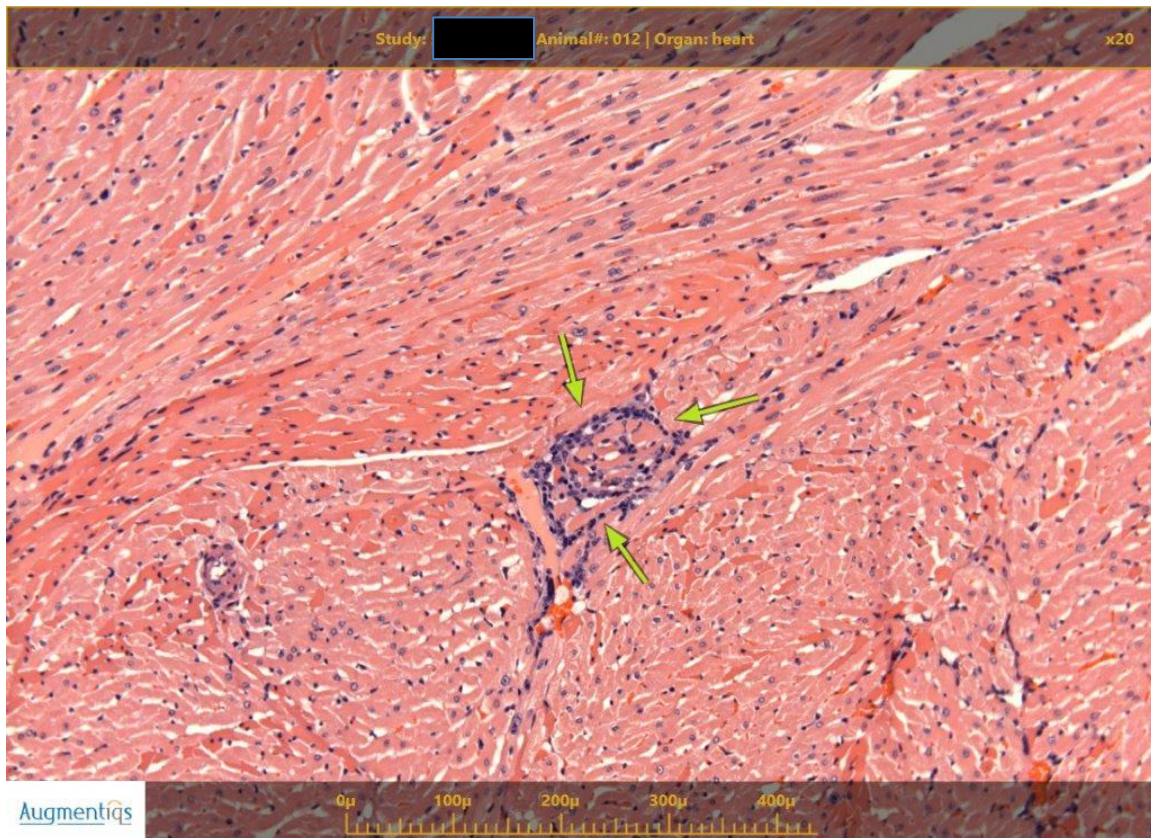
Appendix B: Technical description of the live-telepathology system: pages

Appendix C: List of slides for the live telepathology session – page

Conclusions

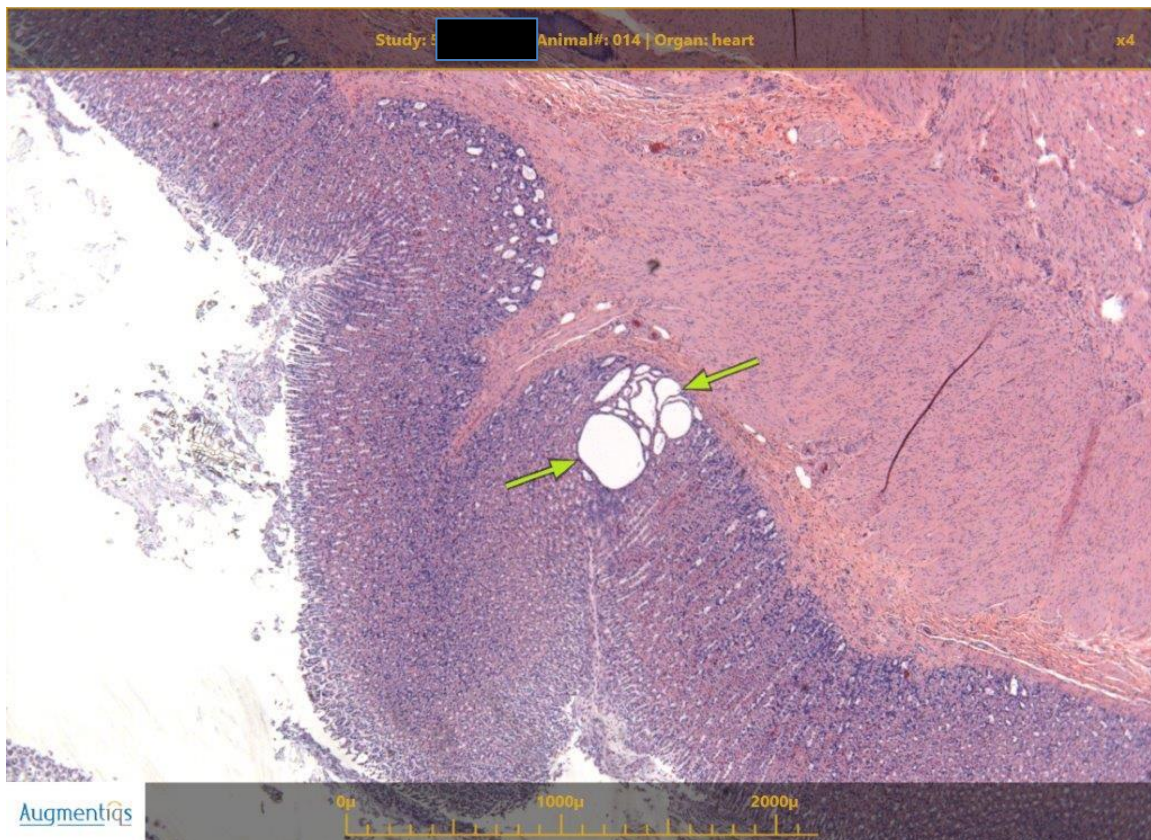
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Appendix A:
REPRESENTATIVE PHOTOS:



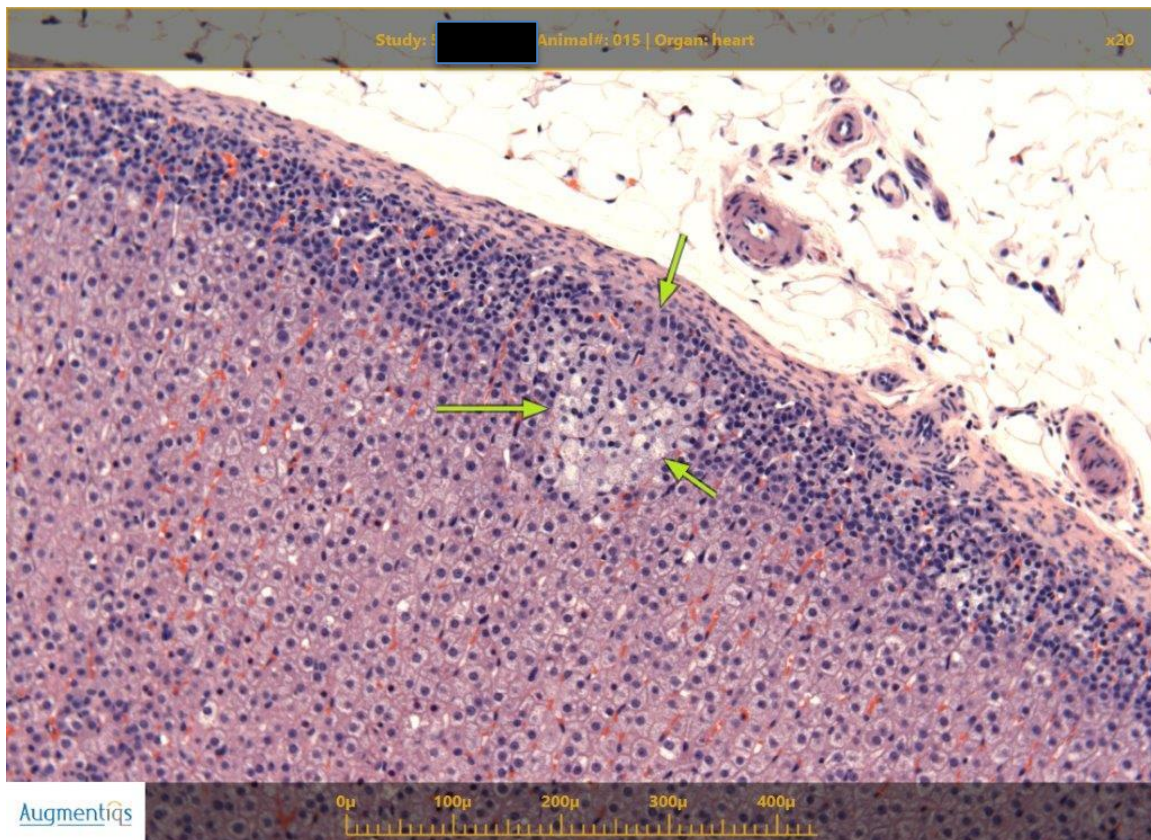
Group 1 - F: 12 – section of the heart – cardiomyopathy, minimal

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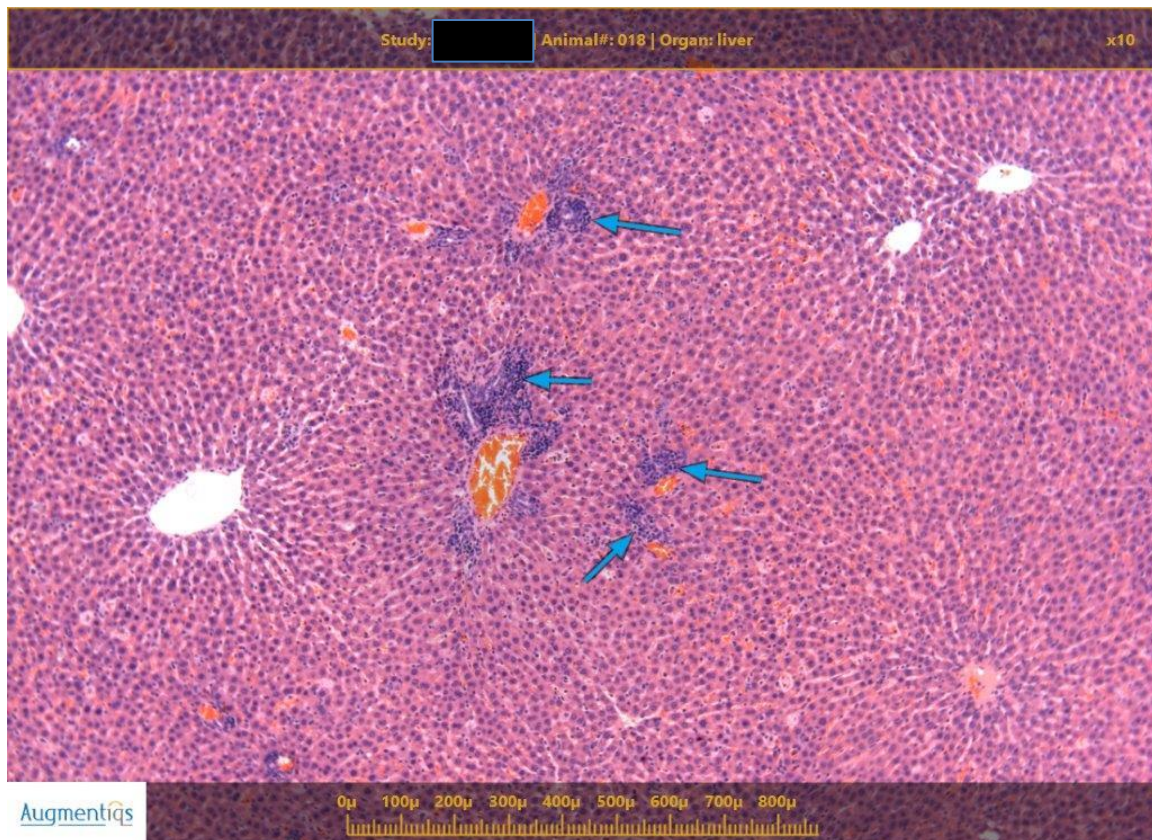
Group 1 - F: 14 – section of the stomach – glandular – Mucosa – cyst, focal, minimal

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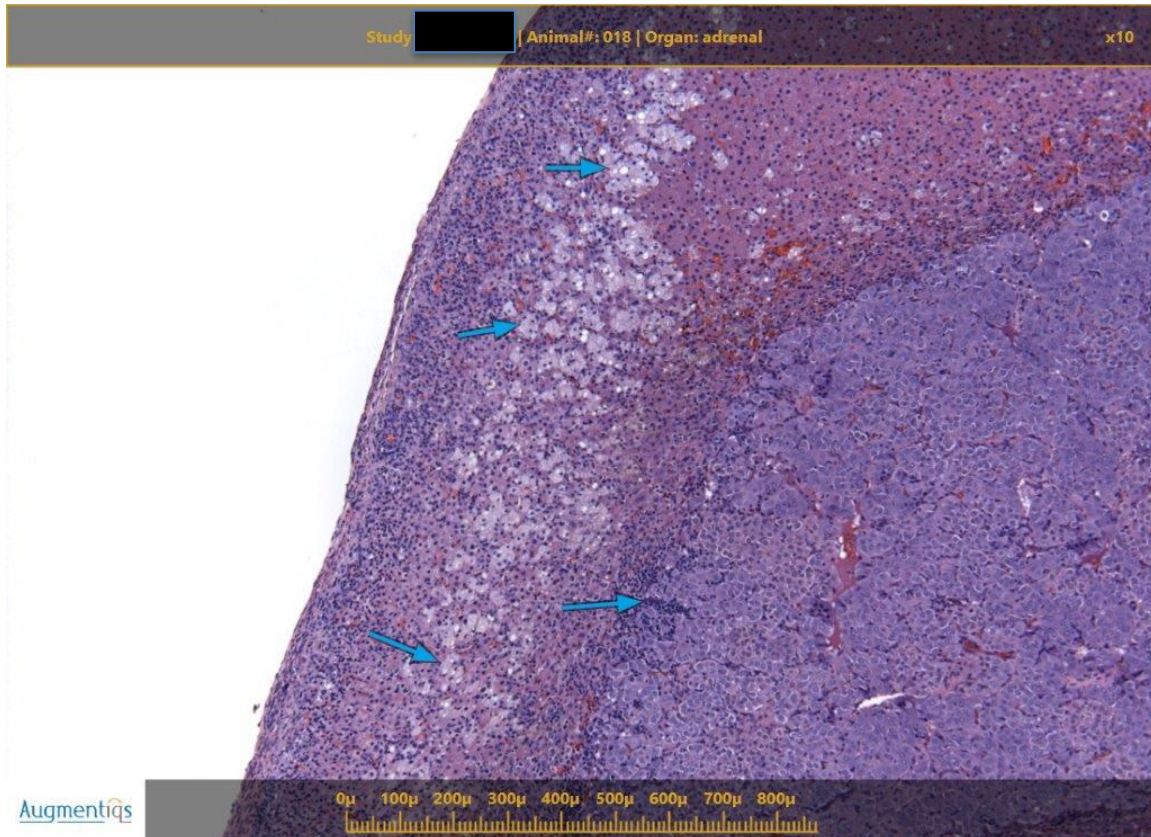
Group 1 - F: 15 – section of the adrenal – cortex –hypertrophy, focal, minimal

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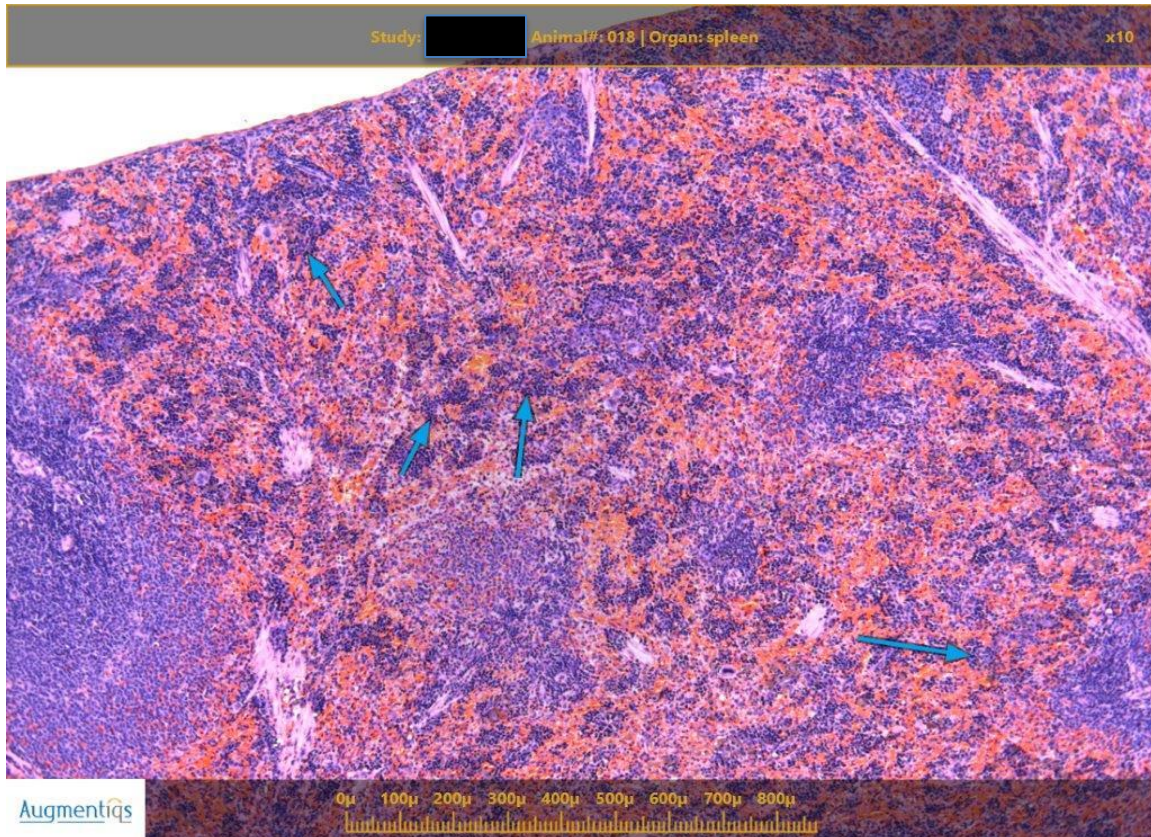
Group 1 - F: 18- section of the liver- lymphoma

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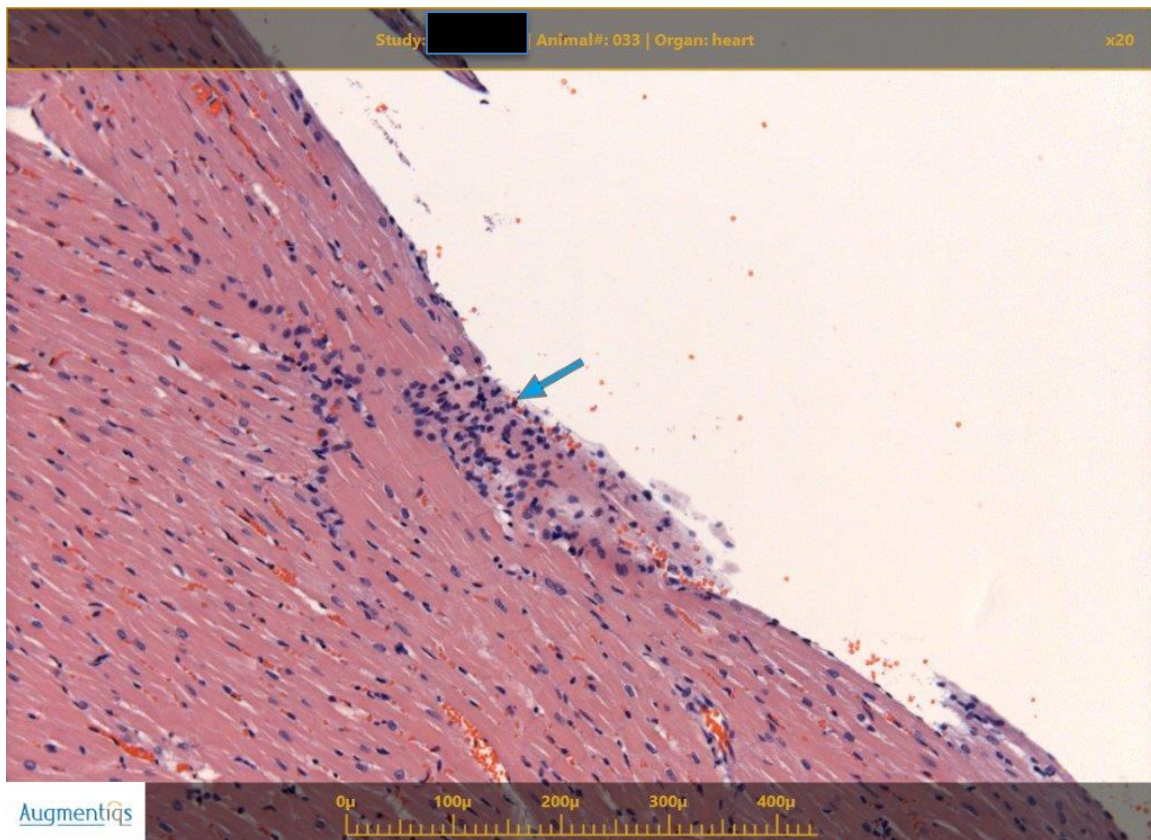
Group 1 - F: 18- section of the adrenal – lymphoma

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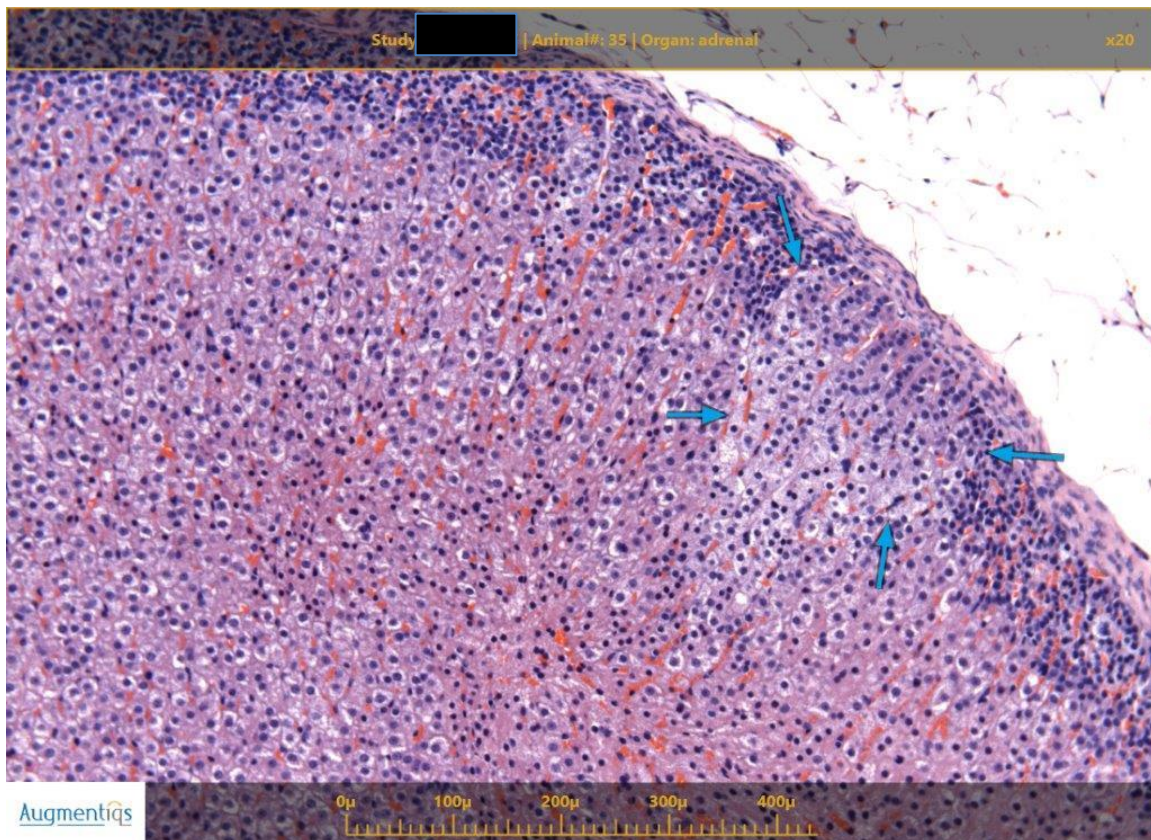
Group 1 - F: 18- section of the spleen- lymphoma

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Group 4 - F: 33- section of the heart – “heart-cardiomyopathy, minimal” (to add)

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Group 4 - F: 35– section of the adrenal – cortex – hypertrophy, focal, minimal (to add)

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Appendix B: Technical description of the live-telepathology system:

On Wednesday, July 25, at 9.00 am East Coast time, a live-telepathology session was done, with the participation of the persons as follows:

Dr. Study pathologist,
Study Director
Consultant, (%%LOCATION%%)
Dr. Abraham Nyska, peer reviewer pathologist

During the live-telepathology session, Dr. Nyska shared the below-listed slides from his Olympus BX-51 microscope (located at Timrat, Israel), with the remote participants (located in xxxxxx). The remote participants viewed the slides on their computer screen, and discussed the lesions and expressed their opinions via SKYPE and/or phone. The consensus for each projected lesion is highlighted in green, below.

Technical description of the live-telepathology system:

The telepathology tool (manufactured by Augmentiqs) consists of small Optical Module that is integrated within the optical path of any light microscope, placed above the nose piece and below the eyepieces. The Optical Module functions by maintaining the same optical view of the tissue when looking through the microscope eyepiece, yet containing an embedded high-resolution camera that captures a live feed of the tissue that is shared with the remote participants.



The placement of the camera in the microscope's optical plane of the microscope, as opposed to the 3rd ocular, provides the remote participants a nearly identical image in relation to field of view as that seen by the microscope user. Furthermore, the use of a microscope-based camera allows dynamic sharing of tissue features including adjustment of the mechanical stage and changing objectives for increased magnification, thereby creating a feeling of real-time microscope sharing for the remote participants.

Calibration capabilities embedded within the technology, in addition to methods of data transmission which prevent packet loss ensures correctness of measurements, image quality, and color gamut. The software employs sophisticated algorithms for automatic adjustment of contrast, saturation and vignette correction in order to achieve best image quality for the remote viewer.

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While discussing the specific slides, all participants are provided a toolbar on the side of their screen which enables the placement of annotations and morphometric calculations directly on the view of the tissue, as well as the ability to download chosen images to their personal computer. Acquired images can be stored on-demand in a lossless, uncompressed way for further study, comparison and image analysis (see images below). This image data is automatically tagged with the metadata context, and stored in a secure database for subsequent access.

The feeling of multi-directional collaboration during the telepathology session is enhanced by the ability for all participants to discuss the same high-quality image of the tissue, while view the annotations made by the different parties.

For data security, the technology employs a number of novel measures:

- Each remote participant performs a unique registration to establish a verifiable viewing account, which allows other parties to recognize each other.
- All data flow is transferred via secure peer-to-peer channel using industry-grade encryption mechanisms.
- Video traffic is purposefully separated from audio traffic in order to deny man-in-the-middle data interception.
- All the account data is encrypted at rest by default using industry-grade mechanisms.

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APPENDIX C: List of slides presented at the live-telepathology peer review:

CASE # 1: Group 1 - F: Animal 12 – section of the heart – cardiomyopathy, minimal
There is a consensus between the SP and PRP.

CASE # 2: Group 1 - F: Animal 14 – – section of the stomach – glandular – Mucosa – cyst, focal, minimal
There is a consensus between the SP and PRP.

CASE # 3: Group 1 - F: Animal 15 – section of the adrenal – cortex –hypertrophy, focal, minimal
There is a consensus between the SP and PRP.

CASE # 4: Group 1 - F: Animal 18 – section of the adrenal – cortex –vacuolation, mild - This diagnosis was not reported by the SP.
There was a complete consensus not to add this lesion, considered to be a secondary change.

Adrenal, liver, spleen - Lymphoma - **There is a consensus between the SP and PRP**

CASE # 5: Group 4 - F: Animal 33 – section of the heart - heart-cardiomyopathy, minimal. This diagnosis was not reported by the SP.
A consensus was to add this diagnosis.

CASE # 6: Group 4 - F: Animal 35 – section of the adrenal – cortex – hypertrophy, focal, minimal - This diagnosis was not reported by the SP.

A consensus was to add this diagnosis.