A close-up, high-contrast photograph of an elephant's head, focusing on the texture of its skin and the base of its tusks. The lighting is dramatic, highlighting the intricate patterns and ridges on the elephant's face. The background is dark, making the elephant's features stand out.

2008 and 2010 Guidelines for the
Control of Tuberculosis in Elephants
— Background Associated with Changes

Acknowledgements

A close-up, high-contrast photograph of an elephant's head, focusing on its textured skin and large, dark tusks. The lighting is dramatic, highlighting the intricate patterns of the elephant's skin.

- Dr. Janet Payeur, USDA, APHIS, VS, NVSL
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- Dr. Michele Miller, AZA Elephant Veterinary Advisor
- Dr. Kathy Connell, Chair of USAHA TB Committee*

A close-up, high-contrast photograph of an elephant's head, focusing on its textured skin and the base of its tusks. The lighting is dramatic, highlighting the intricate patterns of the skin and the smooth surface of the tusks against a dark background.

October 2007

- USAHA TB Committee Chair formed the Elephant TB Scientific Advisory Subcommittee
 - Designate a group of experts to provide comment and input on the current (and future) draft guidelines

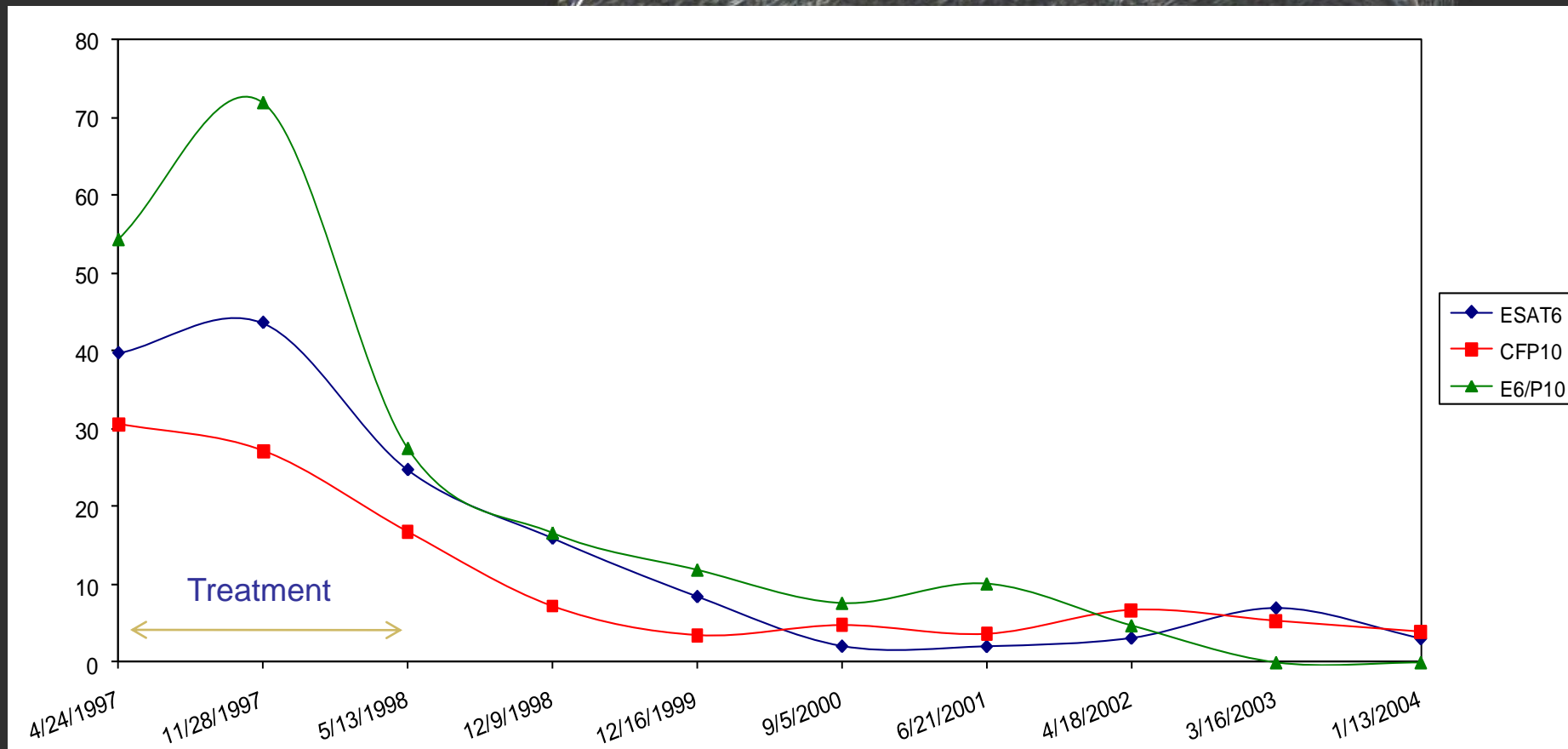
Members of the (AAZV) working group felt that due to the increasing public awareness and regulatory aspects of elephant tuberculosis that it would be more appropriate to address these under the auspices of the USAHA TB committee.

2008 Guidelines for Elephant TB

A close-up, high-contrast photograph of an elephant's head, focusing on the texture of its skin and the tips of its tusks. The lighting is dramatic, highlighting the intricate patterns of the elephant's skin.

- Background for changes:
 - Elephant TB Stat-Pak[®] Assay was approved and licensed by USDA, Center for Veterinary Biologics in 2007 as screening test.
 - Publication of peer-reviewed paper using Stat-Pak in elephants showing seroreactivity prior to culture diagnosis and potential use of MAPIA for monitoring response to treatment
 - Data presented to USAHA TB committee

2008 Guidelines for Elephant TB



2008 Guidelines for Elephant TB

Committee recommended changes to the Guidelines:

- Addition of serological testing using the Chembio[®] ElephantTB STAT-PAK assay to trunk wash cultures for annual testing.
- Mandatory MAPIA follow-up testing for all STAT-PAK reactive samples.
- Reclassification of elephant management groups using both culture and serological results (groups 1-5).
- Increased monitoring/surveillance of seroreactive culture-negative elephants, although these animals would not have any travel restrictions or requirements for treatment (prophylactic treatment is optional).
- Addition of euthanasia option for culture positive elephants.
- Updated necropsy and reference information.

2008 Guidelines

- Treatment Recommendations

Group	Treatment options
1 (cult/AB/exp neg)	No tx recommended
2 (cult/AB neg/exp+)	No tx recommended
3 (cult neg/AB+)	No tx recommended If +exposure, may consider prophylactic treatment w/ 2 drugs (2 schedules given)
4 (cult+)	Options: A-treatment w/ 3 drugs over 12-15 months (2 schedules given); allowed to travel after tx B-quarantine w/o treatment; no travel or public contact C- euthanasia
5 (untested)	No tx-no travel or public contact

Background Information



2009/2010

- 16 culture positive elephants alive
 - 6 had no available serological test results
 - 2 treated elephants – STAT-Pak non-reactive
 - 8 elephants – STAT-Pak/MAPIA reactive
- 4 elephants died
 - 4/4 annual trunk wash cultures **negative**
 - 4/4 STAT-Pak/MAPIA reactive
 - 3/4 *M.tb* complex positive at necropsy
 - One culture negative elephant treated 9 months

Background Information

A close-up, high-contrast photograph of an elephant's head, focusing on the texture of its skin and the base of its tusks. The lighting is dramatic, highlighting the intricate patterns of the elephant's skin.

- Results for elephants tested under 2008 Guidelines
 - 398 tested out of 451 elephants (8 died during this period)
 - 303 nonreactive on STAT-Pak
 - 95 considered reactive by inspectors
 - 37 showed bands on MAPIA consistent with antibodies to *M. tb* complex
 - 4 died with evidence of TB at necropsy (2 TW+ culture)

2010 Guidelines for Elephant TB

A close-up, high-contrast photograph of an elephant's head, focusing on its trunk and the textured skin of its face. The lighting is dramatic, highlighting the intricate patterns of the elephant's skin and the texture of its trunk. The background is dark, making the elephant's features stand out.

Rationale for revisions

- Request for clarification on:
 - classification of treated animals
 - exposed elephants
- Published information on new test – DPP
- Additional information
 - Publication of high sensitivity of serological tests antemortem (Greenwald et al, 2009)
 - Report of potential human risk (outbreak among staff at elephant sanctuary)

2010 Guidelines for Elephant TB

Rationale for revisions

- Chain of custody for testing animal-side to prevent potential misuse of tests for other **regulatory program animals**
 - Condition of licensing of test by CVB – only NVSL/USDA approved trainees are approved labs
- Exposure history added back as a risk factor for management groups
- Clarified that previously treated elephants may be seroreactive but not be subject to restrictions (upon approval of USDA inspector)

2010 Guidelines for Elephant TB

A close-up, high-contrast photograph of an elephant's head, focusing on its trunk and tusks. The elephant's skin is dark and wrinkled, and the tusks are light-colored and curved. The background is dark, making the elephant's features stand out.

Rationale for revisions

- No management group is **REQUIRED** to be treated including culture positive elephants
 - Options for culture positive elephants include:
 - Treatment
 - Euthanasia
 - Quarantine
- **NOTE:** this was also option in 2008 Guidelines

2010 Guidelines for Elephant TB

A close-up, high-contrast photograph of an elephant's head, focusing on the texture of its skin and the base of its tusks. The lighting is dramatic, highlighting the intricate patterns of the elephant's skin.

Rationale for revisions

- Treatment of seroreactive or culture positive elephant is attending veterinarian's choice
- Epidemiological risks **as currently known** provide basis for current management subgroups and recommendations for monitoring and treatment

Future Revisions

- USAHA TB Scientific Advisory Subcommittee will continue to review and revise guidelines as new information is presented at the annual meeting in October through the process outlined by USAHA and the TB Committee.

Questions?

