

Researchers reveal results from CT scan of South American mummy

June 18 2014, by Annie Deck-Miller

The results of the "virtual autopsy" performed on a South American mummy from the collection of the Buffalo Museum of Science (BMS) are in, providing new insights into the life of the infant mummy. As part of the groundbreaking Mummies of the World exhibition, which premiered in Buffalo on April 12, Dr. Peter Loud of Roswell Park Cancer Institute (RPCI) and Dr. Heather Gill-Frerking of American Exhibitions, Inc., along with a team of RPCI radiologists performed a noninvasive 3D computed tomography (CT) scan of the mummy on April 7.

From their analysis of both soft tissues and the [mummy](#)'s skeleton, the research team was able to conclude that the mummy is a two-year-old girl. The scan also determined that there is no discernible evidence of disease or trauma on the skeleton that has been identified so far.

Through the cutting-edge medical imaging available at RPCI, the scan helped experts determine these details, and further analysis will assist in future research applied to the exhibition. Further research to the medical imaging was also conducted by James Schanandore, who works in the Department of Biological Sciences at North Dakota State University.

"This particular mummy has been part of the Buffalo Museum of Science's collection for over a century. Until now, very little was known about this individual, including its age and gender," comments BMS President & CEO Mark Mortenson. "Thanks to collaboration with Roswell Park Cancer Institute and Mummies of the World, we now have answers to some of our questions. We recently agreed to lend this

mummy and related items from our collection to Mummies of the World for the remainder of the exhibition's three-year tour so that her story could be shared with audiences across the nation."

"Some internal organs were preserved, including the liver and part of the lungs. There is a rectangular object on the back of the child, near the left shoulder that may be an amulet with a groove down one side. More research is in progress to determine what the object is made of," says Dr. Heather Gill-Frerking, Director of Science and Education Development at American Exhibitions, Inc. "Future work will include identifying more of the preserved internal organs, and determining the composition and structure of the rectangular object."

"This partnership provided a unique opportunity for us to use the tools and analytical approaches we use every day to help the Buffalo Museum of Science reconstruct important details about the life and circumstances of a mummy that is part of their permanent collection," notes Dr. Peter Loud, Vice Chair of Diagnostic Radiology and Director of Body Imaging at RPCI. "It was an interesting and rewarding project to be involved with, and we're very pleased that we were able to help enhance the experience and understanding of all the museum visitors who will learn about this mummy, through this exhibit and for years to come."

Provided by Roswell Park Cancer Institute

Citation: Researchers reveal results from CT scan of South American mummy (2014, June 18) retrieved 2 May 2024 from <https://phys.org/news/2014-06-reveal-results-ct-scan-south.html>

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