

Randa's Route to Recovery

BY STEPHANIE COFFEY



CHARLE MOREY

▲ Forty-four-year-old Randa is a true survivor.

Arguably, the rhinoceros' most distinctive trait is its horn (or horns in the case of the black, white, and Sumatran species). Thus, visitors to the L.A. Zoo in recent years may rightly wonder why our resident Indian rhino, Randa, is all but lacking this prominent feature.

In 2009, a biopsy revealed that Randa had squamous cell carcinoma, a type of aggressive skin cancer that also occurs in humans. How does a rhinoceros become afflicted with skin cancer on a part of her

▼ Animal keepers, veterinarians, and members of the local medical community rallied around Randa throughout her long ordeal.



TAD MOTOYAMA



JAMIE PHAM



TAD MOTOYAMA

body where there is no skin? Rhino horns are comprised of keratin structures—similar to horses' hooves. They contain calcium and melanin to help strengthen and prevent UV degradation, but are not covered with skin.

Chief Veterinarian Curtis Eng explains, "The horn is made of keratin, but the base of the horn is made of germinal tissue," which is the tissue that develops into skin and horn.

Because of a recurrent infection, Randa had previously undergone surgeries to remove part of her horn, but the cancer diagnosis required a more aggressive approach. Eng and his team decided that the entire horn down to that germinal layer needed to be removed, and the rhino should undergo radiation treatment.

Treating Randa's cancer was no easy feat due to her advanced age (she was 40 at the time of diagnosis) and weight (topping two tons). The Zoo received tremendous community support and partnered with surgeons, oncologists, and radiation specialists from the UCLA Medical Center as well as scientists at Xoft, Inc. Xoft manufactures electronic brachytherapy systems, a type of radiation treatment that does not involve radioactive isotopes and incurs minimal damage to surrounding healthy tissue. The lack of radioactive isotopes meant that Randa could be treated in her exhibit, which was imperative, as finding a lead-shielded room capable of holding such an animal would have been incredibly difficult.

In humans, radiation therapy usually requires anywhere from 10 to 15 treatments, which was not a plausible plan of action for a rhinoceros. It would have been too dangerous to anesthetize such an enormous and aged animal repeatedly. Eng recalls, "We finished the radiation therapy in two treatments, which is probably unheard of. She tolerated it very well—and, as of now, she is cancer free. This is the first documented case in which radiation therapy has been used in a rhino, and it is so incredibly neat to be part of the team that performed such a life-altering procedure."

Today Randa is the second oldest Indian rhinoceros in captivity. Her horn is growing back, but at a very slow rate. With the help of groundbreaking technology, the generosity of the community, and the dedication of her keepers and caregivers, Randa's story can continue to inspire her many visitors. □