

Stereotactic Radiation Therapy for Nasal Carcinoma with Cribriform Plate Destruction in Three Dogs: A Serial CT Study

Soyon An¹
Gunha Hwang¹
Moonyeong Choi²
Chan Huh²
Young-Min Yoon²
Hee Chun Lee^{1,*}
Tae Sung Hwang^{1,*}

¹Institute of Animal Medicine, College of Veterinary Medicine, Gyeongsang National University, Jinju 52828, Korea

²S Animal Cancer Center, Yangsan 50614, Korea

*Correspondence: lhc@gnu.ac.kr (Hee Chun Lee), hwangts@gnu.ac.kr (Tae Sung Hwang)

ORCID

Soyon An:
<https://orcid.org/0000-0002-9994-8760>
Gunha Hwang:
<https://orcid.org/0000-0002-1805-9137>
Moonyeong Choi:
<https://orcid.org/0000-0001-5069-0714>
Chan Huh:
<https://orcid.org/0000-0001-8127-0341>
Young-Min Yoon:
<https://orcid.org/0000-0003-0525-8724>
Hee Chun Lee:
<https://orcid.org/0000-0001-5936-9118>
Tae Sung Hwang:
<https://orcid.org/0000-0001-6730-6061>

Copyright © The Korean Society of Veterinary Clinics

Abstract Three dogs were referred with epistaxis and facial deformity. Computed tomography (CT) scan identified masses in the bilateral nasal cavity with soft tissue attenuation and contrast enhancement. These masses had caused adjacent bones lysis, especially lysis of cribriform plate that extended to the intracranial region. Base on histopathology and CT imaging results, tumors were diagnosed as nasal carcinomas at stage 4. Three dogs were treated with stereotactic radiation therapy (SRT). These dogs received 30-35 Gy from 3-5 daily treatments (7-10 Gy per treatment). The sizes of tumors decreased the most on follow-up CT images at one month after treatment. Recurrence was confirmed between 3 and 5 months after completing SRT. The survival time of dogs treated with SRT were 110, 190, and 210 days, respectively. This study confirmed that SRT could treat canine nasal carcinomas with cribriform plate lysis without causing serious radiation toxicities. Follow-up CT examination is considered at 1 month and 3 to 6 months after SRT to accurately evaluate the prognosis and the timing of recurrence.

Key words canine, computed tomography, follow-up, nasal tumor, stereotactic radiotherapy.

Received January 30, 2023 / Revised March 14, 2023 / Accepted March 20, 2023



This is an open access article distributed under the terms of the Creative Commons Attribution Non-Commercial License (<http://creativecommons.org/licenses/by-nc/4.0>) which permits unrestricted non-commercial use, distribution, and reproduction in any medium, provided the original work is properly cited.