# KAT – 101 Treatment
## Canine Case Study 1 Report
## 18 April 2022

**Abstract:**

The *KAT – 101 Treatment* (Kodiscovery Anticancer Therapeutics pipeline for pets) is a canine cancer treatment specifically targeting cancer cells metabolism, developed over the past 20 years by Dr. Young Hee Ko (*KoDiscovery*, Baltimore, MD, www.kodiscovery.org). In general, KAT is a patented drug formulation used within a broad research program involving both humans and pets (e.g., canines and felines) in support and for advancement of treatments for multiple types of cancer for which effective therapies remain unknown or poorly understood at this time. The KAT received first Investigational New Drug (IND) acceptance for Phase 1 through 2a and Orphan Drug Designation for human hepatocellular carcinoma (HCC) in August 2021. Dr. Ko's research studies have shown that intra-tumoral (IT) injections of KAT have been very effective in destroying cancer cells in vivo, by selectively entering diseased cells, while leaving normal cells unharmed. Data and results from the initial KAT treatment for pets (Canine Case Study 1) are presented in this Report. Canine Case Study 1 involved treating a dog (Chippy, 12 year-old spayed female Alaskan Husky) with IT injections for an anal sac adenocarcinoma. The formal cancer diagnosis was made in early August 2021 by Dr. B. Walker, DVM (Cape Horn Pet Clinic, Northumberland, NH). The dog received treatments that spanned an 8-month period (July 14, 2021 - March 8, 2022). The overall treatment to date has consisted of nine IT injections from August 2021 to March 2022. Also, the dog received an oral application (20 mg/day) of KAT daily beginning August 29, 2021 and ending March 8, 2022. Results represented eleven observations over the study timeframe, including quantitative measures of the size of the tumor and qualitative assessments of the dog's demeanor. Following the first observation in July 2021, the tumor: 1) continued to grow in size up to the first IT injection at Day 46, reaching a maximum size of roughly 65 cm$^3$; 2) reduced slightly in size to approximately 55 cm$^3$ up to the third injection at Day 63; and 3) continued to decline substantially in size following all subsequent injections, realizing a minimum size of 6 cm$^3$ at Day 237. The dog's demeanor remained reserved and lethargic from July through mid-September (Day 63), changing markedly to outgoing and spirited by October 2021 (Day 80), which characterizes the dog's behavior to the present time. This Report will be updated as additional information is accumulated on the dog in this ongoing Canine Case Study 1.

Table 1. Data and results associated with Canine Case Study 1. Acronyms are as follows: KAT is Kodiscovery Anticancer Therapeutics; and B' and C'' are proprietary drugs.

| Time period | | K A T | | | Tumor size (cm³) | Dog's demeanor | Notes |
|---|---|---|---|---|---|---|---|
| Date | Elapsed time (no. days tot.) | B' (mg) | C'' (ml) | 0.45 Saline (ml) | | | |
| 14-Jul-21 | 0 | na | na | na | 4.2 | Reserved/lethargic | Initial observation by dog owner |
| 3-Aug-21 | 20 | na | na | na | 6.0 | Reserved/lethargic | Diagnosis by Dr. Bill Walker (DVM ) |
| 29-Aug-21 | 46 | Protocol dose | Protocol dose | 10 | 65.4 | Reserved/lethargic | Started drug (oral and injection) |
| 10-Sep-21 | 58 | Protocol dose | Protocol dose | 7 | 54.4 | Reserved/lethargic | Injection |
| 15-Sep-21 | 63 | Protocol dose | Protocol dose | 6 | 54.4 | Reserved/lethargic | Injection |
| 2-Oct-21 | 80 | Protocol dose | Protocol dose | 4 | 24.4 | Outgoing/spirited | Injection |
| 1-Nov-21 | 110 | Protocol dose | Protocol dose | 4 | 18.0 | Outgoing/spirited | Injection |
| 18-Nov-21 | 127 | Protocol dose | Protocol dose | 4 | 16.4 | Outgoing/spirited | Injection |
| 1-Jan-22 | 171 | Protocol dose | Protocol dose | 6 | 10.9 | Outgoing/spirited | Injection |
| 27-Feb-22 | 228 | Protocol dose | Protocol dose | 12 | 6.8 | Outgoing/spirited | Injection |
| 8-Mar-22 | 237 | Protocol dose | Protocol dose | 14 | 6.0 | Outgoing/spirited | Injection by Dr. Steve Kinney (DVM) |
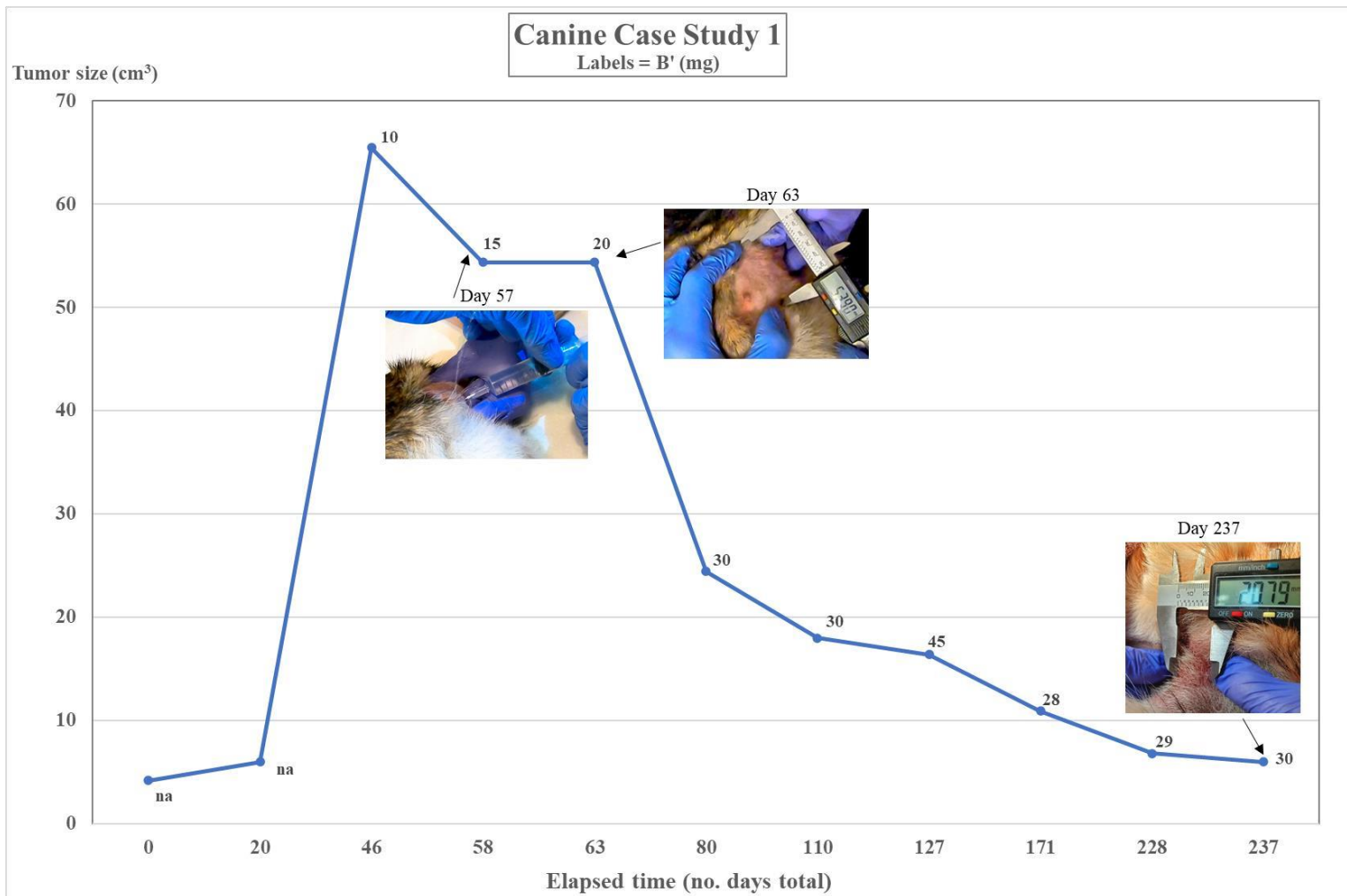
Figure 1. Results associated with Canine Case Study 1. The display presents tumor size (cm$^3$) along the y-axis measured at eleven observation days on the x-axis. Data point labels represent the proprietary drug B' (mg).