Adherence to follow-up recommendations for dogs with apocrine gland anal sac adenocarcinoma: a multicentre retrospective study

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Introduction: Progressive disease is common following anal sacculectomy for apocrine gland anal sac adenocarcinoma; additional therapy may prolong survival. Adherence to medical recommendations influences therapeutic success in humans. The purpose of this study was to assess the adherence to follow-up recommendations in dogs with apocrine gland anal sac adenocarcinoma.

Materials and Methods: Medical records of patients that underwent anal sacculectomy for apocrine gland anal sac adenocarcinoma, with or without iliosacral lymphadenectomy, between July 2015 and July 2018, were reviewed at eight referral institutions to assess postoperative recommendations and owner adherence to recommendations.

Results: One hundred and seventy-four dogs were included, of which 162 underwent unilateral anal sacculectomy, 12 underwent bilateral anal sacculectomy, and 39 underwent iliosacral lymphadenectomy. Seventy-six owners (44%) received recommendations for staging at the time of discharge, histopathology results, or at the first follow up visit. One hundred and forty owners (80%) received recommendations for treatment following the initial surgery. Fifty of seventy-six (66%) owners pursued at least one staging recommendation and 69/140 (49%) owners pursued some kind of adjuvant treatment recommendation. Overall, 16/76 (21%) were adherent to staging recommendations with 20 adherent for the first year following surgery (26%). Forty-seven of 140 (34%) were adherent to restaging recommendations at one year following surgery were significantly more likely to pursue treatment for progressive disease (p = .014).

Conclusions: Further work is required to assess owner motivation and evaluate strategies to improve adherence, given the potential impact on patient treatment.

References

1. Wouda R, Borrego J, Keuler N, Stein T. Evaluation of adjuvant carboplatin chemotherapy in the management of surgically excised anal sac apocrine gland adenocarcinoma in dogs. *Vet Comp Oncol.* 2013;14:67-80.

2. Bennett PF, DeNicola DB, Bonney P, Glickman NW, Knapp DW. Canine anal sac adenocarcinomas: clinical presentation and response to therapy. *J Vet Intern Med.* 2002;16:100-104.

3. Barnes D, Demetriou J. Surgical management of primary, metastatic and recurrent anal sac adenocarcinoma in the dog: 52 cases. *J Small Animal Pract*. 2017;58:263-268.

4. Hobson HI, Brown M, Rogers KS. Surgery of metastatic anal sac adenocarcinoma in five dogs. *Vet Surg.* 2006;35:267-270.

5. Liptak J, Selmic L, Amsellem P, et al. Apocrine gland anal sac adenocarcinoma and sublumbar lymph node metastasis: a VSSO retrospective study. *ACVS Proc.* 2015; 395-398.

6. Sabaté E, Sabaté E, editors. Adherence to long-term therapies: evidence for action. Geneva, Switzerland: World Health Organization; 2003.

7. Manders DB, Morón A, McIntire D, et al. Locally advanced cervical cancer. *Am J Clin Oncol*. 2018;41:447-451.

8. Ayer T, Alagoz O, Stout NK, Burnside ES. Heterogeneity in women's adherence and its role in optimal breast cancer screening policies. *Manage Sci.* 2016;62:1339-1362.

9. Subramanian S, Klosterman M, Amonkar MM, Hunt TL. Adherence with colorectal cancer screening guidelines: a review. *Prev Med*. 2004;38:536-550.

10. Lerman C, Rimer B, Trock B, Balshem A, Engstrom PF. Factors associated with repeat adherence to breast cancer screening. *Prev Med.* 1990;19:279-290.

11. Montes U, Ijo L, Campo A, Caide A, Bastarrika G, Zulueta J. Factors determining early adherence to a lung cancer screening protocol. *Eur Respir J*. 2007;30:532-537

Figures

	Institutio n A	Institution B	Institution C	Institution D	Institution E	Institution F	Institution G	Institution H	Total
Total Number of Patients	30	21	21	12	18	15	35	22	174
Treatment Recommended	23	15	18	10	17	13	23	21	140
Adherent to Recommended Treatment	4 (17%)	3 (20%)	6 (33%)	0 (0%)	12 (71%)	6 (46%)	8 (35%)	8 (38%)	47 (34%)
Adherent to Recommended Treatment for First Year Following Surgery	4 (17%)	4 (27%)	8 (44%)	1 (10%)	12 (71%)	8 (62%)	9 (39%)	8 (38%)	54 (39%)
Staging Recommended	10	9	8	3	9	6	15	16	76
Adherent to Recommended Staging	0 (0%)	2 (22%)	2 (25%)	0 (0%)	5 (56%)	1 (17%)	3 (20%)	3 (19%)	16 (21%)
Adherent to Recommended Staging for First Year Following Surgery	0 (0%)	2 (22%)	2 (25%)	0 (0%)	7 (78%)	2 (33%)	3 (20%)	4 (25%)	20 (26%)

Table 1. Adherence to follow-up treatment and staging divided by institution. Percentages represent adherence to recommendations by institution.

	Adherent	Non-adherent
Further Treatment	9 (45%)	9 (16%)
No Further Treatment	11 (55%)	47 (84%)

Table 2. Number of patients that received additional treatment for progressive disease comparing owners adherent to staging recommendations at 1 year following surgery and non-adherent owners.

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