Gertie, an approximately two-year-old, female, spayed, mixed breed dog was presented to the behavior service on June 17, 2018. She bit an extended family member as he was entering the home. Gertie historically displayed defensive aggression and fearful behavior toward unfamiliar people, especially if they initiated interactions with her. As she matured, she became more offensive at the front door. There were two prior incidents wherein Gertie bit family members (who don’t live in the home) when they insisted on petting her (Figure 1).

Gertie was found on the streets of Philadelphia at four months of age. She was fearful and uncertain about unfamiliar people from the outset. Gertie is comfortable and attached to the family she resides with. She is also comfortable with many dogs and she appears more comfortable with humans when they are with another dog. Gertie lives in a busy household with her family and several other dogs and cats. The family is actively involved with foster care and rescue, so animals come and go as they transition to their adoptive homes. As Gertie matured, her family attended group obedience classes with her at the local animal shelter. Correction based training was used and Gertie’s guardians continued to use her prong collar before coming to the behavior service. The family generally interacted with Gertie in gentle and benign ways, although they typically responded to her aggressive behavior and to intense situations by yelling.

### Physical Exam
A physical exam was performed by Gertie’s regular veterinarian on June 14, 2018; there were no significant findings. A routine screening was done for heartworm and tick born disease (4dx), which was negative. Gertie’s weight was 30.9 kg. Because Gertie was recently seen by her regular veterinarian (and to reduce her stress during the behavior consult) the attending board certified veterinary behaviorist at our specialty hospital, elected to not perform a physical examination at Gertie’s initial behavior consultation. Gertie was diagnosed with generalized anxiety and fear related aggression by the behavior specialist.

### Treatment
The clinician recommended that the client increase Gertie’s mental exercise by training her 3-5 minutes at least three times daily, increasing her foraging and food toy usage, and giving her other outlets; dog interactions, structured activities and physical exercise such as ball play, and working walks. A plan was implemented for counter-conditioning Gertie’s response to guests and ultimately a greeting ritual would be established, to be used when unfamiliar people entered the home. Treatment appointments were recommended to implement the prescribed
A counter conditioning plan was implemented in which the visitors became “cookie monsters” by chronically tossing treats on the floor until the following therapies could be implemented.

counterconditioning and response substitution plan. The client was given comprehensive instructions for teaching Gertie how to feel comfortable in a safe haven for times when the household or certain guests may be overwhelming to her.

Behavior Modification Tools
The clinician’s treatment plan included treatment appointments conducted at the client’s home. A counter conditioning plan was implemented for all visitors to the home in which the visitors became “cookie monsters” by chronically tossing treats on the floor until the following therapies could be implemented. A signifying phrase would be associated with arrivals to indicate that visitors were entering and positive interactions would begin. “Touch” (the patient touches the client’s hand on cue), “go touch” (the patient touches the visitor’s hand on cue), and “get it” (the patient chases and grabs her toys as thrown by visitors). These were the primary behavior modification tools. “Look-at-that” (the patient heard a click or “yes” and she was given a treat every time she sensed people or their activities) was also implemented for entryway stimuli and all provocative stimuli when walking on leash, to prevent further sensitization.

Medications
An initial dose of Trazodone 100 mg (1tab) was prescribed as a bridge until the SSRI reached efficacy. The clients were instructed to trial the Trazodone at times when they could stay home with Gertie for at least three hours, to monitor her responses. The clinician also prescribed Paroxetine 20 mg one-half tablet orally twice daily for seven days, and then the dose was increased to one tablet orally twice daily for seven days, then one-and-a-half tablets orally twice daily thereafter.

Home Visits
Post initial consultation, the technician met the client and patient in four behavioral treatment appointments, at the clients’ home. Initially the client brought Gertie to the front lawn of the home to begin behavior modification in a setting that was less difficult for her. It was noted that Gertie kept track of the technician’s position at all times, often with a furrowed brow and the occasional huff (a low growl with air puffing out of her closed mouth). As the patient ate tiny pieces of cheese and freeze-dried liver tossed by the technician, she began to relax. The clinician had already instructed the client to teach Gertie the “touch” behavior (hand targeting). The client and patient had prior experience with clicker training. The clicker was paired with food and used for marking correct responses to the cues that elicited behaviors that were being utilized for response substitution. A few moments were spent helping the client with timing, then the hand target behavior was transferred to the technician by having the client walk Gertie past the technician and touch her open palm that was held in a non-threatening position. The patient was clicked and treated for this sequence over several repetitions and the cue “go touch” was added. The client was given instructions to practice “touch” and “go touch”, at entrances to the home. This was practiced initially, with people that Gertie was already comfortable with. Once the cue “go touch” was established Gertie could be sent forward to touch the other human walking through the door. As we progressed and Gertie’s medication helped her to feel more relaxed, the client was instructed to add less familiar people. This plan was effective for this dog and generalization was achieved quickly, partially due to the participation of multiple household members. The cues “touch” and “go touch” were rigorously applied thus the cues themselves became highly reinforcing to the patient. It was discussed, that for our next treatment appointment, we would meet outside again but go back into the home together. At the second visit, the technician was able to enter the home with the client and patient. At this point “touch” and “go touch” was being practiced with increased fluency. The technician was able to enter and exit the home several times, using “touch” and “go touch.” As Gertie gained confidence in her new way to interact with people entering the home, we added a signifier phrase “Who is it.” A signifier phrase is the cue that indicates an event is about to occur. “Who is it” indicated that a pleasant interaction, with lots of food reinforcement...
In order to facilitate serotonin in the brain the second Gertie noticed provocative stimuli, the client was also taught how to counter condition her to any and all stimuli that she was anxious or aroused over by saying “yes” or clicking and treating anything she sensed.

was about to occur at the front door. The clinician also prescribed that the technician teaches Gertie how to do other things with visitors such as chase a thrown toy and perform cued behaviors. The client was also taught how to counter condition Gertie to any and all stimuli that she was anxious or aroused over by saying “yes” or clicking and treating anything she sensed. This counter conditioning technique was applied to facilitate serotonin in the brain the second the patient noticed provocative stimuli e.g. Person=click=food. The technician explained that the owner should apply this technique even if Gertie is displaying warning aggression (growling, barking) and especially if she cannot respond to cued behaviors.

Treatment Adjustments
During the course of treatment some problems were encountered that called for changes in the prescribed treatment plan. At the first treatment appointment the technician observed that Gertie became significantly aroused if she heard the other resident dogs alarm barking from the back yard. The plan needed to be altered to gradually include the other dogs in the treatment appointments as it would be necessary for Gertie to handle visitors entering while her housemates are also present, and possibly aroused. Practice was initially conducted with the dog that would be easiest for Gertie to go to the door with, and then the other dogs were added one-by-one. At this point a decision was made that “cookie monstering” from guests would be too risky. Throwing food on the floor could incite aggression among conspecifics. It was decided that, in order to help Gertie succeed, all of the dogs would be safely counter conditioned (to reduce arousal at the door) by hand feeding them when they sensed activity at entry ways and when they went to the door. Treat stations were established at strategic locations. Additionally, by our third session Gertie appeared to have gained a significant amount of weight, most likely due to continuous behavior modification. A plan was put in place to incorporate more of Gertie’s kibble and fruits and vegetables into her behavior modification. The client agreed to conserve tiny pieces of high value meats and cheese for unfamiliar guests. The client was instructed to reach out to the behavior clinician for dietary support. Dogs who are receiving behavior modification often rely on palatable foods to facilitate the treatment plan.

Conclusion
Gertie was discharged from the behavior service after completing her prescribed treatment appointments. This patient was seen by the board-certified veterinary behaviorist for an initial consultation and a progress evaluation. She was also seen for four behavior treatment appointments with the technician. Upon interviewing the client nine months post Gertie’s initial consult, the family reports that she is still doing very well with visitors entering the home.

REFERENCE