



Euthanasia Algorithm for Companion Animals

Designed for companion animal veterinarians and animal shelters

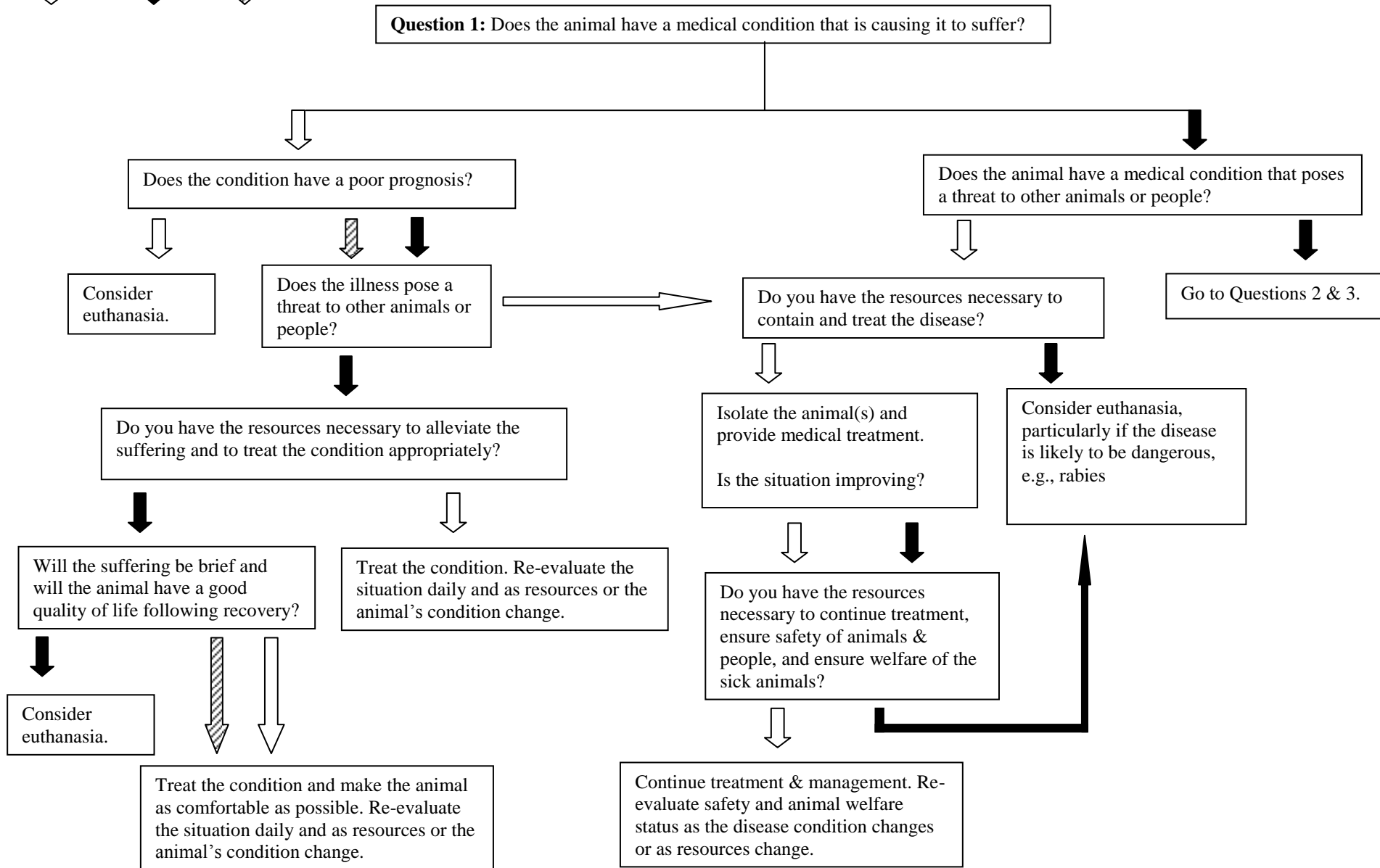
International Fund for Animal Welfare, China 2009

伴侣动物安乐死实施规则

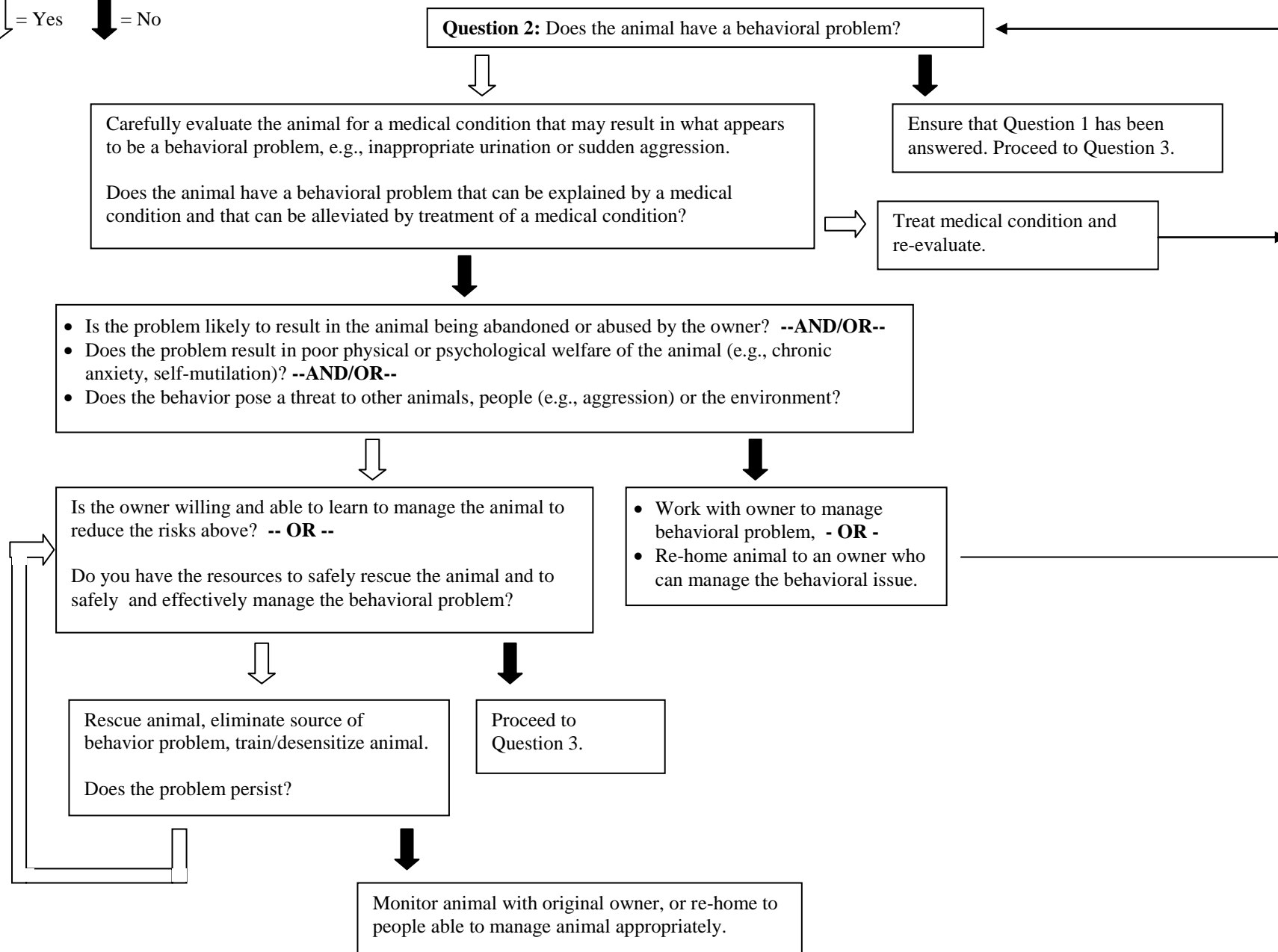
适用伴侣动物医生及动物救助中心

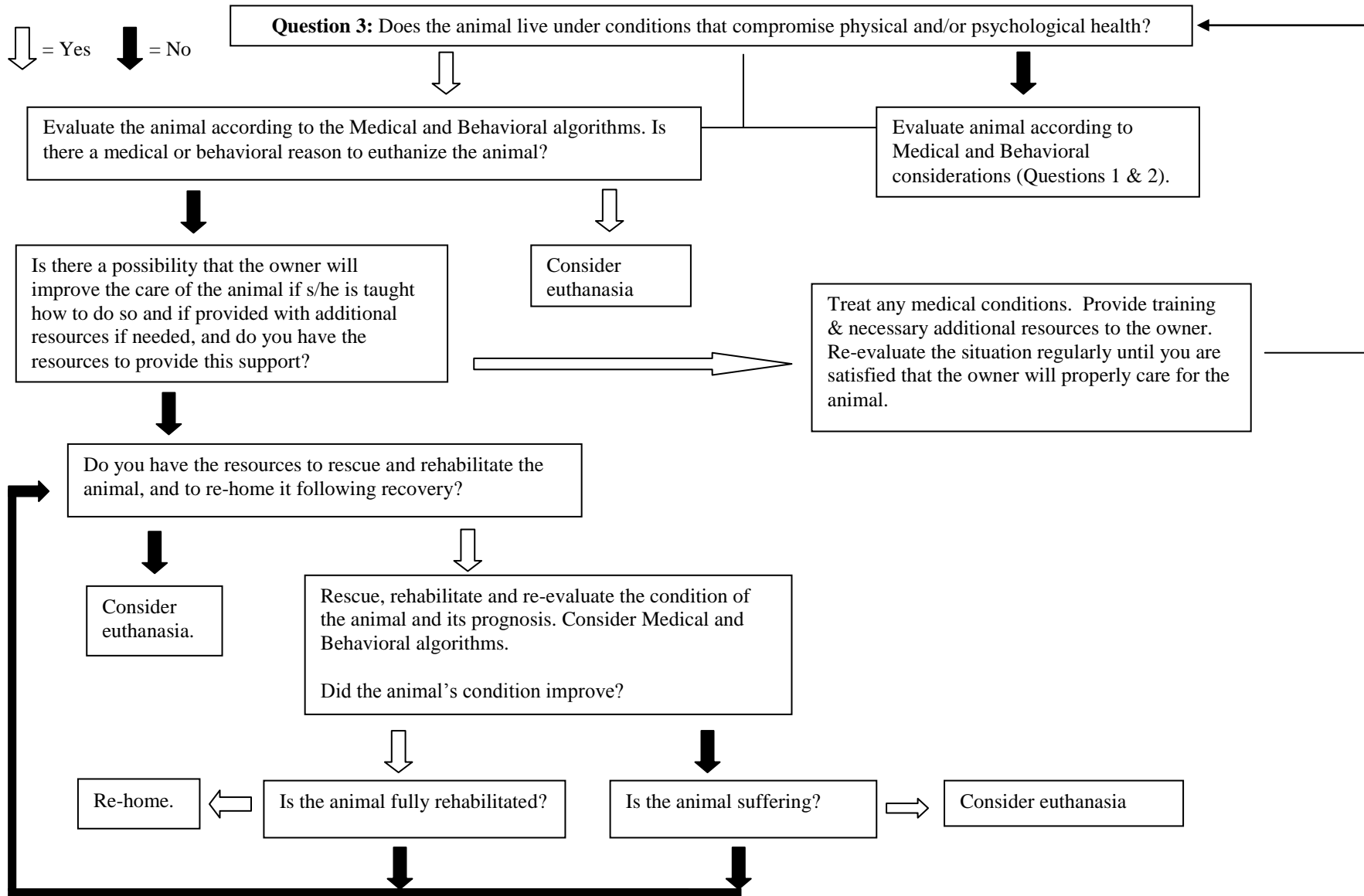
国际爱护动物基金会 中国 2009 年

= Yes  
  = No  
  = Uncertain



↓ = Yes    ↓ = No





Notes for guidance on use of Euthanasia Algorithm  
Designed for companion animal veterinarians and animal shelters  
International Fund for Animal Welfare, China 2009  
Principle author: Dr. Kati Loeffler

IFAW works from the concept of Adequate Guardianship, which requires that an animal's basic needs are being met. The algorithm is based on this concept and its criteria, and provides a simplified structure to help local veterinarians and dog/cat shelter staff to think through a decision about euthanasia as objectively as possible. The notes below are meant only to help clarify some of the terminology in the algorithm, and to provide real-life examples to illustrate implementation of euthanasia criteria and the algorithm.

**Algorithm 1: Euthanasia due to medical condition**

- Does the animal have a medical condition that is causing it to suffer? An animal is suffering if it is in pain or if it is so ill that it is depressed, does not eat, does not move or respond to people, vocalizes due to pain or discomfort, has wounds that will not heal, etc.
  
- Prognosis refers to the ability of the animal to recover from its illness or injuries and to live without undue suffering. For example, a dog or cat may have a crushed leg that needs to be amputated. If the missing limb will be the animal's only problem, then it is capable of living a very happy life and has a good prognosis. On the other hand, an animal with cancer that cause constant pain and that cannot resolve has a poor prognosis.
  
- Resources & skills for management of a medical condition include:
  - 1) staff competence in knowledge and skills in diagnosing, treating and managing the condition
  - 2) staff availability, e.g., skilled staff who are competent to work with the animal 24 hours a day if necessary
  - 3) finances
  - 4) facilities, e.g., drugs, diagnostics such as radiography and laboratory analyses, cages or isolation areas that ensure the comfort and safety of the animal and staff, proper surgical areas and instruments
  
- Quality of life following recovery or partial recovery. Consider physical pain and discomfort and emotional distress. In example (3) below, the dog has to live in a cage and was isolated almost all day. This is not an acceptable living condition for a dog.
  
- How long should the animal suffer in the hope that it will recover? This depends on the degree of suffering, how well you are able to decrease the suffering, how long the suffering will continue, and the prognosis for the animal's future. Consider the following examples.
  - 1) A dog has a broken leg and small wounds on the face and flanks. The leg is very painful but the other injuries are minor and heal quickly once they are cleaned and treated. You have the facilities and surgical skills to repair the bone, the owner is willing to pay for it, and you can give the dog medication against pain. In this case, the suffering that the dog endures is acceptable because:
    - a. the injury has a good prognosis (a full recovery can be expected)

- b. you have the resources to manage the problem
- c. the period during which the dog is in pain will be relatively brief and can be alleviated with drugs
- d. the owner is willing and able to properly care for the dog during its recovery

Make sure to find out why the dog's leg was broken. Did the owner beat her? Does the owner let her run loose on the street and she was hit by a car? In this case, further injuries are likely to occur. This is now a case of Medical Condition + Failure of Guardianship (Question 3).

- 2) A Dachshund is paralyzed in the hind legs due to a prolapsed (or partially prolapsed) disc. He is five years old and overweight. He can only walk by dragging his hind legs across the floor. His attitude is bright, he eats well, and his personality and energy level seem to be normal. He is able to control micturation and defecation.
- a. Do you have the skills to evaluate the degree of the injury, e.g., radiography and neurologic diagnostic skills? If so, you can determine the severity of the condition and determine a prognosis. If not, you have to treat the condition symptomatically.
  - b. You start the dog on pain medication, instruct the owner how to take care of the dog and how to help the dog lose weight.
  - c. A week later:
    - i. the dog is no better, but it is no worse either. It does not appear to be in pain: attitude and appetite are still good and he drags himself around the house with good energy. The owner seems to be taking good care of the dog. Continue treatment. – OR –
    - ii. the dog is panting, in pain and has not been able to control defecation. The prognosis now is much poorer than it was initially. If the owner is taking good care of the dog and wants to keep trying, you can try stronger pain medication and suggest surgery if there is a reliable veterinary neurosurgeon available. If the owner is frustrated and there is no option of surgery, consider euthanasia.
  - d. In the case of (c. i.), recheck the dog every 3 or 4 days. If the attitude is still good and the dog is not developing sores on the dragging limbs and the owner is taking good care of the dog, then you can keep trying.
  - e. If the dog appears to be in pain or the dog develops frequent secondary problems such as urinary tract infections and sores on the dragging body parts, and there is no sign of recovery, then the dog's quality of life is decreasing and you should consider euthanasia.
  - f. The owner gets tired of taking care of the dog and begins to neglect him. The dog is in pain and neglected. Consider euthanasia. Note: this is a case of Medical Condition + Failure of Guardianship.
  - g. The dog loses control of micturation and defecation. It lives in a cage because the owner doesn't want the whole house soiled. The tail is permanently soiled with faeces. The owner takes the dog to a local vet who amputates the tail. The wound heals poorly because it is always dirty. The dog's attitude is bright and he is very happy to see the owner. But he spends 23.5 hours a day in the cage, alone. In this case, you can teach the owner how to provide enrichment for the dog so that he is not so lonely and bored. But the prognosis for the case is poor, and the dog's quality of

life is not good because of his isolated living condition. Consider euthanasia.

- 3) Five year old cat with mammary cancer.
  - a. You do not have experience in cancer surgery and you do not have drugs for proper control of pain. There is no one in the town who has better skills or facilities than you do. In this case, consider euthanasia.
  - b. You have learned how to remove this type of tumor from surgical text books. You have the drugs for proper anaesthesia and pain medication following the surgery. The owner is willing to pay for it and will take care of the cat carefully following surgery. In this case, it is worth a try, but keep in mind that the prognosis for the condition may be only a few months.
  - c. The cat recovers from surgery and appears to be healing well. Six weeks later, she has stopped eating and spends a lot of time lying in a corner, isolating herself. She is now in pain and is suffering. You can try to control the pain with medication, but prepare the owner that this will help only for a short time. Consider euthanasia.
  
- 4) Dog that survived distemper, but is now paralyzed in the hind legs, twitches constantly, and is very thin. The dog eats well, is alert and responds to people. It cannot walk, however, and is developing decubital ulcers. The owner is willing to feed it carefully and clean up the urine and faeces, but cannot manage the ulcers. The quality of life for this dog is poor, and the prognosis for recovery of good quality of life is poor. Consider euthanasia.
  
- 5) Two-year old golden retriever dog with hip dysplasia.
  - a. Dog is limping and doesn't want to go on walks. Pain medication improves the condition but the dog's liver does not tolerate the medicine. You try a different medication, but the dog doesn't tolerate this either. Consider euthanasia.
  - b. Pain medication helps and the dog's liver appears to tolerate it. The owner does a good job in walking the dog twice a day to keep the hip muscles strong. Continue medication and controlled exercise until the dog appears to be in more pain. When that happens, re-evaluate the options and make a new decision.
  - c. Pain medication helps and the dog's liver appears to tolerate it. But the owner does not walk the dog enough and often forgets to give the dog his medicine. The dog is in pain and lonely. Options: a) encourage the owner to do a better job of taking care of the dog; b) find a new home for the dog with a better owner; c) euthanasia. Note: this is a case of Medical Condition + Failure of Guardianship.
  
- 6) Six year old dog with chronic, itchy skin disease.
  - a. The dog scratches constantly, its skin is raw and infected. You have tried a variety of medications but nothing has helped. The owner is frustrated, quality of life for the dog is poor, prognosis is poor: consider euthanasia.
  - b. You have tried several diets to discover if the dog is suffering from a food allergy. This is hard to do because of the lack of hypoallergenic diets available locally. The owner cooks special food for the dog, but the diet is

imbalanced. The dog's skin improves a little bit, but it still receives antibiotics and steroids and now it is malnourished, thin and constantly hungry. Quality of life is poor, prognosis is poor: consider euthanasia.

7) Nine year old cat with kidney failure.

The cat is very thin, vomits daily and is depressed from constant nausea and feeling ill. The owner has to bring the cat to the veterinary clinic every other day for treatment. This causes great stress to the cat and costs the owner considerable time and money. The cat seems to feel better for a few hours, but by the next day is depressed and nauseated again. In this case, the quality of life and prognosis for the cat are poor, and euthanasia should be considered.

### **Algorithm 2: Euthanasia due to behavioral problem**

- A behavioral problem is a behavior that causes the owner to be frustrated with the animal. Some people are very tolerant, others are less tolerant, so a “problem” behavior in one household may not be a problem in another household.
- The frustration of the owner may result in the owner abandoning or abusing the animal. In this case, the issue is Behavior Problem (Question 2) and Failure of Guardianship (Question 3).
- Quality of life is an important consideration for management of behavioral problems. If a dog is locked in a cage 23.5 hours a day because he might destroy something in the house, the quality of life for the dog is poor, and the situation needs to be changed. A cat tied to a wall all day so that she does not run away does not have an acceptable quality of life. A dog who wears a muzzle all day so that he doesn't bark does not have an acceptable quality of life. An aggressive dog who is chained to the wall 24 hours a day and is choked half to death when a visitor comes does not have a good quality of life.
- Resources for managing a behavioral problem essentially means a person with sufficient expertise in animal behavior management and positive reinforcement training to teach pet owners how to manage their animals' behavior issues in a humane and effective manner. This may be difficult to find locally. The owner must be patient and committed to solving the problem, and will have to try to find training resources on his or her own, e.g., obtaining foreign expertise through books or advice from qualified people.
- Training in behavior management (together with Responsible Pet Ownership) is one of the most valuable educational resources that animal shelters and other animal welfare organizations can provide in China.

#### Example 1. Adult dog begins to urinate all over the house.

1. Examine the animal for medical conditions that may cause it to urinate inappropriately, e.g., urinary tract infection or a condition that causes incontinence.
2. You can't find a medical cause for the problem, so you work with the owners to try to figure out what might have changed in the dog's environment that is causing it to behave this way. Is it in season? Did another animal join the household so that the dog now feels the need to mark its territory? Did a person join or leave the household? The owners are patient and work with the dog to re-train it, using positive reinforcement techniques. In this case, the prognosis is good: keep working on it.
3. You can't figure out a medical cause for the problem and the owners are frustrated and beat the dog. The dog cowers and lives in constant fear, which makes it urinate in

the house even more. The owners don't want to deal with the dog anymore. Now we have a Behavior Problem + Failure of Guardianship (Question 3). You have the option of a) rescuing the animal, retraining and re-homing it, or b) euthanasia.

Example 2. Young dog with separation anxiety who chews up everything it can reach in the house when the owner leaves the house. The owner has been shutting the dog in a box, where it lives all day while the work, crying and distressing the neighbors.

1. Owner is willing to spend time to help the dog but doesn't know what to do. In this case, help the owner to understand separation anxiety and teach the owner how to train the dog to overcome the problem. This will require patience and skill in training techniques.
2. Owner is willing to spend time to help the dog but doesn't know what to do and there is no one who knows how to teach the behavioral management to help the dog overcome the problem. The dog is living in a box, is isolated, quality of life poor, and the anxiety becomes worse because of the isolation it suffers. The neighbors complain and the owner is in danger of being forced to abandon the dog. You can try to provide something better than a box for the dog to live in and see if the owner or another member of the household can stay home more with the dog. Alternatively, seek options to re-home the dog. Only if these options fail, consider euthanasia.
3. Owner is frustrated, beats the dog, which makes the dog even more anxious and distressed. Now we have a Behavior Problem + Failure of Guardianship (Question 3). You have the option of a) rescuing the animal and re-homing it to someone who is able and willing to care for the dog properly, or b) euthanasia.

### **Algorithm 3: Euthanasia due to Failure of Guardianship**

- Adequate Guardianship is defined as the resources (e.g. food, water, shelter and health care) and social interactions necessary to meet an individual animal's physiological and psychological needs necessary to maintain an acceptable level of health and well-being.
- In order to ensure proper guardianship of an animal guardianship, the following criteria must be met:
  1. Appropriate food & water to keep animal in good health
  2. Housing conditions to protect animal from weather, provide clean, soft sleeping area, provide area for animal to move about and express normal behavior
  3. Behavioral management
    - a. Appropriate social environment, e.g., human family & other animals
    - b. Sufficient exercise
    - c. Training to prevent or manage behavioral problems, using only positive reinforcement methods.
    - d. A misbehaved dog indicates that something is missing in the care of the animal or in its environment, or that it has a medical condition that is causing it to behave abnormally. Efforts should be made to determine what these deficits are and to correct them in a humane manner.
  4. Never abuse an animal physically or psychologically. Beating or otherwise hurting an animal, isolation, malnutrition and thirst, causing fear and anxiety, punishing an animal for something it does not understand was wrong, all are counterproductive and constitute abuse.

5. Maintain the health of the animals
    - a. Prevention of disease: vaccination, deworming, proper nutrition, exercise, behavioral management
    - b. Seek proper veterinary care if animal is ill
    - c. In many cases, it is advisable to neuter pets in order to prevent unwanted puppies & kittens, prevent or manage behavioral problems, and decrease incidence of certain medical conditions.
- Resources for rescue, rehabilitation and re-homing include:
    - 1) Temporary home for the animal – shelter or volunteer guardian
    - 2) Expertise, time and money to treat medical conditions properly
    - 3) Expertise, time and money to manage behavioral issues properly
    - 4) Personnel, time and money to re-home the animal and to monitor the animal in its new home to ensure adequate guardianship there.
  - Criteria for an appropriate guardian with whom to re-home an animal include:
    - 1) Ability to ensure the 5 criteria listed above.
    - 2) De-sexing (spay/neuter) the animal is strongly advised
    - 3) Understanding of ‘responsible pet ownership’
    - 4) Will not use the animal for fighting/food/experimentation
    - 5) Relinquishment of the animal back to the shelter if Adequate Guardianship cannot be provided
    - 6) Permanent identification of the animal (in addition to a microchip), ie collar and tag
    - 7) Abide by local laws/regulations/ordinances, eg registration and licensing
    - 8) Must not have a criminal record of animal or human abuse
  - “Re-evaluate the situation regularly until you are satisfied that the owner will properly care for the animal.” Re-evaluation should be done twice a week for 2 weeks, then once a week, then monthly until you feel that the situation is under control. If there is any indication that the owner is unable to maintain acceptable conditions of animal welfare, then re-evaluate the situation though the left side of the algorithm, assuming that the animal will need to be rescued and re-homed.

Example 1. A dog lives permanently tied to a wall on a short chain. It must sleep and defecate in the same area and is not taken for daily walks. For shelter it has a broken piece of wood leaning against the wall. Sometimes it has water to drink, but usually this is dirty. Once a day it receives rice gruel and sometimes left-over scraps from the owner’s meals. The animal is thin, dirty and covered with ticks. Once a year she becomes pregnant (while tied to the wall) and raises her puppies while remaining tied up and without additional water and food to sustain her lactation. This is clearly a case of inadequate guardianship. This animal must either be rescued or the owners must be taught – and then monitored – to take proper care of the dog.

Example 2. A dog is kept by the security guards of a factory to help guard the area. The dog runs loose and is not vaccinated. The guards feed it occasionally (not daily) from scraps left over from their own meals. The dog lives primarily on what it can find to eat in the streets. It has a strong cough, is very thin, and sleeps in the garbage litter next to the factory gate. When it meets one of the guards, it cowers in fear, and the guards are often seen to kick it.

This is a case of inadequate guardianship and the animal must be rescued. A communally “owned” dog like this is often neglected because no one takes the responsibility to properly care for it. Consider also role of this dog in 1) risk & spread of disease; 2) population control

Example 3. A cat is kept tied to the wall by its neck all day. It is fed rice gruel once a day. This is a case of inadequate guardianship. This animal must either be rescued or the owners must be taught – and then monitored – to take proper care of the cat.

Example 4. A cat begins to urinate on the owner’s bed. The owner takes the cat to the veterinarian who cannot find anything medically wrong with the cat. The cat continues the behavior and the owner gets so frustrated that it begins to throw the cat across the room. This is a case of Behavior Problem + Failure of Guardianship. In this case, the owner needs help in identifying the cause of the cat’s behavior, and then in managing the problem. If he or she is unwilling to do this, the cat must be rescued.

## **Method of euthanasia**

- A. Humane euthanasia techniques must meet the following criteria:
1. The method must produce loss of consciousness and death without causing pain, distress, anxiety or apprehension in the animal. This refers to:
    - a. The manner in which the animal is handled (minimize stress, anxiety, pain)
    - b. The drugs or other method used to euthanize the animal
  2. The method must work rapidly, in less than one minute.
  3. The method must be safe for personnel.
  4. The method must be irreversible
    - a. complete loss of consciousness
    - b. heart & breathing stopped – listen with stethoscope and observe for at least 5 minutes
    - c. absence of all reflexes (palpebral, corneal, toe pinch)
    - d. a central fixed dilated pupil
- B. Restraint of the animal for euthanasia
1. Must be gentle: minimize stress.
  2. Must be safe to the animal and to personnel (e.g., handling a dog that may have rabies)
  3. Handle the animal away from other animals.
  4. NEVER euthanize an animal in front of other conscious animals.
  5. If the animal is very anxious or is in danger of causing injury to itself or to personnel, sedate the animal for safe restraint
- C. Euthanasia drugs
1. The animal MUST be in a deep plane of anaesthesia at the time of death.
    - a. No palpebral reflex
    - b. Jaw tone loose
    - c. No response to toe pinch
    - d. Relaxed muscles
  2. The most common and safest method is to over-anaesthetize the animal with a barbiturate (e.g., sodium pentobarbital).

3. Alternatively, use another anaesthetic drug and follow with KCl
  - a. First, anaesthetize the animal to a deep plane of anaesthesia per requirements above, for example with Zoletil or isoflurane. Note that sedation alone is not enough!
  - b. Once the animal is deeply anaesthetized and cannot feel pain, administer KCl.
4. NEVER use KCl alone on an animal that is awake or only sedated. This causes a very painful, cruel death.