Please note that while these treatment options are available, it is recommended you discuss with your Technician/PI to determine if the mouse NEEDS to be maintained.
In general a sick stock or breeding animal should not be maintained (unless a very valuable animal).
Please contact LAM at anytime if you are unsure how to diagnose a condition, or are unsure of appropriate treatment.
Conditions highlighted in orange require LAM consult.
Please refer to your ASP for endpoints.

Body System	Condition	Treatment	Frequency	Comments
	Dermatitis	1. Clean skin with 2% dermachlor. 2. Apply appropriate topical ointment (see comments). 3. **Trim the nails.** 4. If secondary to irritation from ear tag please remove ear tag. 5. Mouse can be moved to soft bedding and a secondary form of enrichment provided if singly housed.	2% dermachlor rinse: Once prior to initial application of topical ointment. This will help you better visualize the lesion and determine how significant wound is. Topical treatment: once or twice daily, except for Silver Sulfadiazine which is applied once daily or once every other day. Nail trim: Once every two weeks, or as needed.	Ointment choice will vary on severity, as well as location: **Base of animals neck and forward towards face:** requires ophthalmic Triple Antibiotic Ointment +/- steroids*. **Base of neck towards the tail:** 1. Triple Antibiotic Ointment +/- pain relief 2. Quadritop* 3. Silver Sulfadiazine 4. 2% Dermachlor rinse (used when antibiotics are contradictive to study) *Must consult PI prior to use of steroids Re-evaluate/contact LAM if not responsive to treatment within a week.
	Ulcerative Dermatitis	1. Clean skin with 2% dermachlor. 2. Apply appropriate topical ointment (see comments). 3. **Trim the nails.** 4. If secondary to irritation from ear tag please remove ear tag. 5. Mouse should be moved to soft bedding and a secondary form of enrichment provided if singly housed.	2% dermachlor rinse: Once prior to initial application of topical ointment. This will help you better visualize the lesion and determine how significant the wound is. Topical treatment: once or twice daily, except for Silver Sulfadiazine which is applied once daily or once every other day and Dakin's which is applied every other day. Nail trim: Once every two weeks, or as needed.	Ointment choice will vary on severity, as well as location: **Base of animals neck and forward towards face:** requires ophthalmic Triple Antibiotic Ointment +/- steroids*. **Base of neck towards the tail:** 1. Silver Sulfadiazine in combination with Dakin's solution 2. Quadritop* *Must consult PI prior to use of steroids Re-evaluate/contact LAM if not responsive to treatment within a week.

Integumentary (Skin)	Fight Wounds	1. Clean skin with 2% dermachlor 2. Apply appropriate topical ointment (see comments) 3. Separate out aggressor, remember to provide second form on enrichment to single housed animal.	2% dermachlor rinse: Once prior to initial application of topical ointment. This will help you better visualize the lesion and determine how significant the wound is. Topical treatment: once or twice daily, except for Silver Sulfadiazine which is applied once daily or once every other day.	Ointment choice will vary on severity: 1. Triple Antibiotic Ointment +/- pain relief 2. Quadritop* 3. Silver Sulfadiazine 4. 2% Dermachlor rinse (used when antibiotics are contradictive to study). Always ensure mice can urinate normally if perineal area effected. Re-evaluate/contact LAM if not responsive to treatment within a week.
	Abscess	1. Clean skin with 2% dermachlor 2. Express the abscess if possible to do so without causing pain/distress. 3. Clean skin and expressed area again with 2% dermachlor. A flexible catheter tip can be utilized to better direct flushing of the wound. 4. Begin systemic antibiotic treatment	2% dermachlor rinse: Once prior to expression, and once again post. Systemic treatment: rehouse the animal singly, remembering to add secondary form of enrichment. Make medicated water, change every 3-5 days or as it becomes cloudy.	Sometimes it is not feasible to express an abscess. In those instances it may be possible to maintain the animal on systemic antibiotics and have the abscess clear up if it is mild. Please **consult LAM** to determine best treatment option.
	Hyperkeratosis (scaly skin)	1. Provide supportive care via wet feed or dietary gel supplements. 2. Systemic antibiotics can be used in some cases.		Hyperkeratosis is often due to Corynebacterium bovis infection. Prevention and control is difficult. Please **consult LAM** to determine best treatment option.
	Necrotic Tail	Tail amputation if effecting less than 2/3 of the tail.		Tail amputation should only be completed by an individual who is certified in aseptic surgery and tail amputation. Pain management must be provided post-operatively and the animal monitored closely for ability to urinate. Please **consult LAM** to determine if tail amputation is advisable.

Ophthalmic (Eyes)	Corneal Ulceration	Ophthalmic Triple Antibiotic Ointment +/- analgesics if warranted.	Twice Daily	Depending on the severity corneal ulcers can be very painful. Very mild cases can be treated and monitored closely for recovery. Often humane euthanasia is preferred. Please **consult LAM** if you wish to treat a mouse with corneal ulcer.
	Conjunctivitis	Ophthalmic Triple Antibiotic Ointment	Twice Daily	Re-evaluate/contact LAM if not responsive to treatment within a week.
	Blepharitis (swelling of eyelids)	Ophthalmic Triple Antibiotic Ointment	Twice Daily	Re-evaluate/contact LAM if not responsive to treatment within a week.
	Buphthalmos (swelling of the eye itself)	If mild and no additional health issues noted the mouse can be monitored.		Typically the presentation of glaucoma. If moderate or severe euthanasia is recommended. Please **consult LAM** to determine if mouse can be maintained.
	Exophthalmos (normal sized bulging eye)	If mild and no additional health issues noted the mouse can be monitored.		Typically the presentation of retro-orbital abscess. If moderate or severe euthanasia is recommended. Please **consult LAM** to determine if mouse can be maintained.
	Microphthalmia/ Anophthalmia (abnormally small or absent eyes)	If no additional health issues noted the mouse can be monitored. Some mice with microphthalmia with develop discharge from the eyes which can be treated with Ophthalmic Triple Antibiotic Ointment.	Twice Daily	Please ensure mice can normally posture, move about the cage freely, and access feed and water. If this is a new phenotype please consult LAM to ensure Deleterious Phenotype form has been submitted to the ACUC.
	Cataracts (opaque eye)	No treatment required.		Corneal ulceration can often be misdiagnosed as cataracts. Please **consult LAM** if you are not sure how to identify the difference-as a misdiagnoses can lead to unmanaged pain

Gastrointestinal	Malocclusion	1. Trim teeth of mouse. 2. Provide wet feed daily for rest of animals life. 3. Monitor and record weight weekly and trim teeth as needed for rest of animals life.		Malocclusion is a serious health concern, usually seen as a failure to grow and thrive. In many strains of laboratory animals, this is due to a genetic trait, therefore, we strongly discourage breeding these animals. These animals require life-long monitoring every 7 days and regular trimming of the overgrown teeth.
	Rectal Prolapse	For mild to moderate: 1. Change to cage with soft bedding, and provide a secondary form of enrichment if singly housed. 2. Apply a thin layer of PreparationH Hemorrhoidal Cream. For severe cases animal must be humanely euthanized.	Twice Daily	**Mild**: Barely noticeable (<1mm) of moist, inflamed tissue protruding from the anus. **Moderate**: <3mm of moist, inflamed tissue protruding from the anus; No active bleeding; Mouse is otherwise healthy and normal. **Severe**: Animal will exhibit one or more of these clinical signs; >3mm moist, inflamed tissue protruding from the anus; active bleeding; dried blood; dry tissue.
	Diarrhea	For mild to moderate: 1. Provide supportive care via wet feed or diet gels. 2. Warmed subcutaneous fluids may be given. For severe cases where conditioning is very reduced and the animal is lethargic humane euthanize is advised.		To determine subcutaneous fluid dose follow the following equation: Body weight of animal in grams X % dehydration= dose in ml Provide half of the dose initially then reassess the animals in 2-3 hours to determine if the rest is needed. To determine % dehydration identify % of body weight loss. The % of body weight loss is equivalent to % dehydration. e.g.: A mouse that weighed 20g pre-illness now weighs 19g. 1g is 5% of 20g, so the mouse is suffering from 5% dehydration. 19g x 5% = 0.95ml. This dose is halved, giving the mouse 0.475ml initially, and if needed given the remaining 0.475ml 2-3 hours later.
	Vaginal Prolapse	May occasionally resolve on its own so close monitoring is possible, however can quickly progress to uterine prolapse which requires humane euthanasia.		A vaginal prolapse can occur due to contractions or straining during pup delivery. If it does not resolve rapidly humane euthanasia is required. Please **consult LAM** to determine if animal can be maintained.
	Uterine Prolapse	Humane euthanasia.		

Reproductive and Urinary	Penile Prolapse	1. Remove male from breeding cage, if necessary, and place in a cage with soft bedding and provide secondary form of enrichment if housed singly. 2. Apply lubricant/ointment . 2. Monitor closely for normal urination.	Twice Daily	If mouse is unable to urinate, it must be euthanized within one hour.
	Urinary Staining (blockage)	Humane euthanasia.		
	Mastitis	1. Remove with pups and place with a foster dam. 2. Provide supportive care in the form of wet feed or dietary gel. 3. Move mouse to soft bedding and provide a secondary form of enrichment if singly housed. 4. Systemic antibiotics may be beneficial if mild.		Please **consult LAM** to determine if mouse can be maintained and what systemic antibiotic is appropriate.
	Dystocia	1. If not valuable humane euthanasia is recommended. 2. If valuable provide wet feed and/or water to dam. 3. Place cage on heating pad. In the case of a valuable animal, in addition to contacting the PI or contact person for verbal permission to euthanatize contact LAM immediately to determine if a C-section is feasible (this is a terminal procedure for the dam). Please also locate an available foster mother for the pups. If LAM does not consider a C-section as a viable option or dam is moribund then humane euthanasia should be elected.		If dam looks lumpy around the abdomen instead of smooth a C-section will likely not produce live pups. Dams that have a nice, smooth, pear shaped abdomen are better candidates for C-section. Timing is key when trying to perform a successful C-section, so as soon as it is noticed the valuable dam is having difficulty please **consult LAM**. The pups chance of survival decreases as the wait time continues.

Musculoskeletal and Neurologic	Lameness	Mild/Moderate: Monitor carefully and provide supportive care such as feed/water on the cage floor. **Try to determine the cause**-examine the cage and feeder for possible pinch points. Dispose of any caging materials that could have caused the lameness (e.g. a feeder with a loose weld where the mouse could get stuck). Analgesics can be provided if pain is observed. Severe: If the animal is having difficulty moving normally about the cage, accessing feed/water, and posturing normally then humane euthanasia should be elected.		Systemic analgesics are the most effective if pain is observed. Buprenorphine SR or Meloxicam SR (NSAID) are both safe and effective pain management options. Please **consult LAM** if you wish to maintain a mouse with painful lameness.
	Ataxia (weak/clumsy gait)	Management is based on severity. Attempt to determine cause and assess severity. In general supportive care should be provided in the form of wet feed and/or water on the cage floor. Soft bedding can also be added to the cage to make animal more comfortable.		If moderate or severe humane euthanasia is recommended. Please **consult LAM** to determine if mouse can be maintained.
	Paresis (partial loss of motor function, usually hind limbs)	Humane euthanasia.		
	Paralysis (complete loss of motor function)	Humane euthanasia.		
	Head Tilt	If the animal can still ambulate, and has only a very mild head tilt : 1. Provide supportive care in the form of wet feed and water on the cage floor. 2. A systemic antibiotic course can be started if it is suspected the cause is an inner ear infection. If the head tilt is moderate to severe humane euthanasia is recommended.		Inner ear infection is the only diagnosis that is practical to treat, and even with treatment may not resolve. Head tilts can also be caused by neurologic conditions that will not benefit from treatment and need to be humanely euthanized. Please **consult LAM** to determine best treatment option.
	Hydrocephalus	Humane euthanasia.		

	Seizure	Short duration with resolution: Monitor for frequency as well as length of time. As long as it is resolving and not getting worse continue to monitor. Supportive care such as wet feed and water should also be provided on cage floor. Unresolving: humane euthanasia.		Minimizing handling and keeping animals in a quiet room may help reduce seizures. If a specific genotype is producing mice with seizures contact LAM to ensure a Deleterious Phenotype form has been submitted to the ACUC. Please **consult LAM** to determine if animal can be maintained.
Respiratory	Hyperpnea (abnormally deep and rapid breathing)	Humane euthanasia.		
	Dyspnea (labored breathing, open mouth breathing)	Humane euthanasia.		
Other	Distended Abdomen	Associated with fluid build up (ascites). If unexpected humane euthanasia is recommended. If expected due to study conditions then close monitoring of abdomen girth and bodyweight must be performed. Follow monitoring guidelines in ASP.		Palpation of the animal to determine cause of distention is important. Most commonly the abdomen will be fluid filled, but excess gas or a mass is also possible. Please **consult LAM** if abdominal distention is not expected to determine if mouse can be maintained.
	Jaundice	Humane euthanasia.		
	Pale Skin	Humane euthanasia.		
	Cyanosis	Humane euthanasia.		
	Masses	Monitoring of mass volume at least weekly- more frequently as mass gets larger. Follow tumor volume endpoints guideline. If mass is open/ulcerated/necrotic humane euthanasia should be selected unless otherwise noted in ASP.		Masses can be associated with the study, or be spontaneous. Either way the volume needs to be monitored.