

Managing clinical mastitis

1. MARK

2. GIVE PAIN RELIEF

KetoMax (for 3 days)

3. SAMPLE & TEST

Take milk sample, identify bug, wait 24 hours and treat based on result

4. SEPARATE

5. TREAT

6. RECORD

7. EVALUATE

If cow is sick, start with antibiotic treatment and KetoMax for pain relief and to reduce inflammation

Staph. aureus	If new infection, treat cows with an extended course of antibiotic ranked number 1 (lowest MIC) Check records for repeat high SCC or clinical mastitis cases. Seek vet advice; options include dry off quarter, antibiotic DCT or culling (at end of season)
Strep. uberis / Strep. dysgalactiae / Strep. species / CNS / Other Gram +ve / Unspecified	Treat with intramammary antibiotic ranked number 1 (lowest MIC)
E. Coli / Unspecified Gram -ve	MIC most commonly ≥ 4 indicating antibiotics are likely ineffective. Continue with KetoMax and milk cow at least twice a day. Discuss options with your vet
Probable Serratia / Klebsiella	Antibiotics are ineffective, continue with KetoMax. Culling the cow should not be based on a single test result, please contact your vet
No growth	No treatment - strip quarter twice daily and monitor. If udder is painful or swollen continue with KetoMax
Mixed infection (two bacteria)	Discuss options with your vet

Managing HiSCC cows

1. SELECT RMT POSITIVE COWS OR HIGH SCC COWS AT HERD TEST

2. SAMPLE & TEST

Take a milk sample and wait 24 hours for the result

3. MANAGE

Implement management options using guidelines below as agreed with your vet



	HiSCC in early lactation cows	HiSCC in late lactation or at dry off	
Staph. aureus Low BMSCC (<150,000)	Treatment uneconomic. Options include: <ul style="list-style-type: none"> RMT test and dry off infected quarters (but take care not to re-cup these quarters for the rest of the lactation) or Milk these cows last to reduce spread to other cows then manage as appropriate at dry-off 	Dry cow antibiotic therapy (DCAT) will cure around 60-75% of <i>S. aureus</i> infected cows. All cows with <i>S. aureus</i> should be given the benefit of DCAT, however the cure rate is lower for long term infections. Cows that have high SCC through one lactation and have persistently high SCC in the following lactation after receiving DCAT may be chronically infected with <i>S. aureus</i>	Staph. aureus
High BMSCC (>150,000)	If new infection; RMT test and treat infected quarter(s) with extended antibiotic treatment (discuss with your vet). If long-term infection; RMT test and dry off infected quarters or milk last	Culling. Create a preferential culling list based on clinical mastitis history, somatic cell count, DCAT history, age, production and other diseases. Culling may be appropriate for cows with: <ul style="list-style-type: none"> ISCC >300-500,000 at 3 or more seasonal herd tests ISCC >300-500,000 in the previous lactation, treated with DCAT at the end of that lactation but strong RMT positive or ISCC >300-500,000 at the first herd test in the current lactation or 2 or more cases of clinical mastitis over the season All other cows may be treated with DCAT +/- ITS (internal teatsealant) as recommended by your vet	
CNS / Gram +ve Low or High BMSCC	Leave untreated but monitor. If mastitis turns clinical then re-test infected quarter(s) using Mastatest clinical cartridge and treat based on recommendation		
Coliform / Gram -ve Low or High BMSCC	Leave untreated and monitor quarter(s) (If >10% Gram -ve discuss with your vet)		
No growth Low or High BMSCC	Leave untreated and monitor quarter(s) (If >20% no growth send sample to lab to check for yeast/fungi etc. Discuss with your vet)	If ISCC >120,000 (heifers) or 150,000 (cows) at any herd test or clinical mastitis over the season - treat with DCAT +/- ITS. If ISCC <120,000 (heifers) or 150,000 (cows) and no clinical mastitis over season - treat ITS as recommended by your vet	CNS / Other Gram +ve / Coliform / Gram -ve / No growth

ISCC = Individual cow somatic cell count result at herd test BMSCC = Bulk milk somatic cell count CNS = Coagulase-negative Staphylococci MIC = Minimum inhibitory concentration (the amount of antibiotic required to kill 90% of the bacteria) NB: There is minimal research on managing subclinical mastitis in New Zealand dairy cows so the recommendations above are based on first principles. All decisions should be discussed with your vet.