

Rådgiverdag: Yversundhed og mælke kvalitet
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Behandling af mild til moderat mastitis

MAF projekt: Yversundhed i top

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STØTTET AF

Mælkeafgiftsfonden



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Treatment of mild to moderate clinical bovine mastitis caused by gram-positive bacteria: A noninferiority randomized trial of local penicillin treatment alone or combined with systemic treatment

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ABSTRACT

Bovine mastitis is one of the most important diseases in modern dairy farming, as it leads to reduced welfare and milk production and increased need for antibiotic use. Clinical mastitis in Denmark is most often treated with a combination of local and systemic treatment with penicillin. The objective of this randomized clinical trial was to assess whether worse results could be

growth. Noninferiority was assessed using unadjusted cure rates and adjusted cure rates from a multivariable mixed logistic regression model. Of the 1,972 clinical mastitis cases registered, 345 (18%) met all criteria for inclusion (full data). The data set was further reduced to 265 cases for the multivariable analysis to include only complete registrations. *Streptococcus uberis* was the most commonly isolated pathogen. Noninferiority was demonstrated for both unadjusted and adjusted

Reduktion af antibiotikaforbrug (ansvarlig brug)

- Mastitis er den diagnose der trækker det største forbrug til voksent kvæg (aktivt stof) (DANMAP, 2021)

TAL MED DIN NABO:

Hvordan kan vi reducere antibiotikaforbrug til mastitis?
- indenfor rammen "ansvarlig brug"

FOKUS PROJEKT: mindre mængde aktivt stof/behandling

- Penicilliner...
- Hovedsagelig kombination af IM og IMM administration (Wilm et al., 2021)
- En kombinationsbehandling (IM+IMM) indeholder 16 gange så meget AB (aktivt stof) som en lokal behandling (Penethamat IM, Benzylpenicillin IMM)

	Mælk	Yver-væv	Ko/blod
Streptokokker	+++	+	
Staph. aureus	+	+++	
CNS	+++		
E.coli/Klebsiella	+		+++

(Modificeret efter Pyörälä, 2009)

Formål med studiet



- Outcome: Bakteriologisk helbredelse
- Non-inferiority studie: 15% margin

Hypotese:

Lokal behandling alene IKKE
reducer bakteriologisk
helbredelse med mere end
15% sammenlignet med
kombinations behandling

12 besætninger

Screening

Mild

Moderat

Alvorlig

Malkning

Materialer og metoder

Mast
Decide
®

3 dage

Bakteriologisk
helbredelseBenzylpenicillin
procain IMMKlinisk
helbredelseBenzylpenicillin
procain IMMPenethamat
hydroiodid IM

Materials and Methods

- Ko- og case karakteristika (DEK, SCC, grad...) inkluderet i logistisk regression (mixed model) af behandlingseffekt på bakteriologisk helbredelse

Non-inferiority analyse

Results

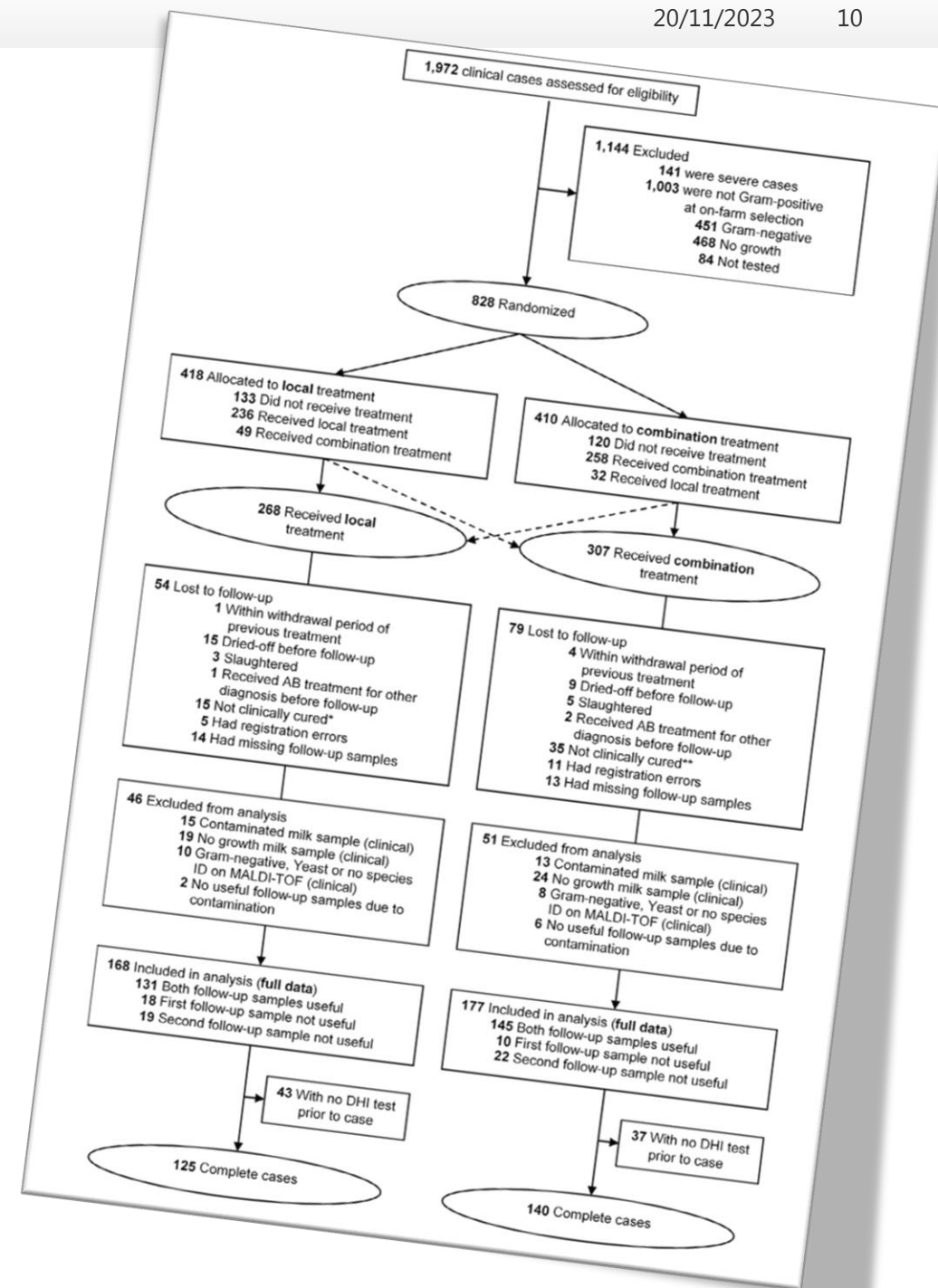
- Knap 2000 cases registeret
- 265 cases med al information

No.	Date	Cow ID	Quarter	Mastitis grade	Sample	OF test start	OF test end	OF test result	Treatment*
111	24.11	5235 MAX	HF	① 2 3	7:10	12:56	5:31	0 ⊖ +	—
112	24.11	4683 MAX	VF	① 2 3	6:50	12:59	5:31	0 ⊖ +	—
113	24.11	4683 MAX	HB	① 2 3	6:51	13:00	5:32	0 ⊖ +	—
114	24.11	4888 MAX	HF	① 2 3	8:00	13:05	5:32	0 ⊖ +	—
115	24.11	2674 MAX	HF	① 2 3	8:10	13:07	5:33	0 ⊖ +	Carepen mamyz
116	24.11	2674 MAX	HB	① 2 3	8:11	13:08	5:33	0 ⊖ +	—
117	24.11	2674 MAX	VF	① 2 3	8:12	13:09	5:33	0 ⊖ +	—
118	24.11	1313 Jack	VF	① 2 3	20:46	23:13	13:20	0 ⊖ +	—
119	25.11	4367 MAX	HF	① 2 3	8:20	13:14	5:36	0 ⊖ +	—
120	25.11	4979 MAX	HB	① 2 3	8:00	13:16	5:36	0 ⊖ +	—

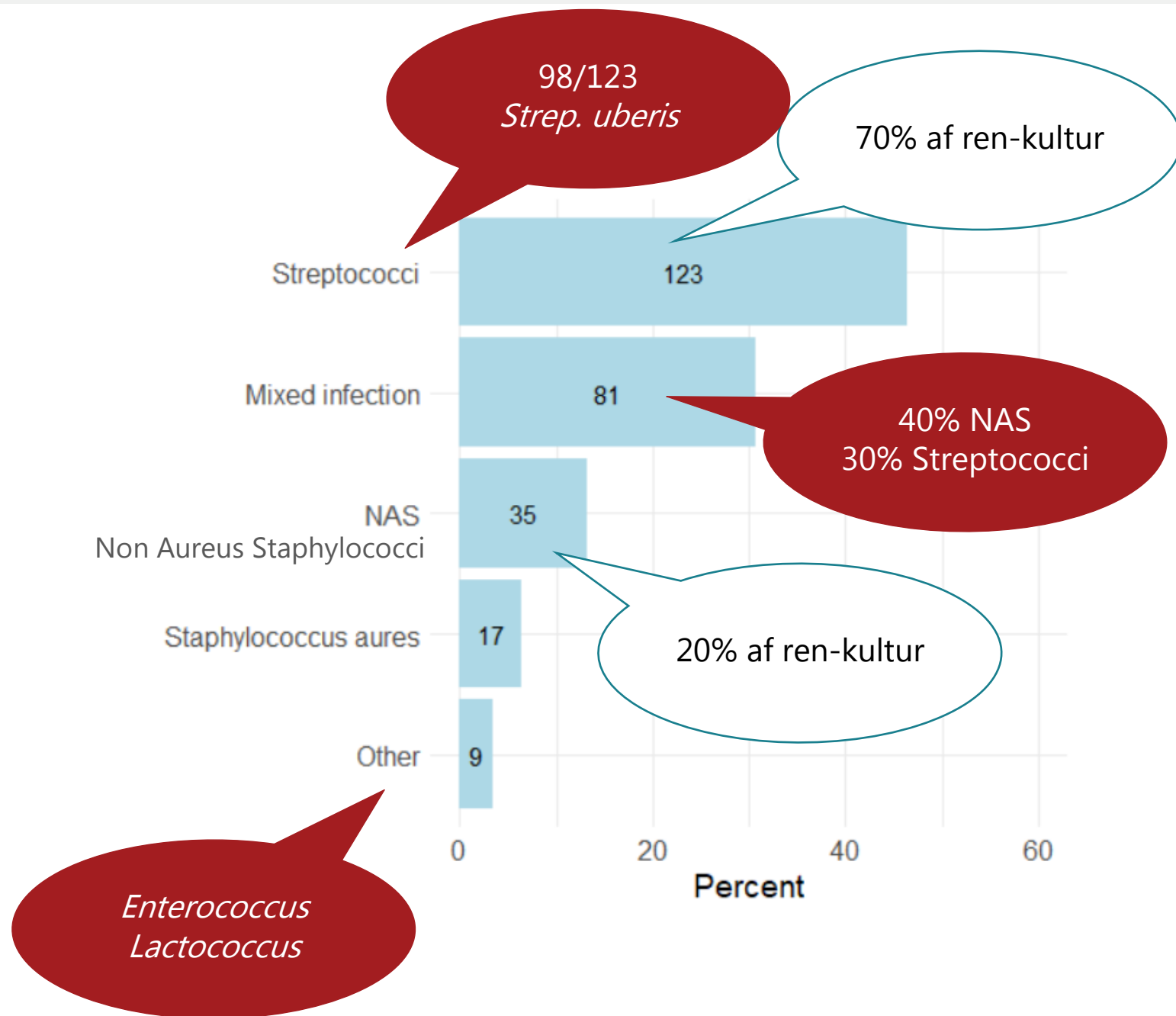
*Odd cow ID (1,3,5,7,9)= Carepen 3d, Even cow ID (0,2,4,6,8)= Carepen+Mamyzin 3d, ALL COWS=

The sample should be stored at 5°C BEFORE OF test

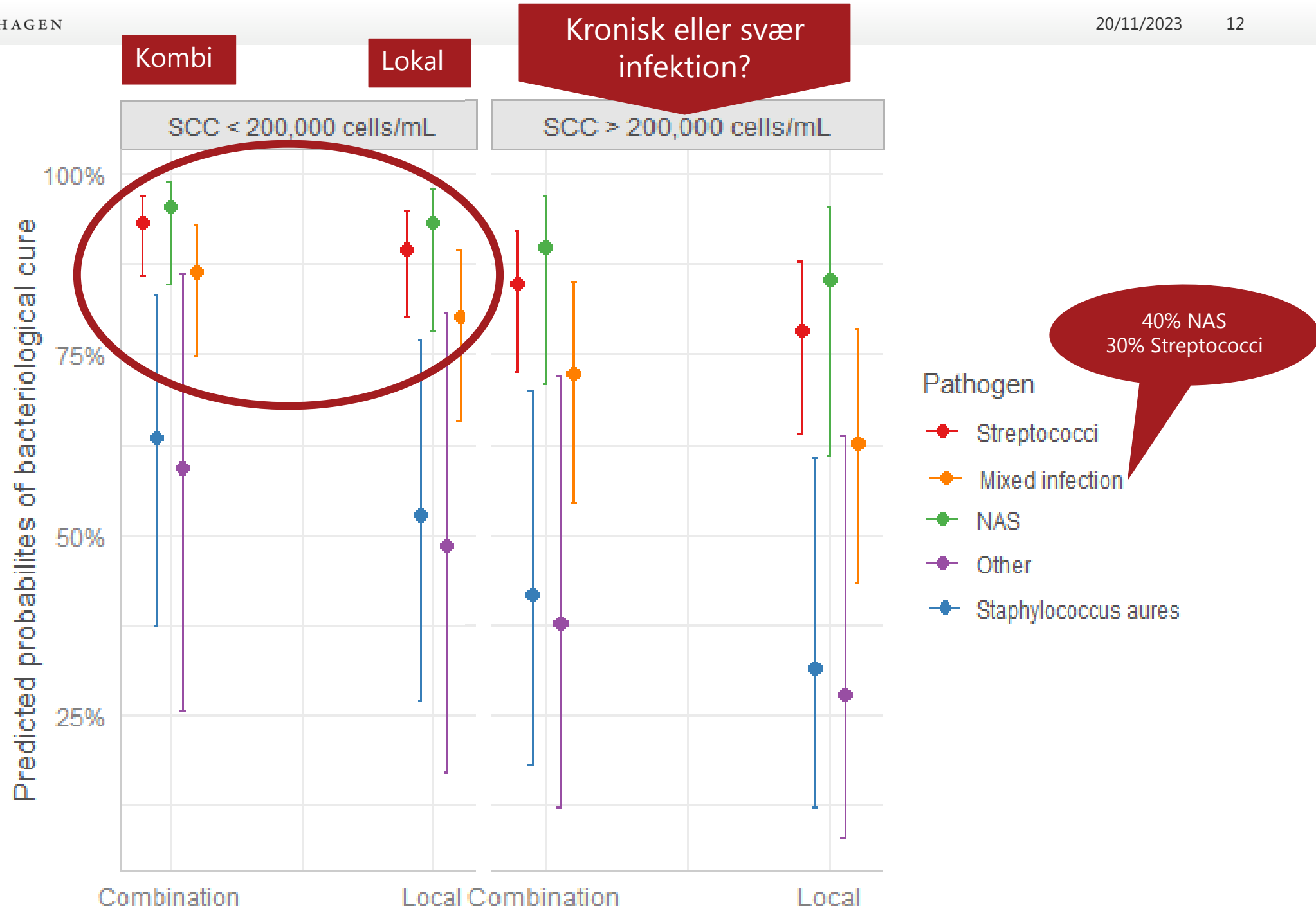
Skema brugt i besætningen til at registrere alle kliniske mastitis cases



Resultater

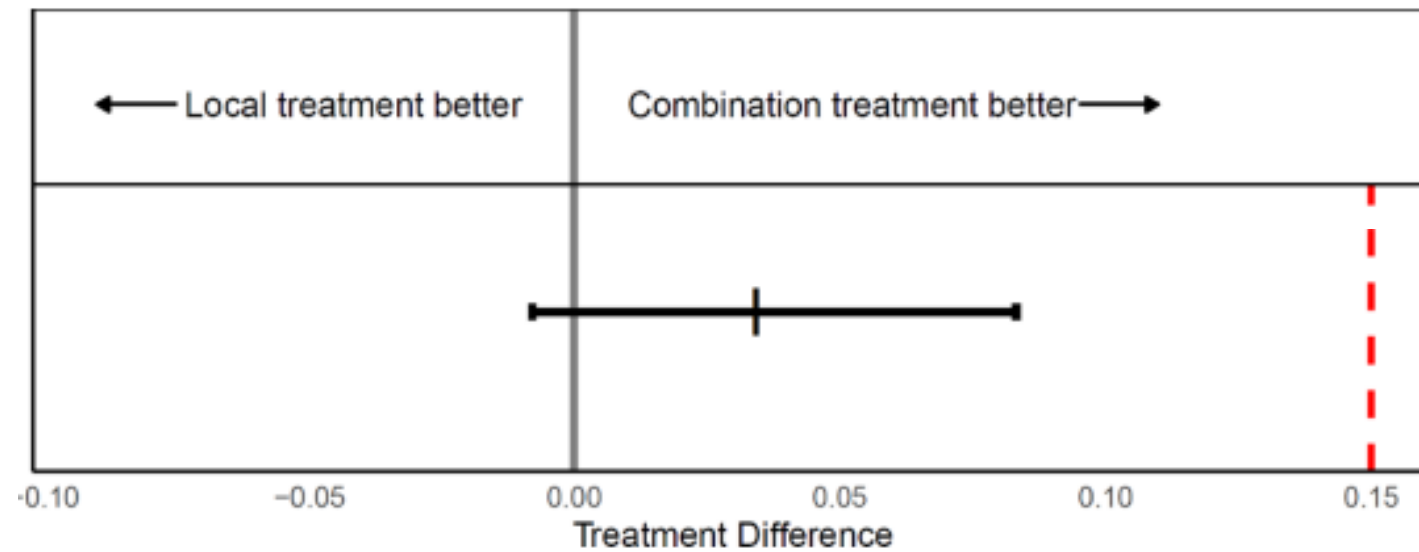


Resultater



Non-inferiority analyse

Lokal behandling er
ikke værre end kombi
behandling



KONKLUSION:

Behandl i kirtlen og spar antibiotika uden at reducere behandlingseffekt væsentlig!

Tag-med-hjem overvejelser

- Effekt af behandling afhænger af pathogen og SCC
- Besætningspecifikt!
 - Forskellige species og stammer

Brug diagnostikken!

- Accepteres 15% forskel?
- Inkluder klinisk og cytologisk helbredelse?



Tak!

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