

# Band-like Tail Lesions in Danish Holstein and Holstein-mix Dairy Cows

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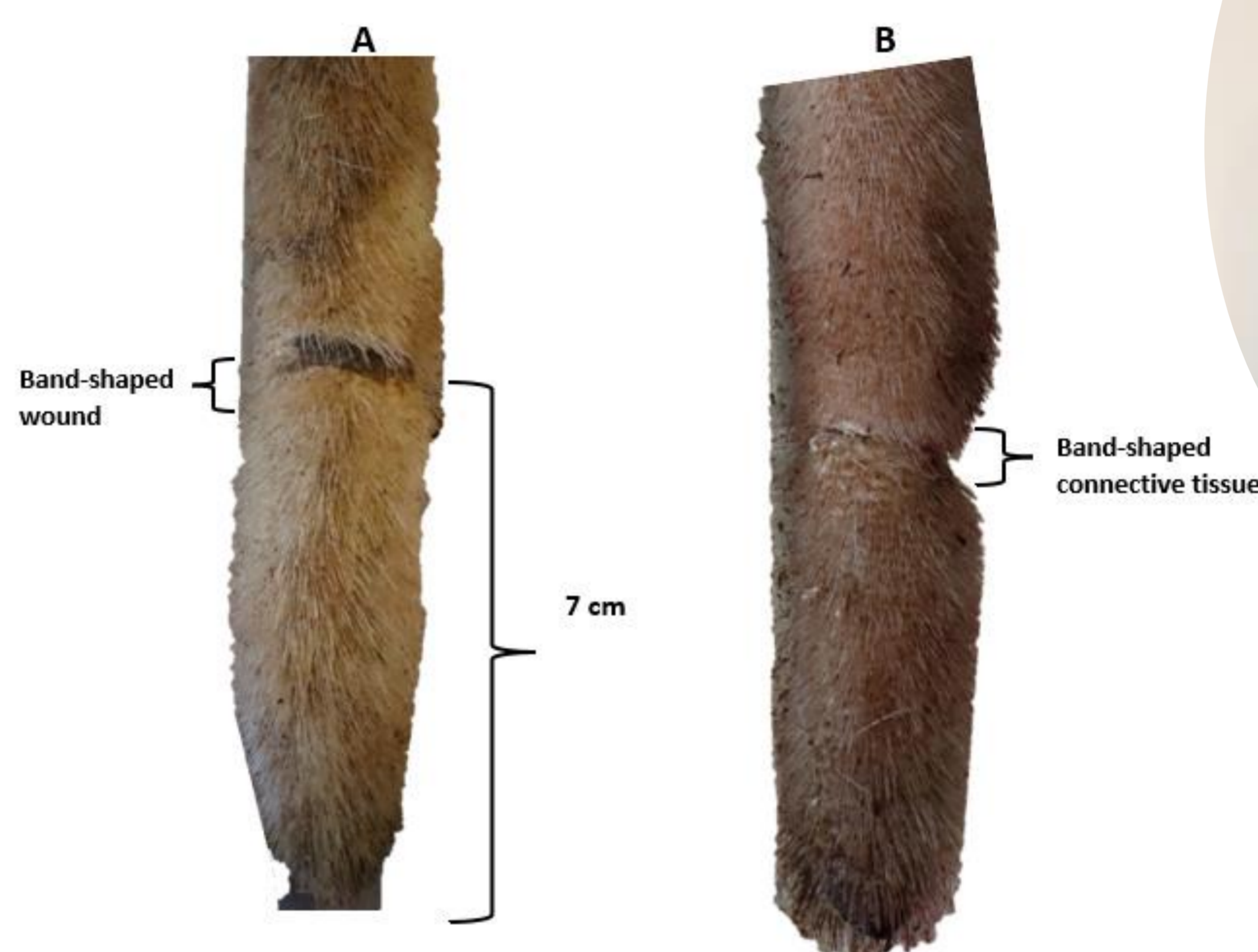


## OBJECTIVES

- To characterise band-like tail lesions grossly and histopathologically
- To determine the prevalence of band-like lesions on tails of Danish Holstein and Holstein-mix dairy cows.
- To determine risk factors for band-like lesions

## MATERIALS AND METHODS

- 458 tails of dairy cattle at abattoir
- 2099 tails of dairy cattle in 16 herds
- Data collected on cow, housing, and management.
- Univariable and multivariable logistic regression used to determine possible associations between the occurrence of band-like tail lesions and cow and herd variables



## RESULTS

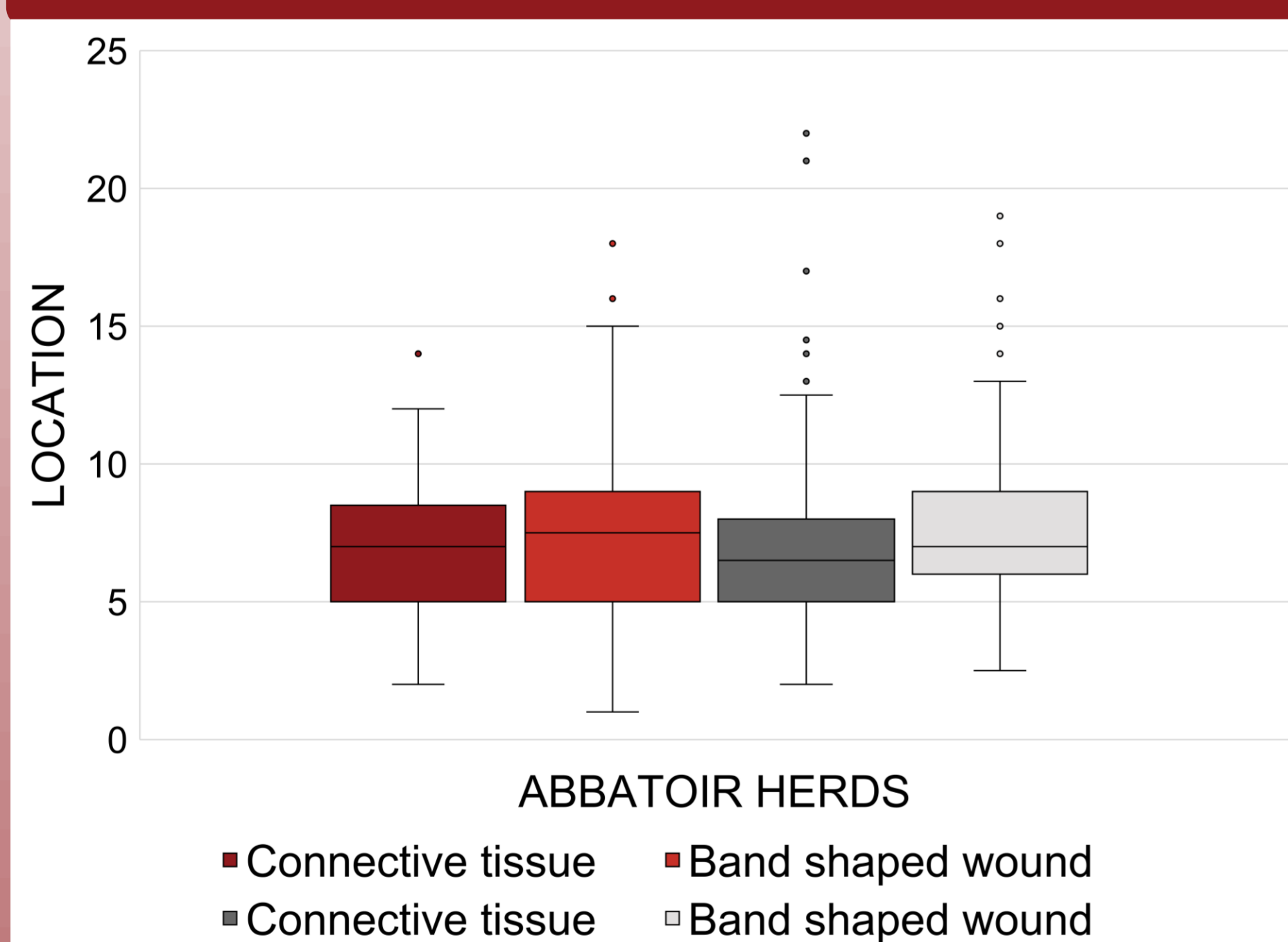
- Abattoir prevalence: 23%
- Within-herd prevalence: 25%

- All ulcerations were chronic
- All contained granulation tissue to a variable degree
- All band-like fibrotic lesions had hyperkeratosis with rete-peg formation in the epidermis
- Fibrotic tissue with loss of both hair follicles and glands, i.e. scar-tissue formation had replaced normal structures of the dermis and subcutis

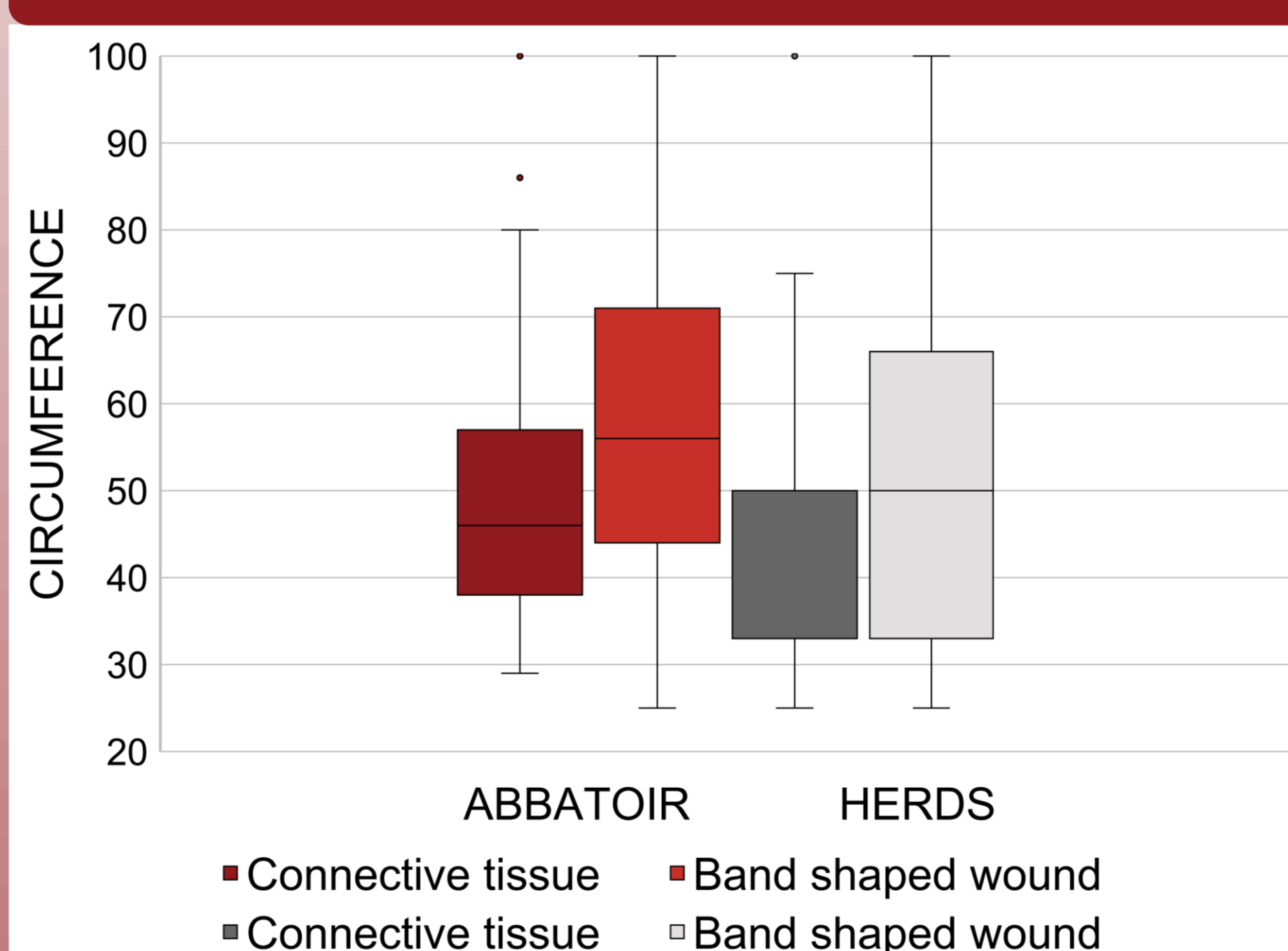
### Lesion characteristics

- Band-shaped wounds or connective tissue formations
- Located dorsally on all tails
- Situated on average of 7 cm from the tail tip.
- Encircling the tails to a varying degree - in most cases > half of the tail circumference
- Higher odds of lesion with increasing parity
- Lower odds of lesion in cows with missing tail tip
- Higher odds of lesions in cows housed on mattresses compared to sand

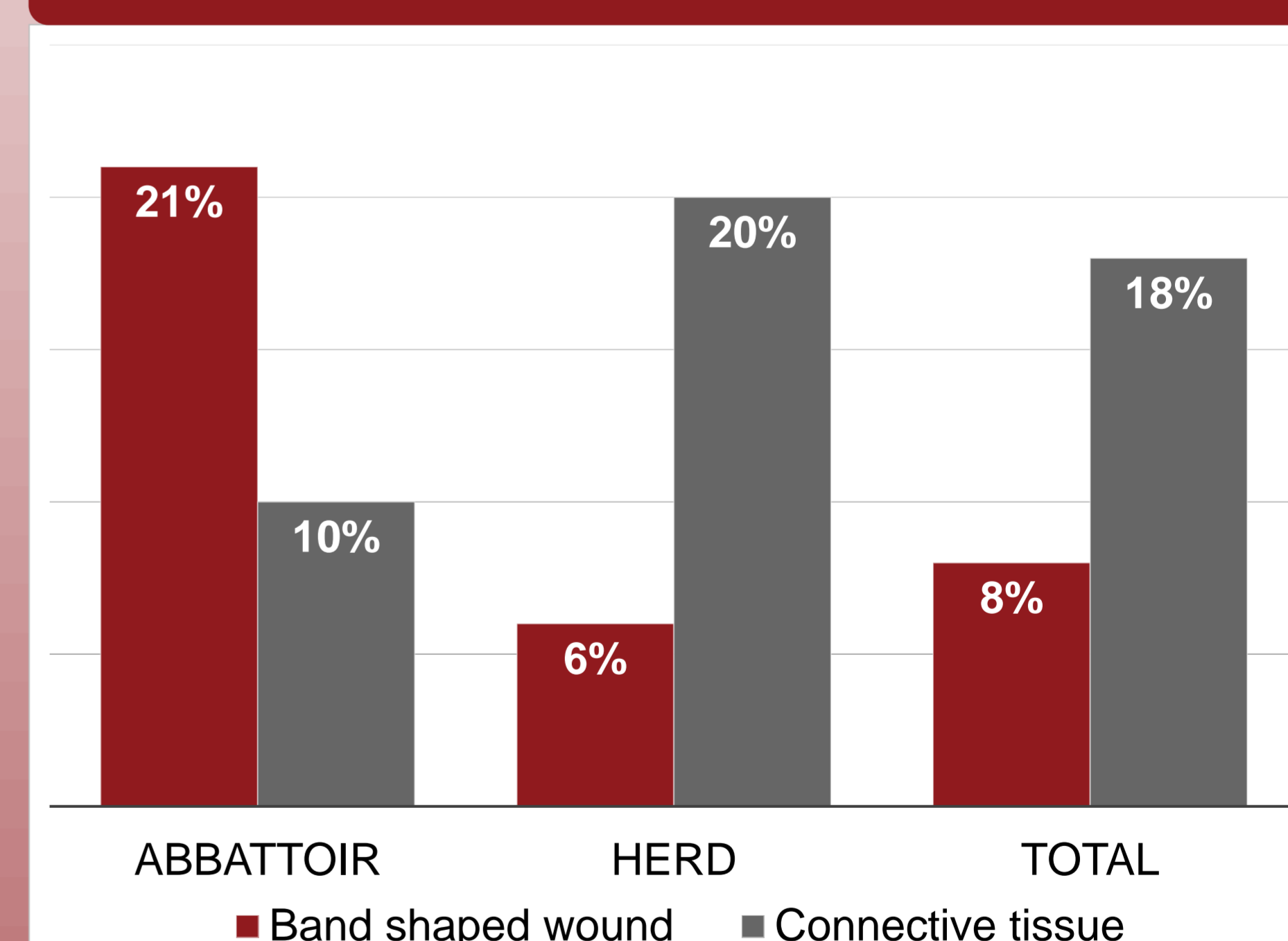
### LOCATION – CM FROM TAIL TIP



### PERCENTAGE CIRCUMFERENCE



### OBSERVATIONS IN PERCENTAGE OF 2557 COWS



VARIABLE		WITH LESION	WITHOUT LESION
Old fractures	Yes	42 (19%)	178 (81%)
	No	493 (26%)	1386 (74%)
Lack of tailtip	Yes	33 (15%)	183 (85%)
	No	502 (27%)	1381 (73%)
Regular trimming	Yes	486 (26%)	1415 (74%)
	No	49 (25%)	149 (75%)
Cleanliness tail	0	77 (21%)	292 (79%)
	1	276 (26%)	767 (74%)
	2	182 (27%)	504 (73%)
	3	0 (0%)	1 (100%)
Cleanliness cow	0	6 (14%)	38 (86%)
	1	274 (24%)	853 (76%)
	2	255 (27%)	673 (73%)
Parity	0	71 (21%)	268 (79%)
	1	71 (29%)	171 (71%)
	3	61 (31%)	133 (69%)
	>3	69 (35%)	129 (65%)

VARIABLE		WITH LESION	WITHOUT LESION
Stable type	Tie stall	85 (29%)	207 (71%)
	Loose housing	450 (25%)	1357 (75%)
Cubicle bedding	Mattress	312 (28%)	792 (72%)
	Cubicles with sand	223 (22%)	772 (78%)
Hight of bed	0-19 cm	85 (29%)	209 (71%)
	20-29 cm	274 (25%)	819 (75%)
	30-39 cm	176 (25%)	538 (75%)
Milking system	Tie stall	100 (29%)	247 (71%)
	Rotary	120 (20%)	476 (80%)
	Parallel/tandem	183 (26%)	530 (74%)
	Robotic	132 (30%)	311 (70%)
Manure scraper system	Automatic wire system	219 (25%)	658 (75%)
	Manuel machine	176 (26%)	504 (74%)
	Robotic system	140 (26%)	402 (74%)
Floor type	Tie stall	85 (29%)	207 (71%)
	Concrete	285 (24%)	910 (76%)
	Slatted concrete	165 (27%)	447 (73%)

## CONCLUSIONS

- Band-like lesions are very common among Danish Holstein and Holstein-mix dairy cows
- Lesions present as band-shaped wounds or connective tissue formations, characteristically located approximately 7 cm from the tail tip.
- Occurrence associated with higher parity, missing tail tip, and the use of mattresses as bedding material.
- Aetiology and pathogenesis are unknown
- Impact of the lesions on animal health and welfare are unknown