

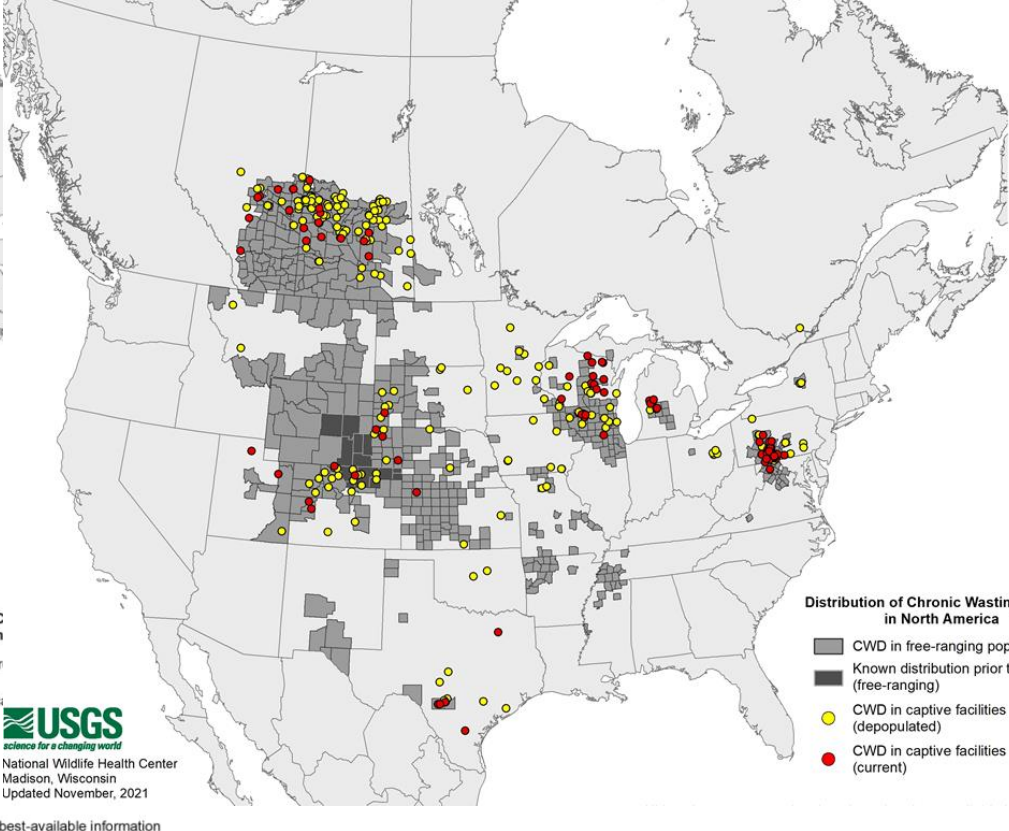
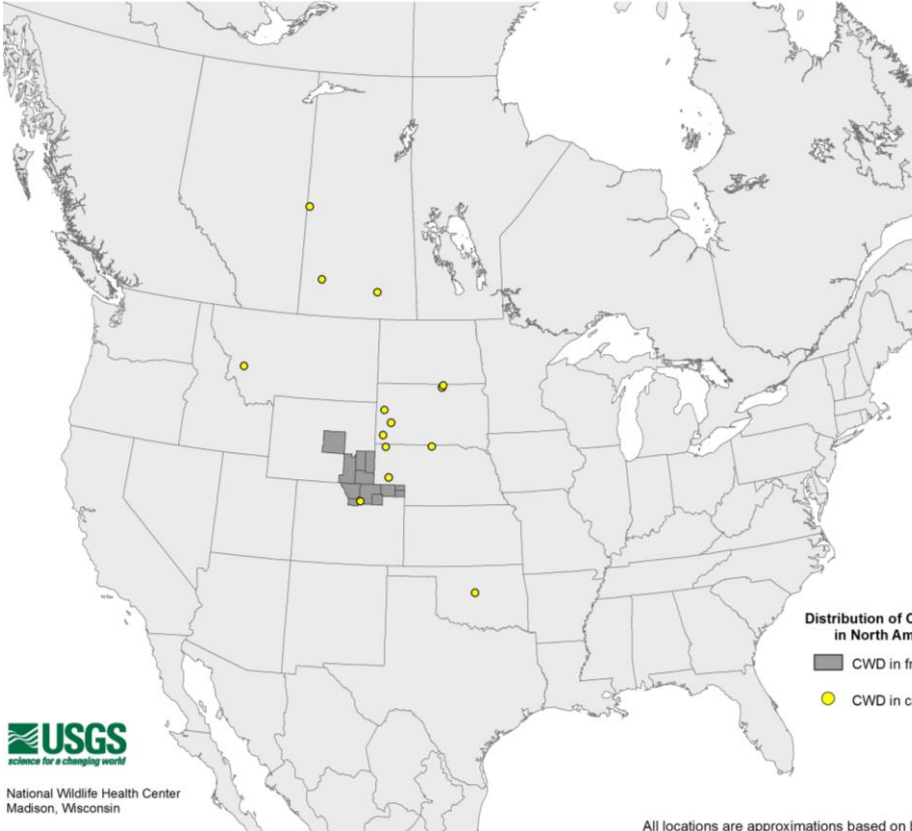


Veterinærinstituttet
Norwegian Veterinary Institute

Chronic Wasting Disease (CWD) in Europe

CEA conference, 27th January 2022

Jørn Våge, Sylvie L. Benestad, Petter Hopp, Knut Madslie, Torfinn Moldal, Carlos das Neves, Malin R. Reiten, Attila Tarpai,
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Norwegian Veterinary Institute



All locations are approximations based on best-available information

Credit: Bryan Richards, USGS National Wildlife Health Center. Public domain.

Last 20 years development

The surveillance programme for Chronic Wasting Disease (CWD) in free ranging and captive cervids in Norway 2018



Benestad et al. *Vet Res* (2016) 47:88
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SHORT REPORT

First case of chronic wasting disease in Europe in a Norwegian free-ranging reindeer

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Abstract

Chronic wasting disease (CWD) is a fatal contagious prion disease in cervids that is enzootic in some areas in North America. The disease has been found in deer, elk and moose in the USA and Canada, and in South Korea following the importation of infected animals. Here we report the first case of CWD in Europe, in a Norwegian free-ranging reindeer in Southern Norway. The origin of the disease is unknown. Until now a low number of cervids, and among them a few reindeer, have been tested for CWD in Norway. Therefore the prevalence of CWD is unknown.

Moose May 2016



Red deer Sept. 2017

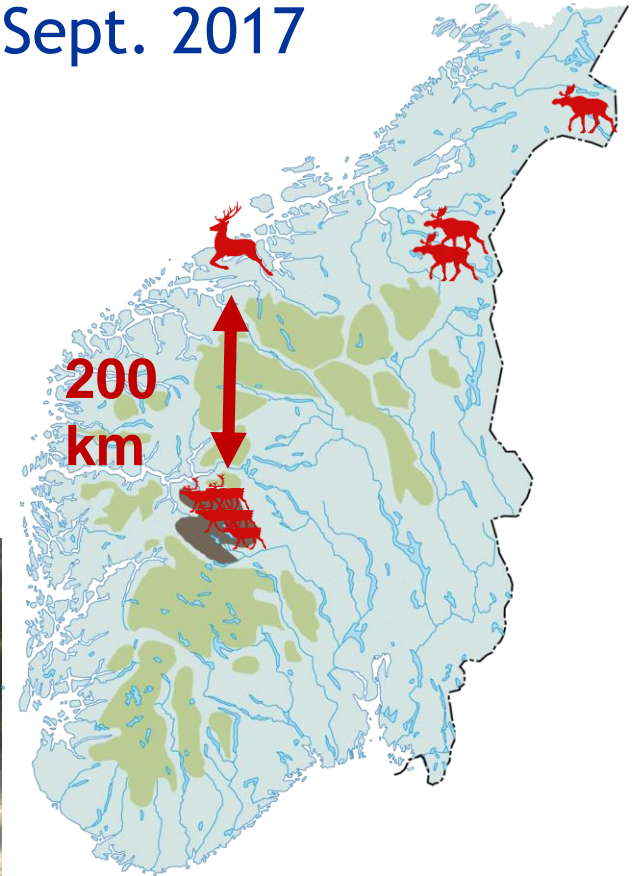


Photo: Jarle Fuglem



CWD – circle of contagious prions



Saliva Contagious Urine Faeces

Long incubation period - months to years, appear healthy

Lymphatic tissue - early detection



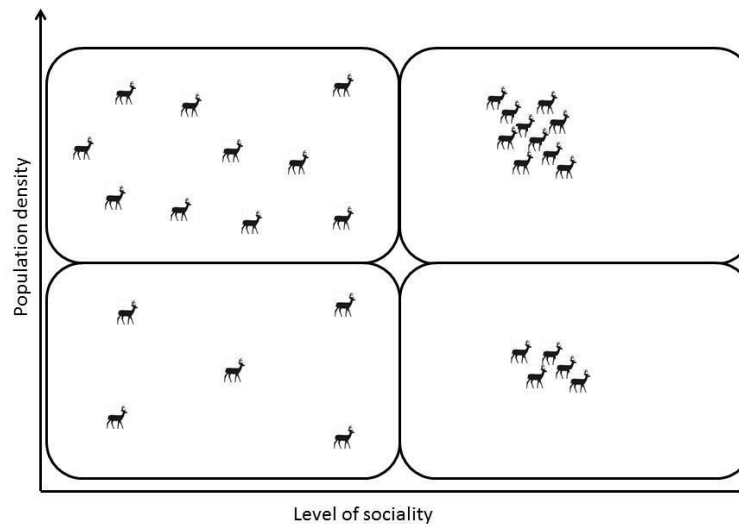
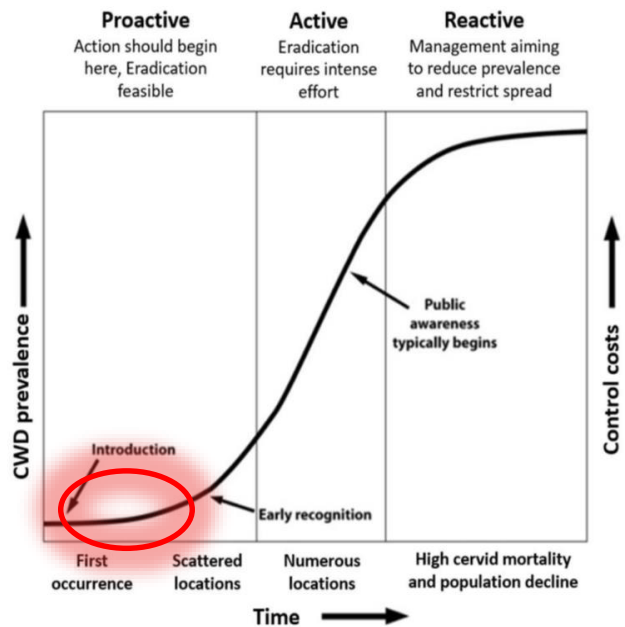
Stable and resistant - long infectivity from environment (years)



Fatal - no cure

Behavioural change (emaciation, urination and salivation)





Phases of CWD introduction and control (adapted from Florida Invasive Species Partnership (FISP): <http://www.floridainvasives.org/edrr.cfm>).

Scientific advise - political decision to cull of affected herd





Antall prøver undersøkt for skrantesjue

Oversikt over undersøkte prøver fra hjortedyr i Norge i 2016-2022. Antallet er gruppert på utvalgte områder og art/produksjonsform.

Art og produksjonsform	Antall negative	Antall positive
Villrein	17471	20
Nordfjella 1	2082	15
Nordfjella 2	275	0
Nordfjella	456	4
Hardangervidda	5542	1
Andre områder	8952	0
Ukjent	157	0
Svalbard	7	0
Tamrein	51047	0
Rein i dyrepark o.l.	7	0
Vill hjort	27237	2
Gjemnes	661	1
Andre områder	26179	1
Ukjent	397	0
Oppdrettshjort	2920	0
Elg	33286	11
Selbu-sonen	5544	3
Lierne	750	1
Andre områder	26420	7
Ukjent	572	0
Elg i dyrepark o.l.	6	0
Rådyr	10046	0
Dåhjort (dådyr)	233	0
Ukjent art	2539	0
Totalt	144792	33



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MILJØ-
DIREKTORATET



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- CWD in reindeer
- Atypical CWD in moose
- ▲ Atypical CWD in red deer



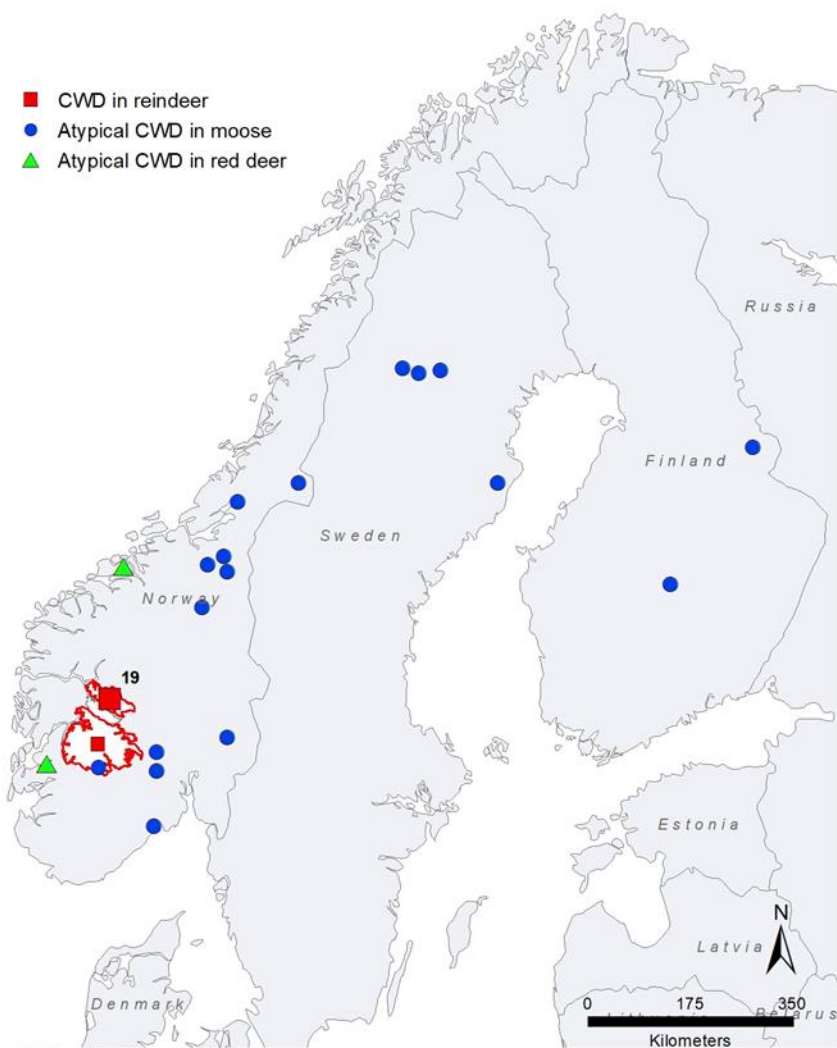
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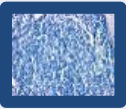


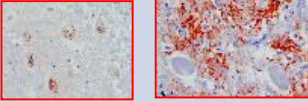
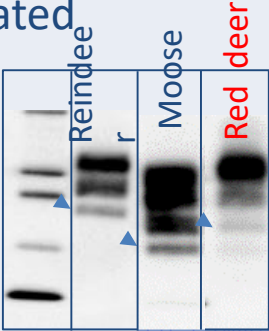


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	Reindeer (20) 	Moose (11) 	Red deer (2) 
Age (years)	Young /adult (1,5-8)	High (12-20)	High (16)
Lymphotrophism	High 	Low 	Low 
Distribution In the brain	Mostly the brainstem 	Mostly in neurons, the whole brain 	Mix 
Western blot	Like North Amerika CWD	Lower MV, N-terminal truncated 	Intermediate MV, N-terminal truncated,



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Chronic wasting disease in Europe: new strains on the horizon

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Fla feltet i Jepsaluokta (Hjemmeluft) i Alta
Berglund 1982
Av Froydis Anne Stygge
Lisens: CC BY SA 3.0



NJFF Møre og Romsdal

Samisk reindrif

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kronikk

Er sau viktigere enn føre var-prinsippet?

Laboratorieforsk viser at CWD kan smitte mellom arter. Er det lurt å la sau belte i CWD-området Nordfella?



Billing Utøsther saer for mang endelårer i sone i nordkara. Foto: Inger Kristiansen/NTNU



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Thank you for your attention!

