

Recurrent PD Diagnoses

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Recurrent PD diagnoses

- Samples from diseased or dead fish
 - submitted by professional fish health services
 - to Norwegian Veterinary Institute
- Total mortality is not known at sampling



PD diagnoses:

Tissue changes as described for PD and detection of salmonid alphavirus

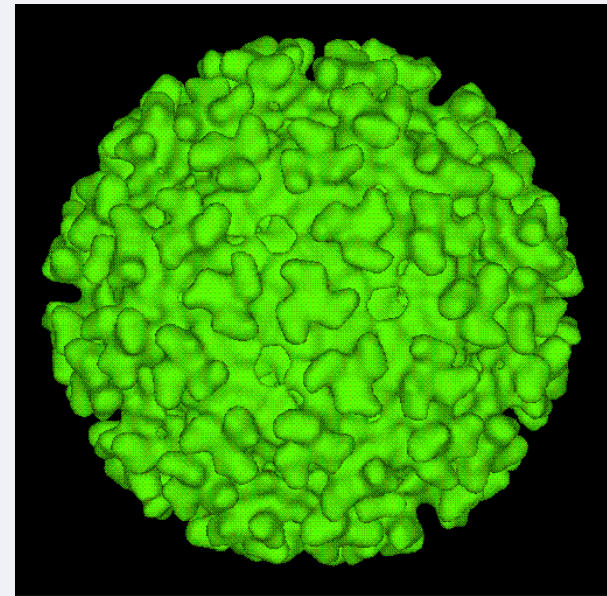
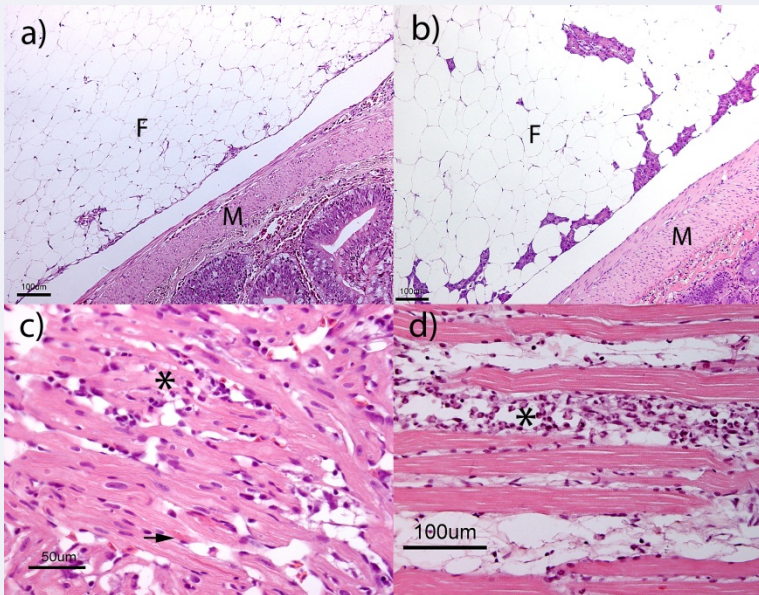


Photo: Centers for Disease Control and Prevention, U.S. federal government / Wikipedia

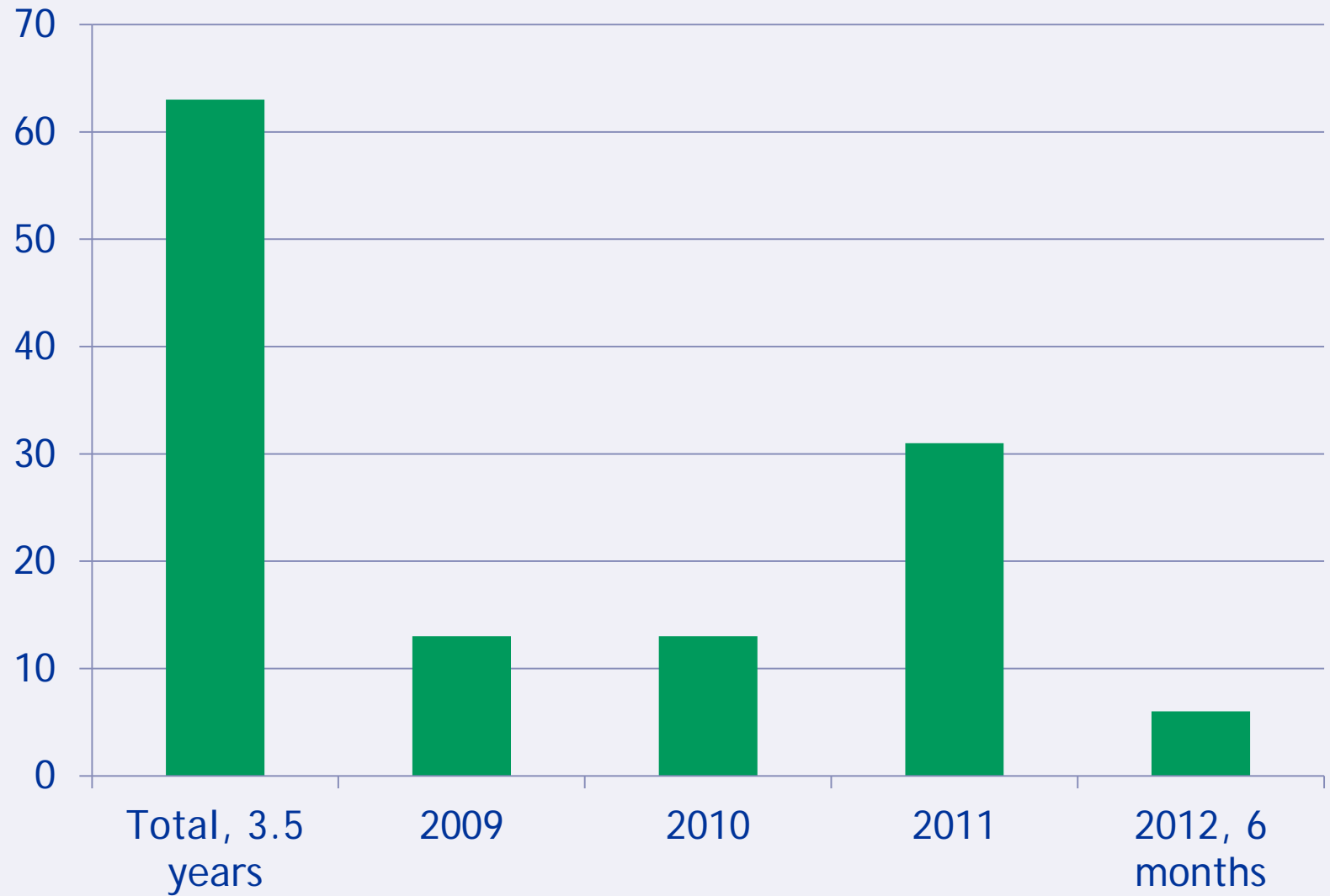


Recurrent PD diagnoses

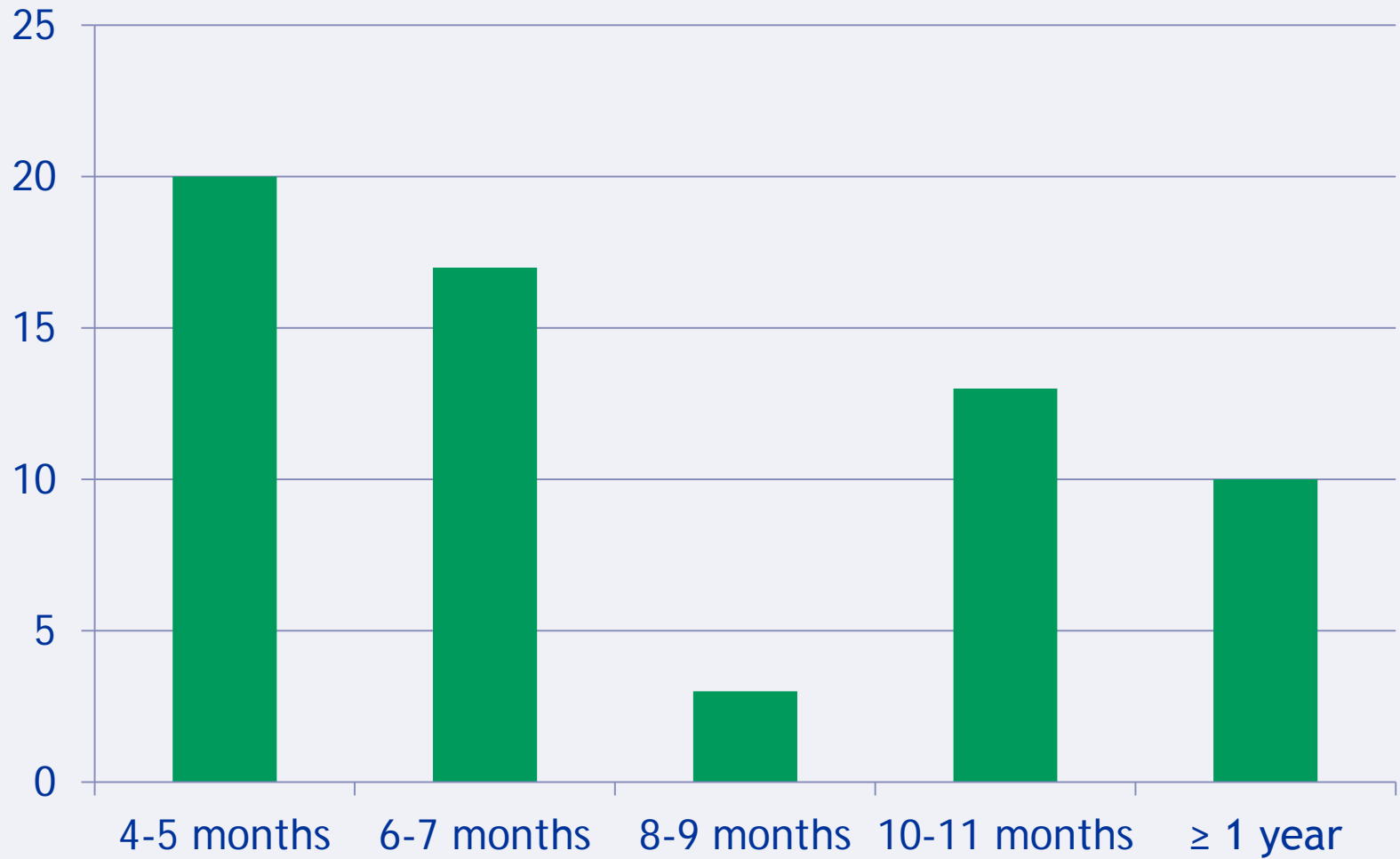
- Number of fish farms with recurrent PD diagnoses during a single production cycle in sea water
- During 3 ½ years (2009-june 2012)
- Only fish farms with 4 or more months in between first and last PD diagnosis are included



■ Number of fish farms



Time between first and last PD diagnosis



Recurrent PD diagnoses, example 1

- Sea water transfer in spring, year 1

PD diagnosis number	Month	Other diagnoses?
1	August	HSMI*
2	December	HSMI*
3	June	No
4	August	No

- Slaughter in September, year 2

* Main HSMI outbreak in September and November



Recurrent PD diagnoses, example 2

- Sea water transfer in September 2010

PD diagnosis number	Month	Other diagnoses?
1	April 2011	No
2	May	No
3	November	No
4	January 2012	CMS

PD in 3 fish <u>SAV</u> : low Ct 2 fish high Ct 1 fish <u>PMCV</u> : no Ct	CMS in 1 fish <u>SAV</u> : no Ct <u>PMCV</u> : low Ct
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Knowledge gaps, 1:

- Compromised herd immunity response?
 - No booster effect of natural SAV exposure?
 - Reduced effect of vaccine over time?



Knowledge gaps, 2:

- Possible source(s) of SAV
 - Persistence inside the affected farm?
 - Reactivation of a covert infection (individual fish or herd level)?
 - Wild fish or other sources in or close to the fish farm?
 - New SAV introduction to the farm
 - Neighbouring farms with PD outbreaks?
 - Other sources, boats etc?
- Any impact of additional microorganisms
 - as IPNV, PRV, PMCV, parasites?



- How are the dynamic of viral spread and immunity in such fish farms, during time?
 - On farm, cage and individual level?



Last question /my knowledge gap:

- Are recurrent PD diagnoses observed in Scotland or in Ireland?

