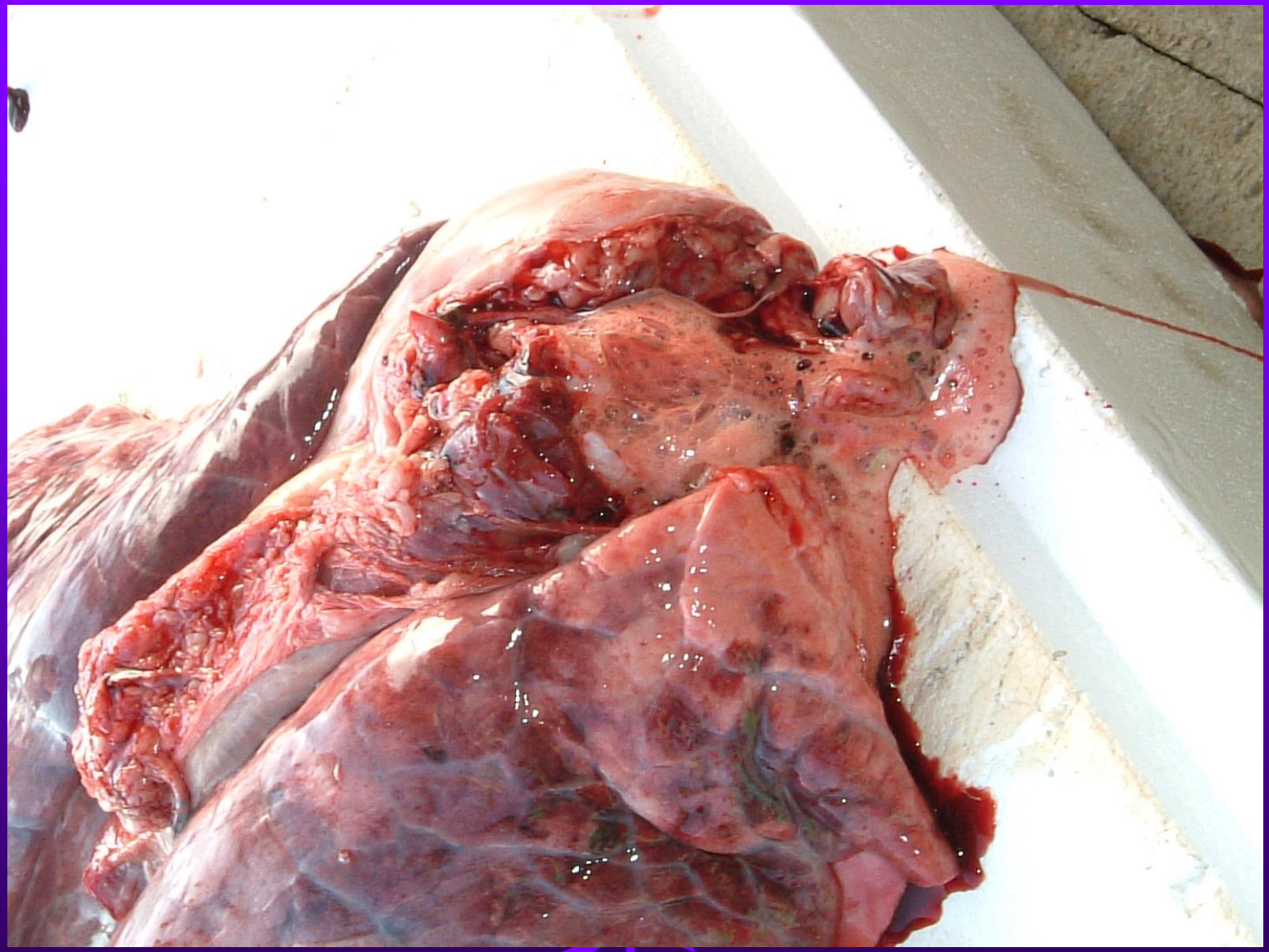

Estremamente grave in alcuni soggetti

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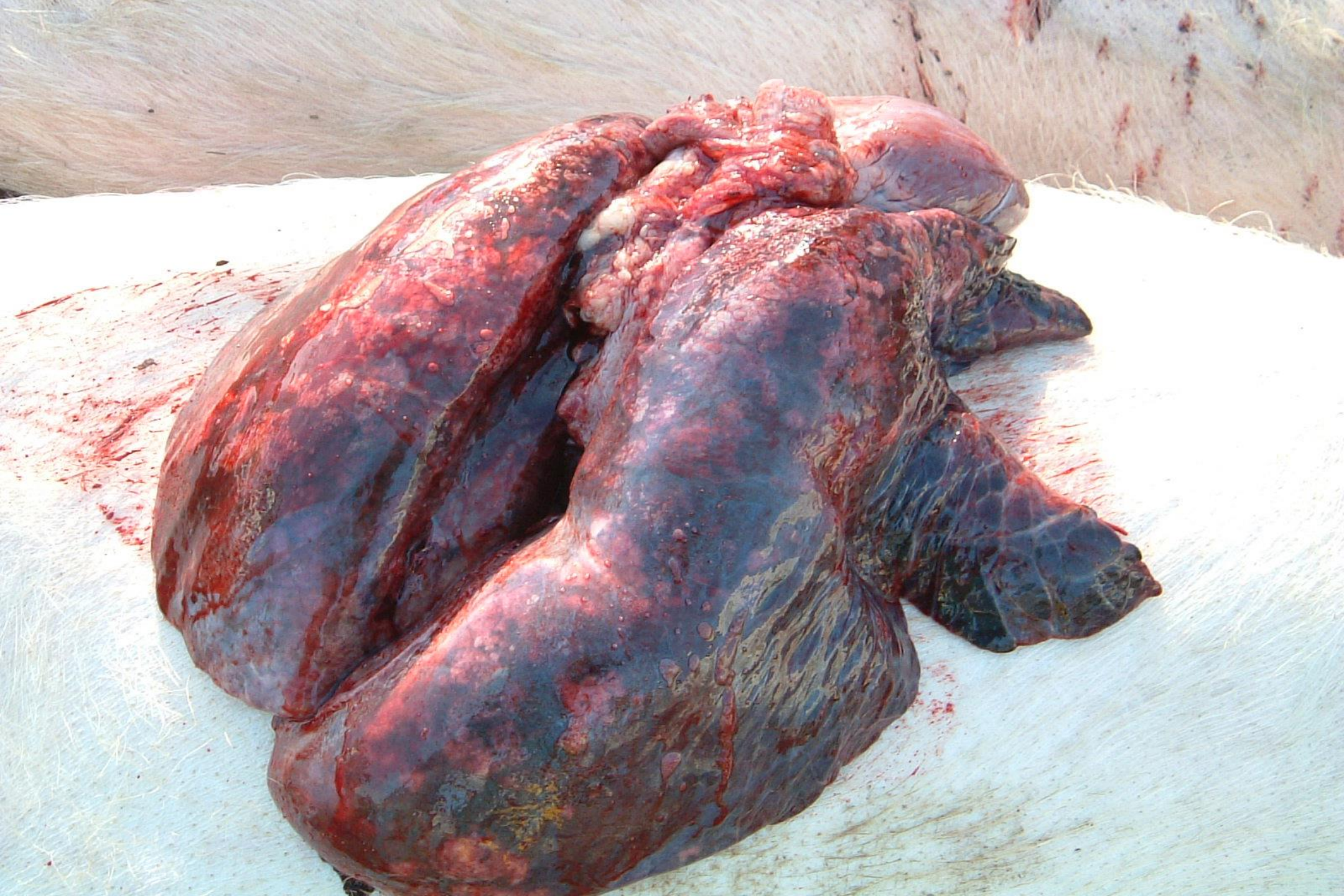
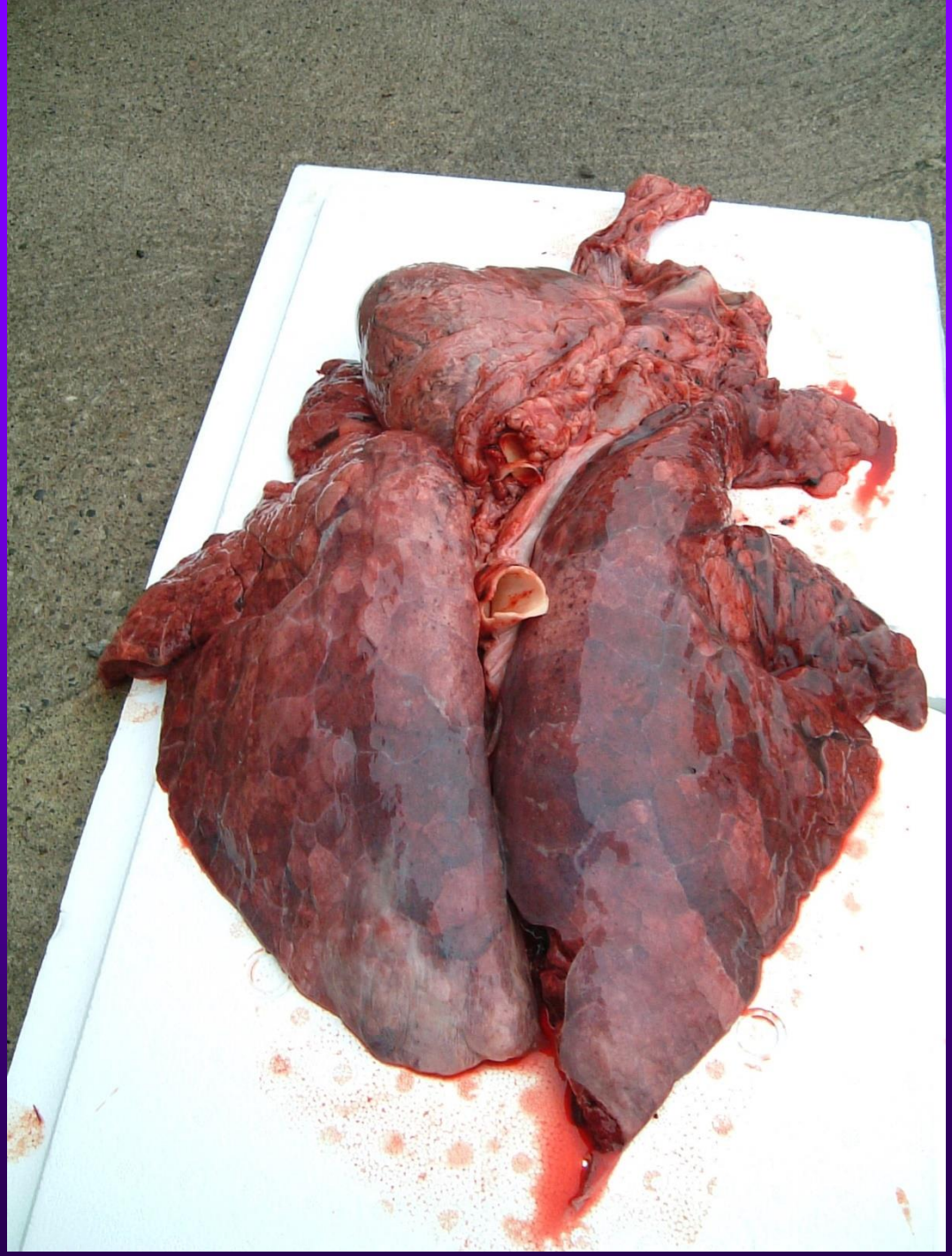
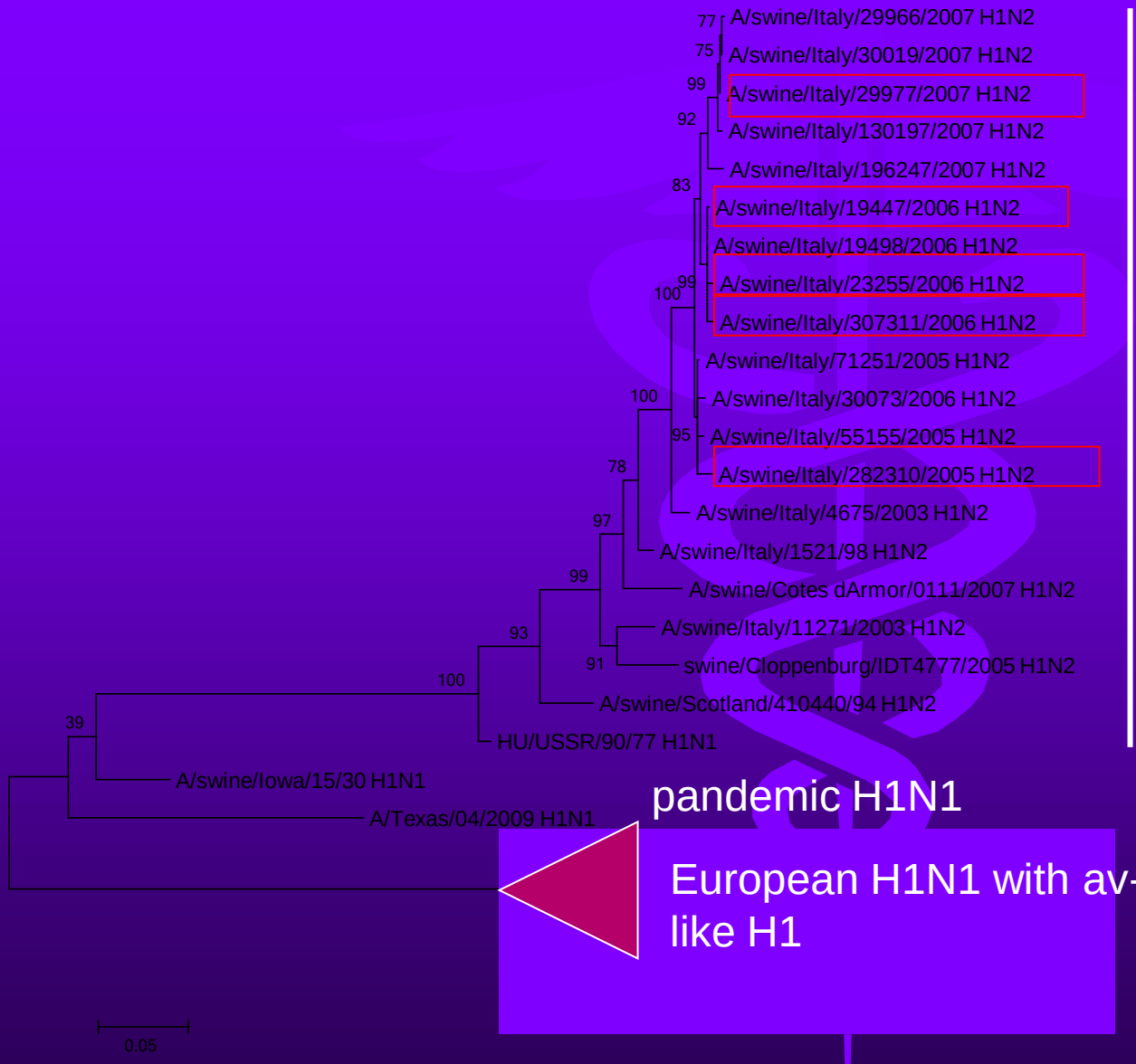




Phylogenetic tree of **H1** haemagglutinin



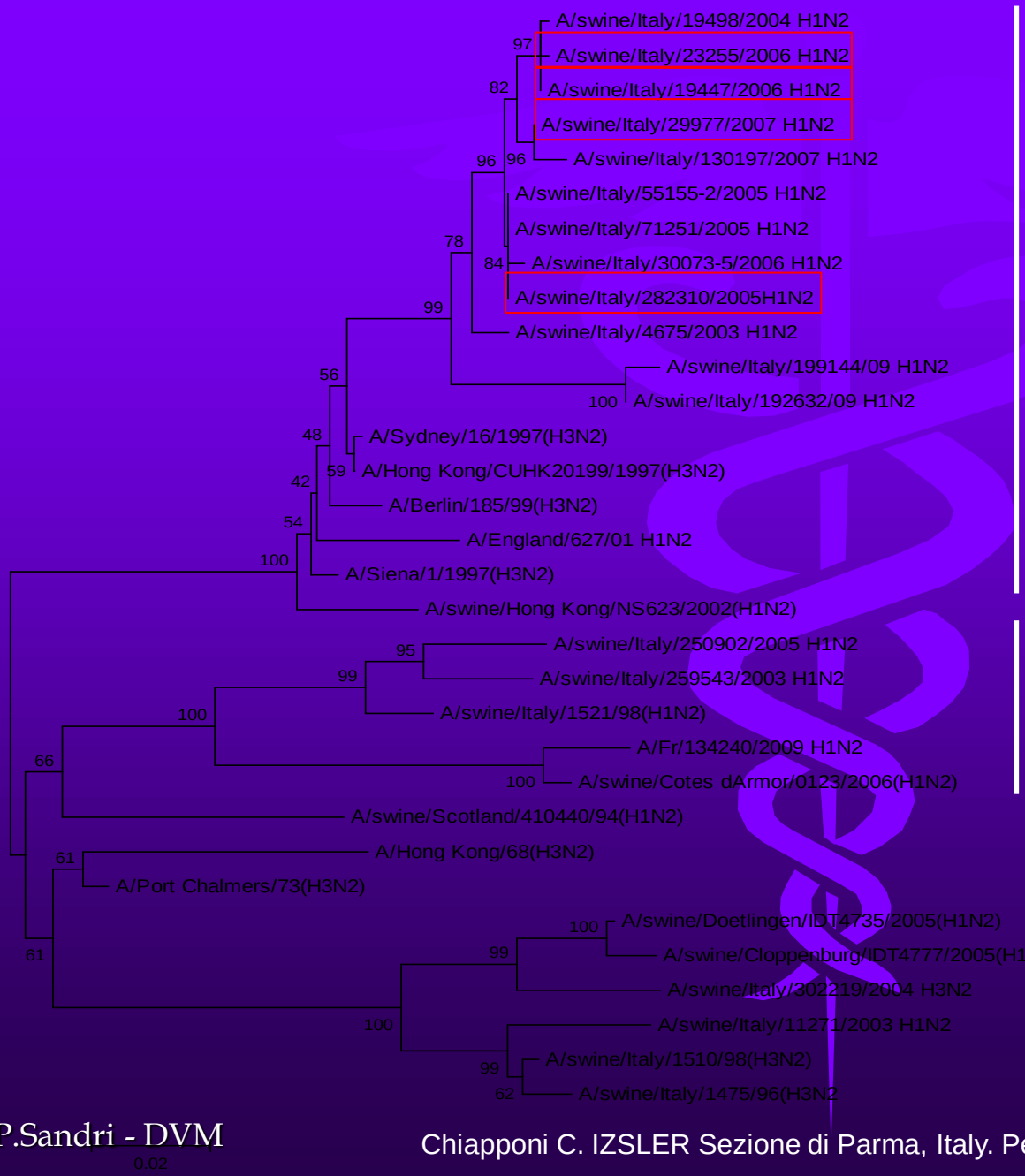
European H1N2 with hu-like H1

pandemic H1N1

European H1N1 with av-like H1

Chiapponi C. IZSLER Sezione di Parma, Italy. Personal communication

Phylogenetic tree of **N2** neuraminidase



1997-2001 Human H3N2

swine H1N2

H3N2 -“Port Chalmers/73” like

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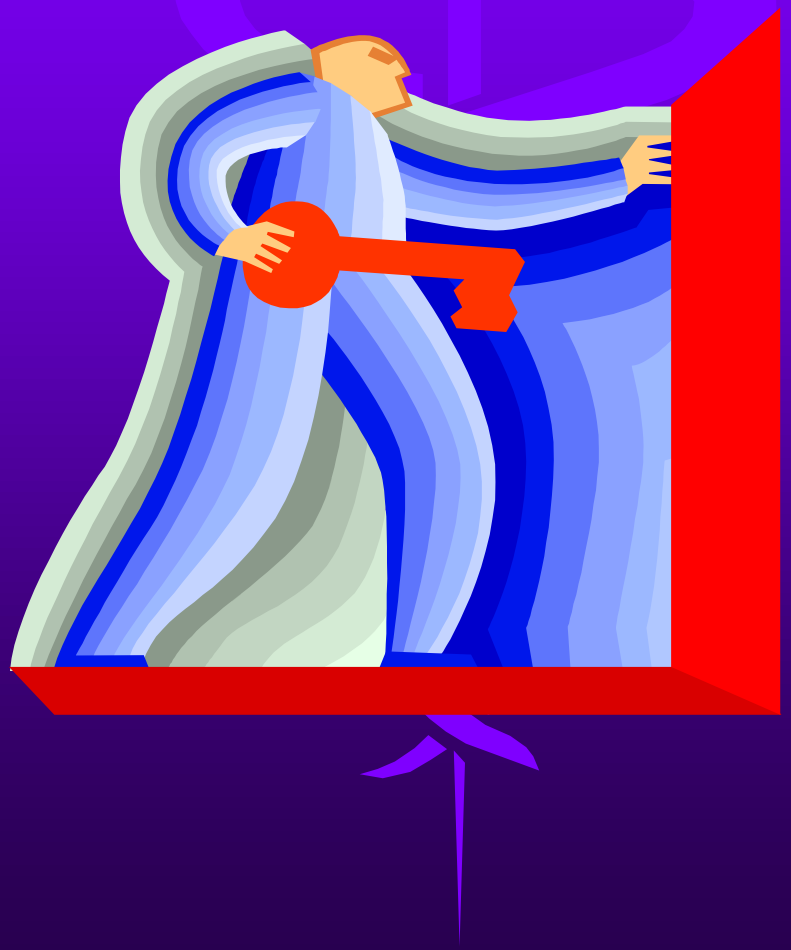
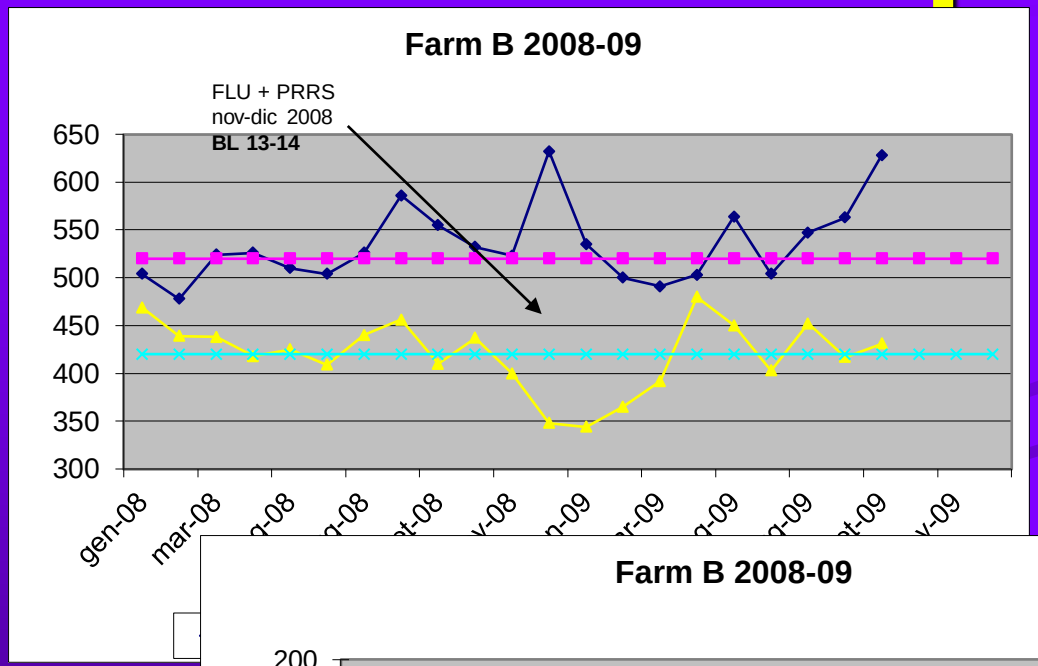
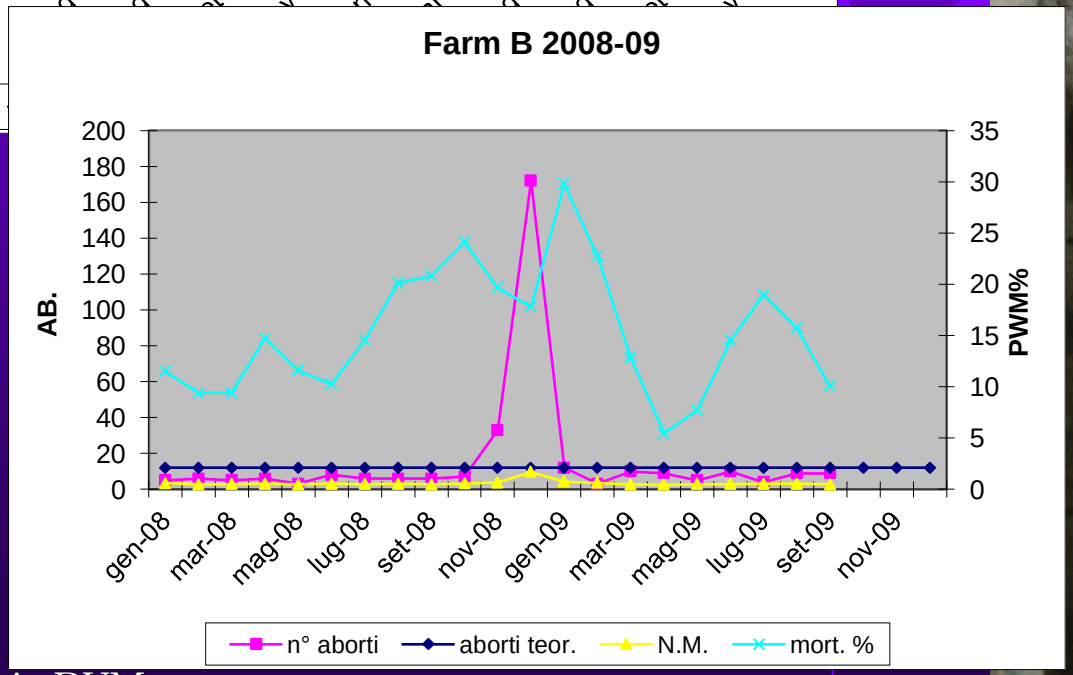
Influenza come apriporta per PRRS ?



… è accaduto più di una volta !





Terapia

- Antipiretici
  - ASA (aspirina)
  - Paracetamolo
  - Ketoprofene & altri FANS
- Trattamento antibiotico
  - Solo quando necessario per controllare conosciute superinfezioni batteriche !!

Prevenzione

- **Biosicurezza**
  - AI/AO management dei gruppi di ingrasso
  - Reparto quarantena & management delle scrofaie
  - Confinement/reti antipassero (?)
  - Accesso controllato/ristretto agli allevamenti suini
- **Vaccinazione**
  - Scrofaie (scrofette/scrofe)
  - Ingrassi
  - ***Personale/lavoratori !!!***

Data	Allevatore/ciclo	mese ciclo	n. suini acc.	dens. Zona	*general e*	*tosse*	*febbre*	*inappet.*	*forme resp.*	PCR	isolam.	tipizzazione
16-apr-12	M. G.	3°	4550	+++	++	+	+++	+	+	pos	pos	H1N2
29-giu-12	M.G.	5°-6°	4500	+++	+	-	"+/-"	"+/-"	-	pos	pos	H1N1
07-dic-12	M. G.	1°-2°	4500	+++	++	+	+	++	+	pos	si H1N1	**H1**


Pradelle
Gazzo Veronese
Museo Archeologico Di Gazzo Veronese
Vetrerie
Corte Poli
SS12
A
Casello
Ronchetrino
500 m
2000 ft
Immagini ©2013 Cnes Spot Image, DigitalGlobe, Map data ©2013 Google

Influenza vaccinazione SI/NO ?

Una questione di prevalenza, costi & benefici.

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dr G.P.Sandri - DVM

Vaccinazione FLU si/no ?
Una questione di prevalenza, costi & benefici

Per poter decidere bisogna conoscere :

L'incidenza (quanto spesso/di frequente accade) della malattia nell'ambito del proprio "sistema produttivo" e/o area .

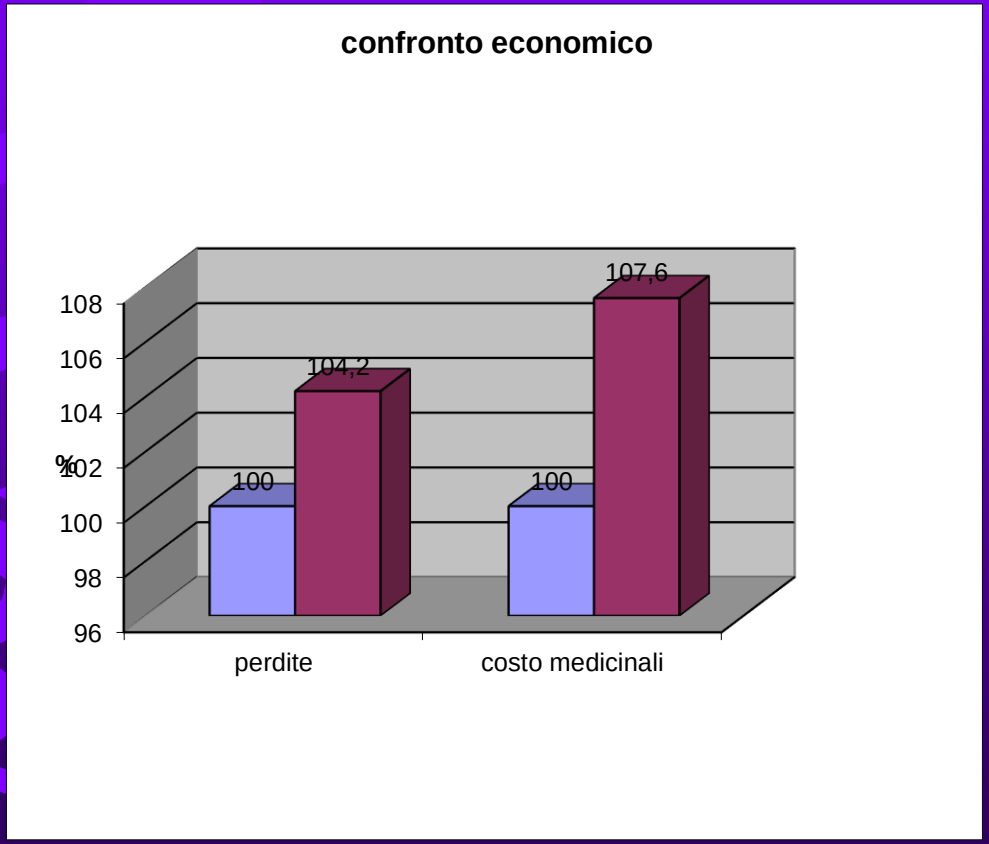
1. **Il full cost di ogni singolo episodio influenzale.**

Influenza : una valutazione economica (2)

- Costi di medicazione da determinare in base alla gravità e durata dell'episodio (= o > di 1,5-2 €/capo in media ?)
- **Ogni scrofa gravida che muore approx. 350-400 €**

Influenza:una valutazione economica

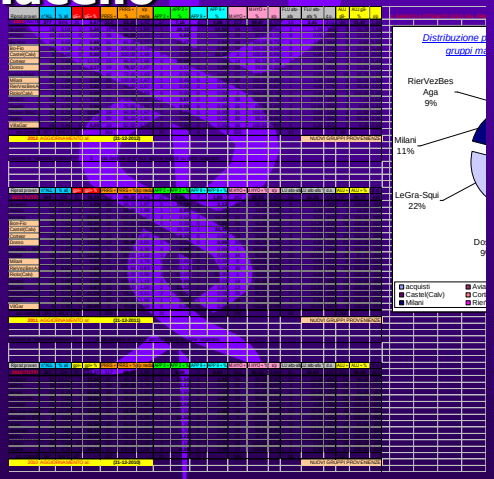
- Cicli di ingrasso che hanno sofferto Flu outbreaks hanno avuto in media 4,02 % di perdite e 7,6 %di costi di medicazione in più rispetto alla media di tutti gli altri.
- Accrescimento ?
- Indice di Conversione ?



Serological monitoring

Campioni di sangue prelevati in macello
da ogni ciclo di suini

Indagine Serologica



23 y –Database
> 7.000 records

Figura 1. Media geometrica dei titoli anticorpali anti H1N1 per gruppo (test HI)

*Geometric mean (log10) of serum antibodies to **H1N1** in pigs in Group C, and Group T (HI test)*

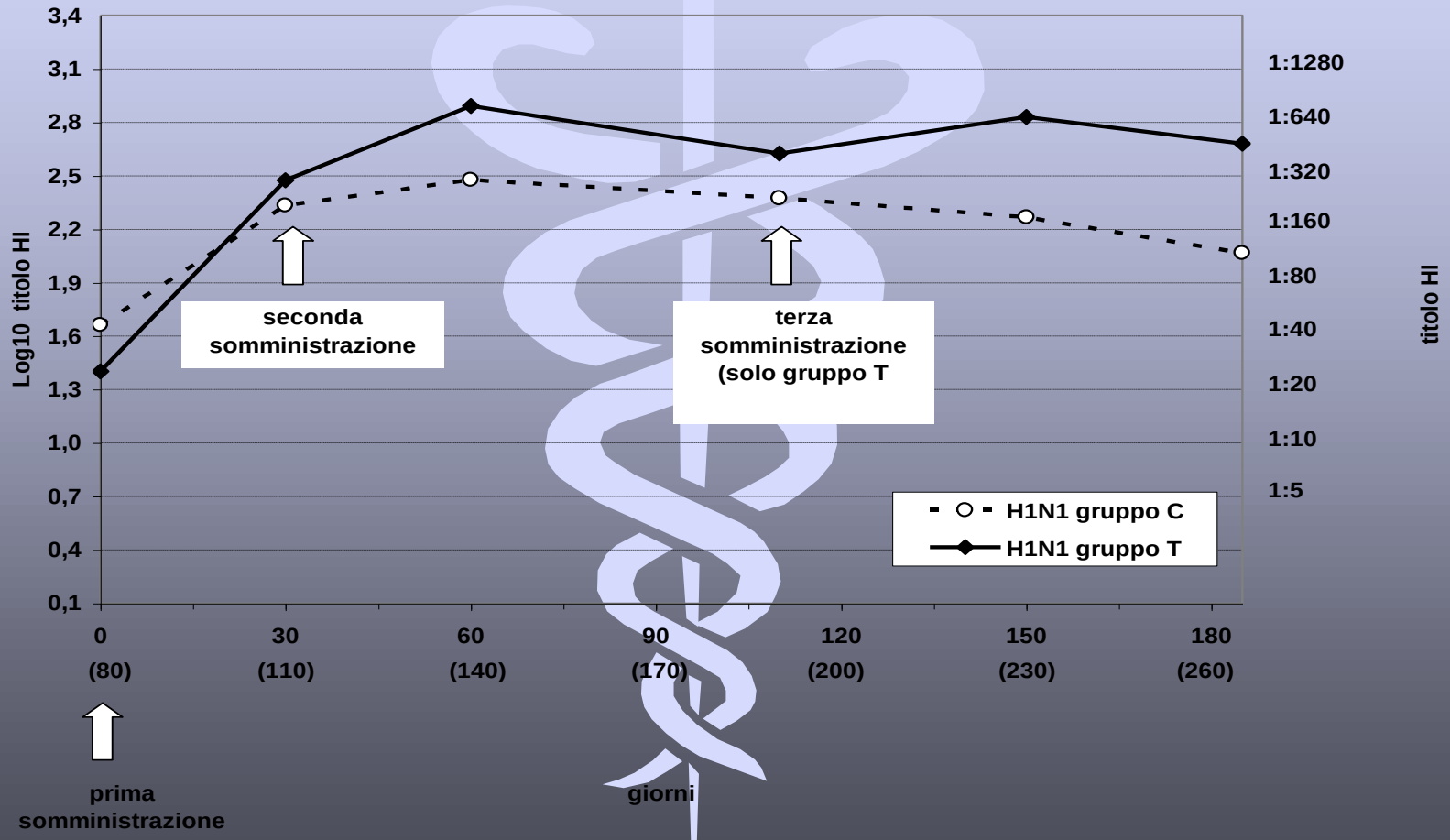


Figura 2. Media geometrica dei titoli anticorpali anti H3N2 per gruppo (test ELISA)

*Geometric mean (log10) of serum antibodies to **H3N2** in pigs in Group C, and Group T (HI test)*

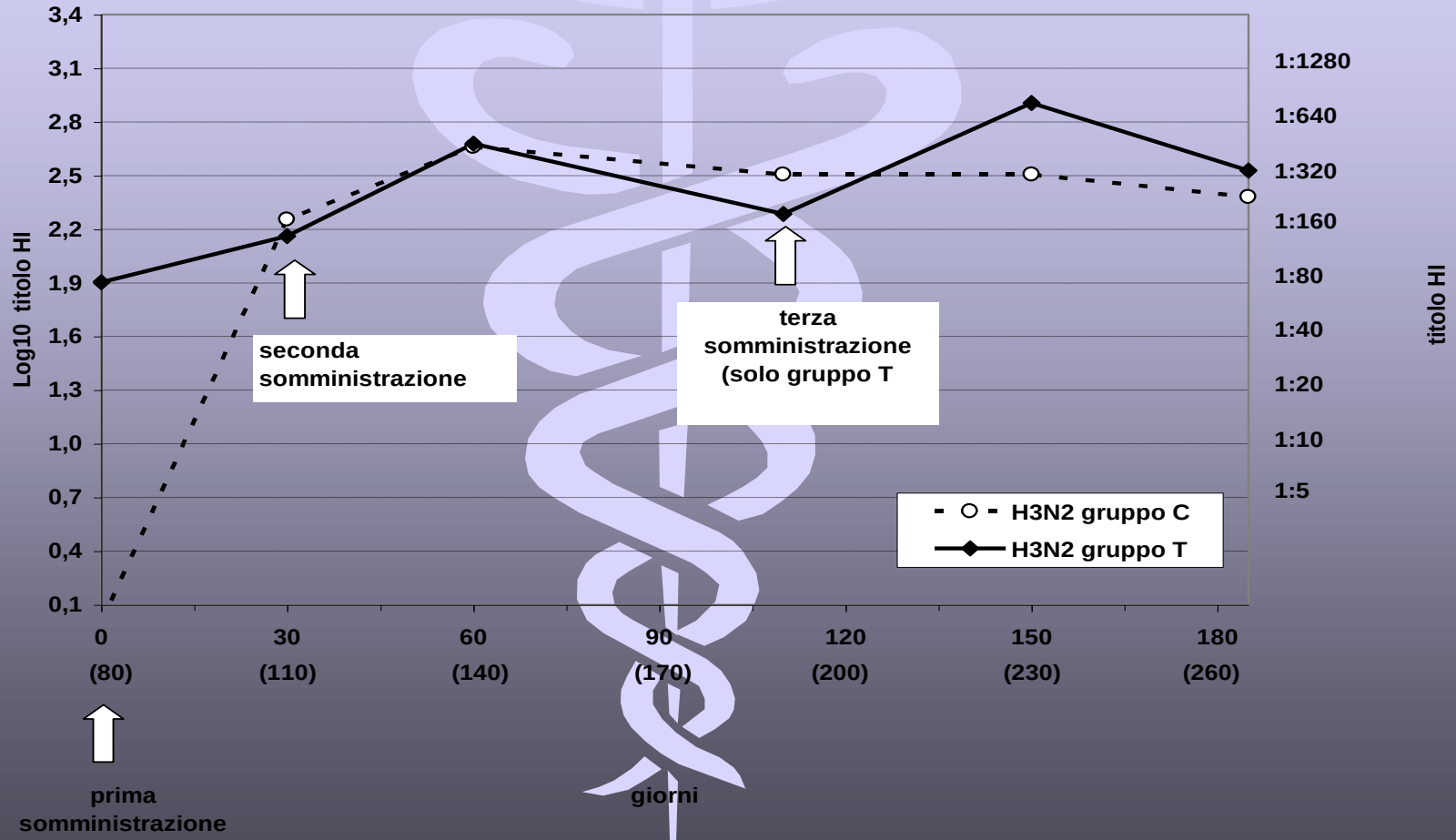


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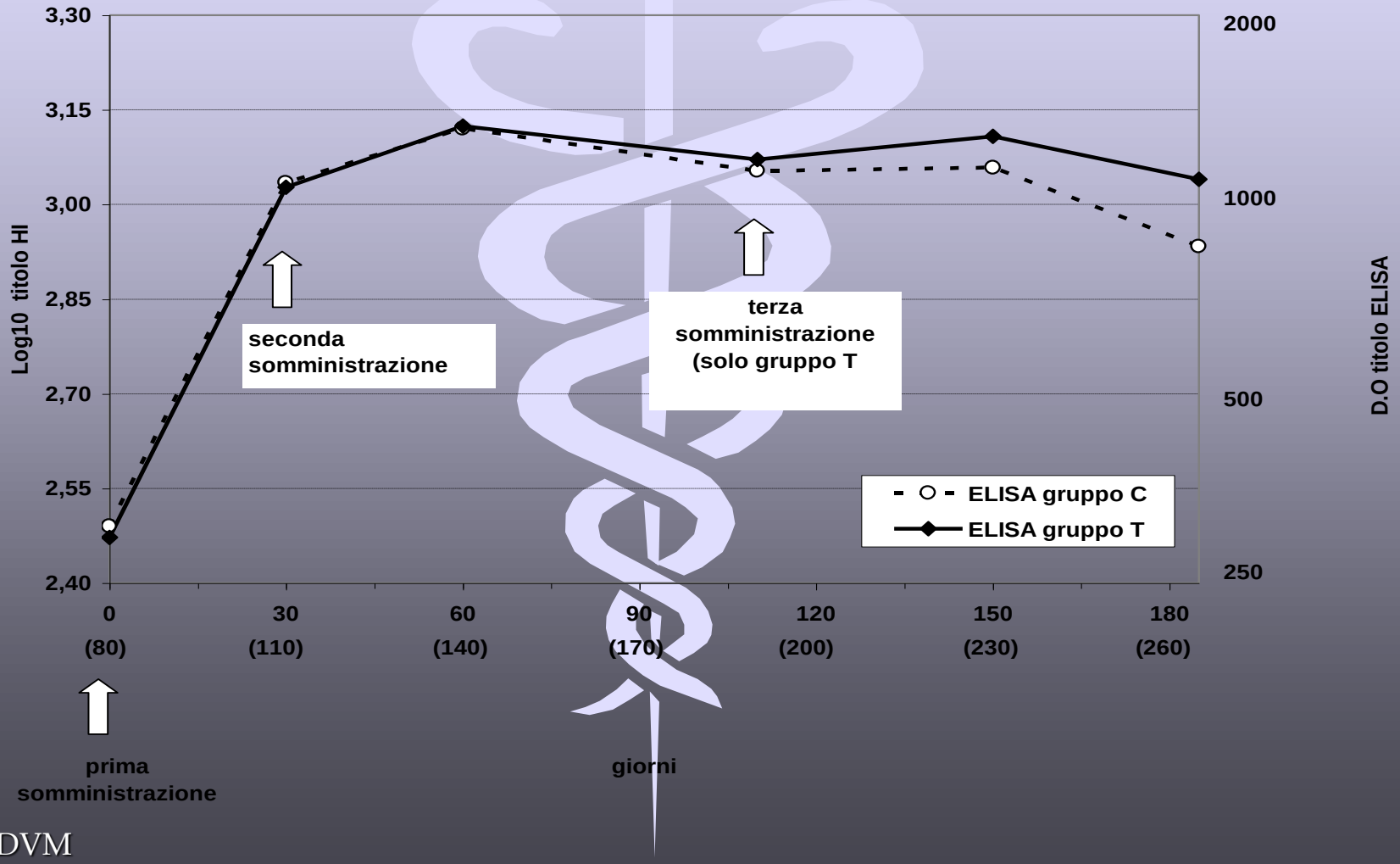
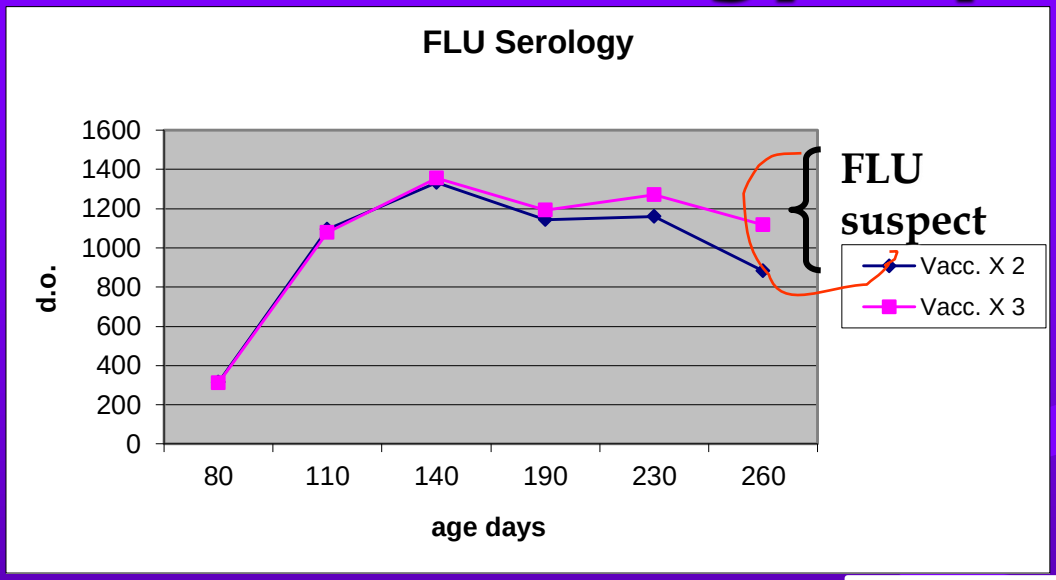
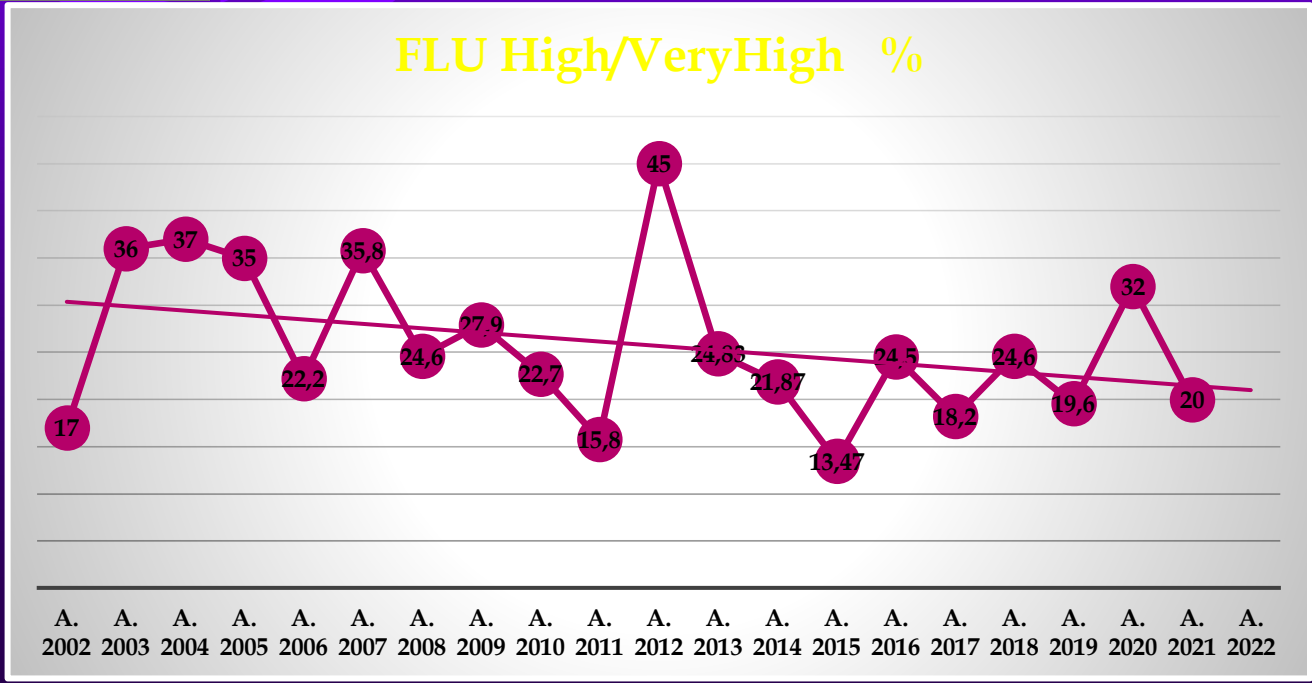
Figura 3. Media geometrica dei titoli anticorpali anti SIV per gruppo (test ELISA)

Geometric mean (log10) of serum antibodies to SIV in pigs in Group C, and Group T (ELISA test)



Flu serology & prevalence in finishers

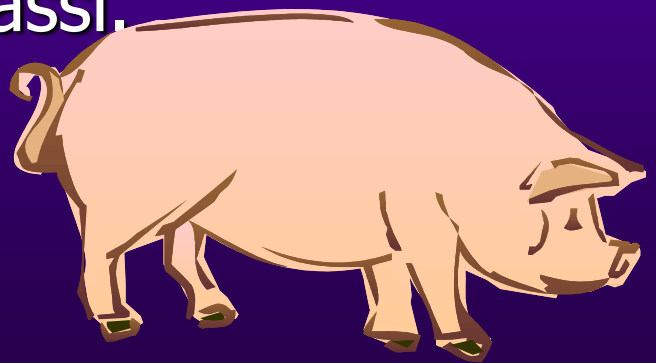




Infection with or w/o disease

Vaccinazione FLU delle scrofe : Si/No ?

- Previene ritorni, Aborti **??**
- La vaccinazione delle scrofe tende a livellare verso l'alto/ a rendere più omogeneo lo status immunitario della popolazione.
- Aumenta l'immunità materna "prevenendo" episodi Flu outbreaks nei siti di svezzamento **??**
- Necessità di misurare la durata della immunità materna nei weaner pigs per prevenire eventuali interferenze con la vaccinazione dei grassi.



IL VIRUS INFLUENZALE SUINO (*SIV*) E LE PRINCIPALI ASSOCIAZIONI VIRALI, BATTERICHE E DA *MYCOPLA*

HYOPNEUMONIAE IN 150 EPISODI DI PATOLOGI RESPIRATORIA NEL SUINO

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L. ALBORALI

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Parole chiave: Suino; Influenza; PRDC

Key words: Pig; Influenza; PRDC

Riassunto. Il virus dell'influenza suina (*SIV*) è causa frequente, nella speci logia respiratoria acuta oltre ad essere un importante patogeno che concor logia del complesso respiratorio del suino (PRDC). Tale studio retrospettiv obiettivi principali sia quello di indagare la prevalenza di infezione da diver di *SIVs* in allevamenti del Nord Italia, a partire dai campioni conferiti ai Veterinari della Sezione Diagnostica di Brescia, sia di valutare la prevalenz patogeni in associazione a *SIV* in episodi di patologia respiratoria. *SIV* è u grado di determinare da solo un quadro di patologia respiratoria, e tale sua considerevole valenza nella eventuale evoluzione del PRDC. La presenza de di influenza virus tipo A, determinata attraverso l'ausilio di una RT-PCR, i i segni clinici e-o le lesioni anatomo-patologiche indicativi di patologia r sono i criteri utilizzati per includere un episodio clinico nella presente inda 150 i casi che hanno soddisfatto tali criteri nel periodo di studio. Il virus è stato identificato nel 65,3% dei casi, il PCV-2 nel 34%, *Mycoplasma hyop* nel 9,3% e gli agenti di pneumopatia batterica o setticemia nel 58,7%.

Abstract. The swine influenza virus (SIV) frequently causes acute respirat in pigs worldwide and is an important pathogen in the porcine respirat complex (PRDC). The purposes of this retrospective survey were to investi rologic prevalence of infection with SIV subtypes in North Italy farms, usi submitted for a diagnosis to the Brescia Veterinary Diagnostic Laboratory, mine the prevalence of different pathogens detected in combination with cases of respiratory diseases. The influenza virus is a respiratory pathogen ab disease by itself and its own ability is of great importance in the evolution The presence of Influenza Virus type A antigen, demonstrated by RT-PCI with clinical signs and/or pathological lesions of respiratory disease were t teria to include a case in this survey. A total of 150 cases fulfilled these crit the study's period. Porcine reproductive and respiratory syndrome virus w in 65,3% of the cases, PCV-2 in 34%, *Mycoplasma hyopneumoniae* in 9,3 terial pneumonia or septicaemia in 58,7%.

Conclusions

After mass vaccination with 2 doses of FluSure XP, significant increases in HI serum antibody titers were observed in breeding females. Prevalence of shedding in sows and suckling piglets decreased over time until no SIV-positive samples were detected in suckling and recently weaned pigs. This case report provides insights into a potential control strategy for swine influenza in breeding herds through mass vaccination.

Observations regarding influenza A virus … swine breeding farm after mass

…M, MS; Marie Gramer[1], DVM PhD; Michael Kuhn[3], DVM, MBA; …Mohr[2], DVM; Robert Morrison[1], DVM, MBA, PhD
…. Paul, Minnesota; [2]New Ulm Regional Veterinary Center, New Ulm, Minnesota; [3]Pfizer Animal Health, Madison, New Jersey

Mycoplasma hyopneumoniae, and porcine circovirus type 2 (PCV-2). The influenza control protocol used at the farm consisted of 1 dose of a trivalent autogenous (Newport Laboratories, Worthington, MN) influenza vaccine (containing A/Swine/MN/003252/2010/H1N2, A/Swine/MN/02011/2008/H1N1, and A/Swine/MN/02588/2009/H3N2) administered 4 weeks prefarrow in breeding females, while gilts were vaccinated twice postarrival at 100 and 110 kg of body weight. In early December 2010, the breeding herd experienced an outbreak of acute respiratory disease in suckling piglets. Respiratory disease was characterized by cough ranging from light to severe which was evident in piglets 10 to 21 days of age, with the cough persisting for about 2 weeks. Shortly after the initial respiratory episode in the farrowing unit, pigs with similar respiratory signs were observed in the nursery.

The herd veterinarian suspected SIV and collected 10 nasal swabs from suckling piglets for molecular diagnostic testing by an influenza A virus matrix gene using reverse real-time polymerase chain reaction (rRT-PCR)[5,6] and virus isolation (Univ. MN Veterinary Diagnostic Laboratory). Four of the 10 nasal swabs were positive for influenza A viral RNA, and virus was isolated from 2 of the 4 swabs positive by rRT-PCR. The virus was successfully subtyped and genetically characterized as an H1N2 virus grouping with the delta 1 cluster of H1 North American SIV.[7] During the first weeks of February 2011, as part of the routinely scheduled herd health visits, the herd veterinarian again collected nasal swabs from 21-day-old piglets. Twelve (40%) out of 30 tested positive for influenza, indicating that suckling pigs were still becoming infected while nursing the sow.

Materials and methods

Because the herd veterinarian and owner concluded that their SIV vaccination strategy was not working as expected, they decided to change the vaccination strategy from prefarrow vaccination to a 2-dose mass vaccination in the breeding herd, and switched to a commercial vaccine (FluSure XP®, Pfizer Animal Health) instead of the autogenous vaccine. FluSure XP is a killed multivalent vaccine that contains 4 distinct inactivated influenza isolates: A/Swine/North Carolina/031/05 H1N1; A/Swine/Missouri/069/05 H3N2; A/Swine/Iowa/726H/2005 H1N2; and A/Swine/Iowa/110600/00 H1N1. The H1N1 vaccine strains (A/Swine/Iowa/110600/00, A/Swine/North Carolina/031/05) belong to the gamma and delta 2 groups, respectively; the H1N2 strain belongs to the delta 1 group, and the H3N2 vaccine strain is a cluster 4 H3. Notably, the hemagglutinin (HA) gene from virus isolated in farm samples shared 98.9% HA

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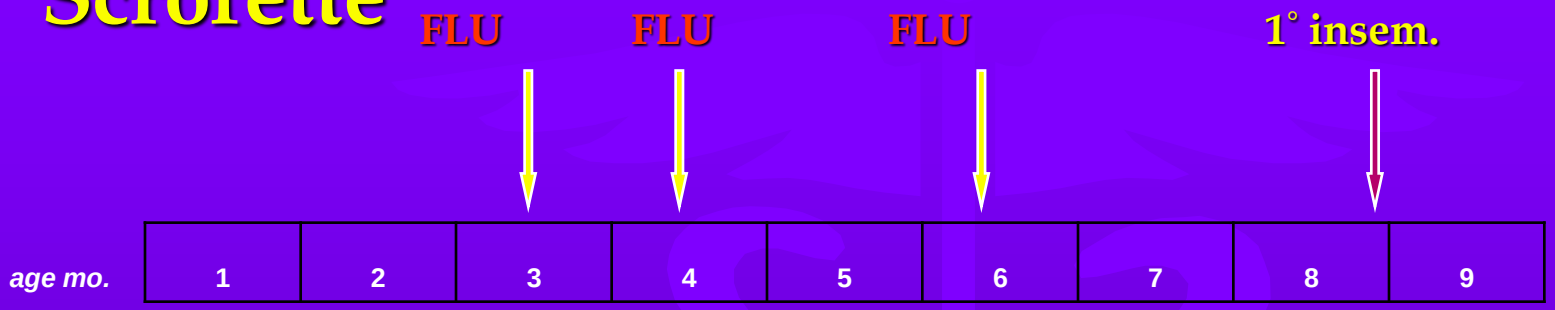
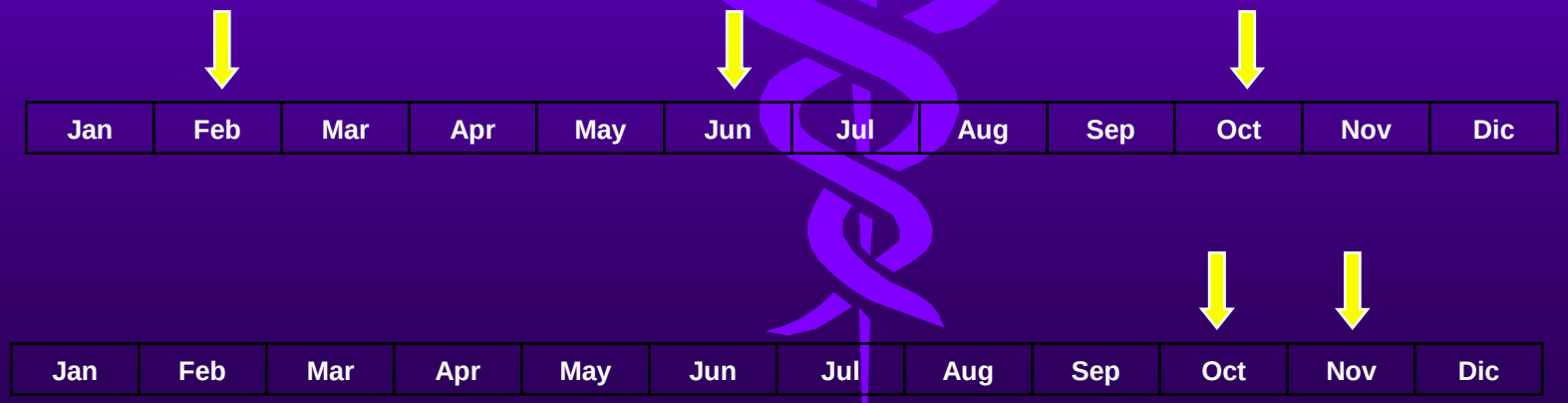
Scrofette



Scrofe



Grazie per la vostra attenzione !

lrlsa@tin.it

" What is too easy is probably false, but what is complicated is often useless "