

La maladie du Renard

Wallon !

Dr Olivier Detry

Service de Chirurgie Abdominale et Transplantation
CHU Liège, Université de Liège

**15^{èmes} Journées de l'Enseignement Post-Universitaire
de la Faculté de Médecine de Liège
sous l'égide de l'EPU-ULg**

avec la collaboration de nombreuses Associations de Médecins Généralistes

**Samedi et dimanche 13 et 14 MAI 2017
Amphithéâtre Roskam, CHU Sart Tilman, LIEGE**







ELSEVIER

Available online at www.sciencedirect.com

SCIENCE @ DIRECT®

Veterinary Parasitology 117 (2003) 23–28

veterinary
parasitology

www.elsevier.com/locate/vetpar

Prevalence of *Echinococcus multilocularis* in the red fox (*Vulpes vulpes*) in southern Belgium

B. Losson^{a,*}, T. Kervyn^b, J. Detry^a, P.-P. Pastoret^b,
B. Mignon^a, B. Brochier^c

^a Department of Parasitology and Parasitic Diseases, Faculty of Veterinary Medicine,
University of Liège, B43 Sart Tilman, B-4000 Liege, Belgium

^b Department of Immunology and Vaccinology, Faculty of Veterinary Medicine,
University of Liège, B43b Sart Tilman, B-4000 Liege, Belgium

^c Department of Rabies, Brussels Pasteur Institute, 642 rue Engeland, B-1180 Brussels, Belgium

Received 5 February 2003; received in revised form 25 July 2003; accepted 5 August 2003

Abstract

Between June 1998 and February 2002, 709 red foxes killed in Wallonia (south of Belgium) were available for parasitological examination of the gut. The identification of *Echinococcus multilocularis* was based on morphological data. *E. multilocularis* adults were observed in 20.2% of the animals. The analysis of data revealed marked differences between the geological areas of Wallonia; the highest prevalence (33%) was found in the Ardenne and the lowest (0%) on the Plateau de Herve.

Host gender and the collection season had no effect on the prevalence. However, the latter was significantly higher in juveniles (<8 months of age). The geographical distribution of *E. multilocularis* in Belgium is much wider than originally thought.

© 2003 Elsevier B.V. All rights reserved.

Echinococcus multilocularis in Belgium: Prevalence in red foxes (*Vulpes vulpes*) and in different species of potential intermediate hosts

R. Hanosset^{a,*}, C. Saegerman^d, S. Adant^b, L. Massart^c, B. Losson^a

^a Parasitology and Parasitic Diseases Faculty of Veterinary Medicine, University of Liège, Boulevard de Colonster 20, B-43, B4000 Liège, Belgium

^b M.R.W.-D.G.R.N.E.-Direction des Cours d'Eau non navigables Service de Piégeage des rats musqués 15, Avenue Prince de Liège, B-5100 Jambes, Belgium

^c Biostatistics, Faculty of Veterinary Medicine, University of Liège, Boulevard de Colonster 20, B-43, B4000 Liège, Belgium

^d Epidemiology and Risk Analysis Applied to Veterinary Medicine, Faculty of Veterinary Medicine, University of Liège, Boulevard de Colonster 20, B-42, B4000 Liège, Belgium

Received 30 November 2006; received in revised form 21 September 2007; accepted 26 September 2007

Abstract

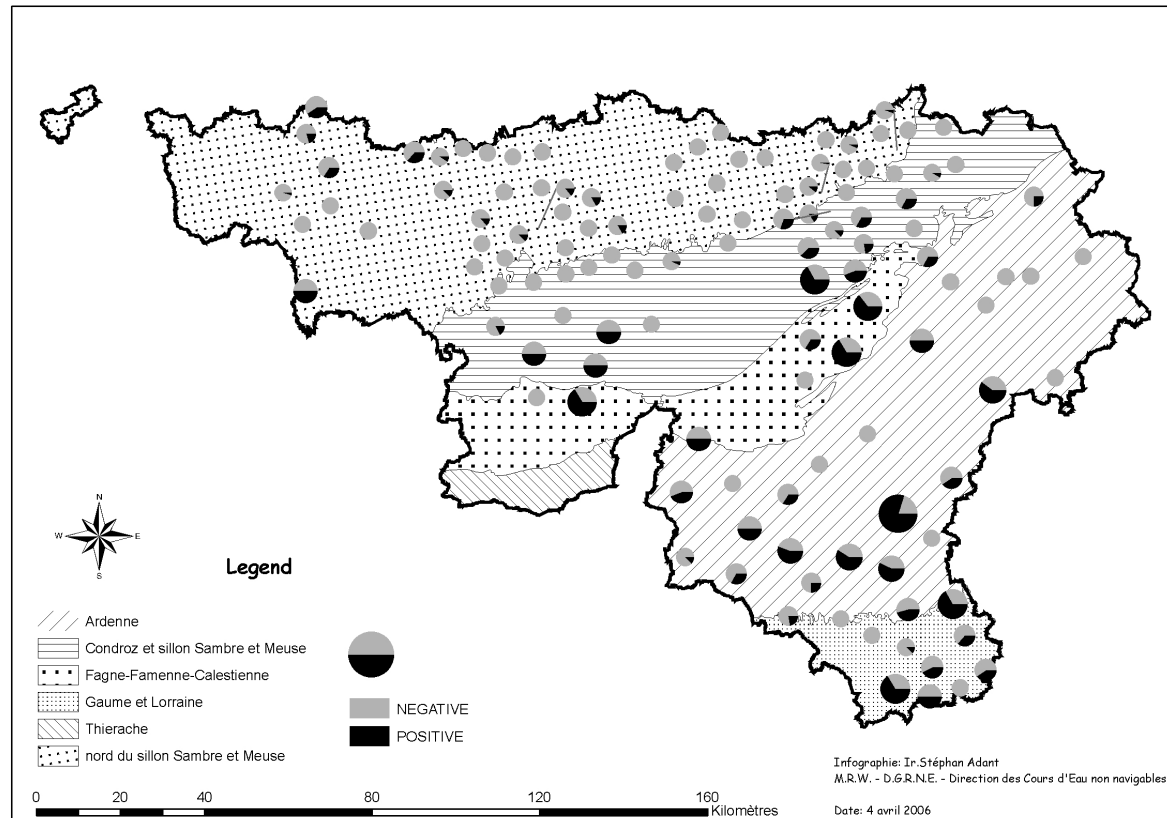
Echinococcus multilocularis causes a rare but potentially lethal zoonotic infection in humans. This tapeworm is known to be endemic in foxes in several countries of Western and Central Europe. In Western Europe, the common vole (*Microtus arvalis*) and the water vole (*Arvicola terrestris*) are considered to be the most important intermediate host species of this cestode whereas the red fox is by far the most important final host. The purpose of this study was to provide data on the prevalences in Wallonia (Southern part of Belgium) both in the red fox and in different potential intermediate hosts.

A total of 990 red foxes were examined between January 2003 and December 2004 for the presence of *E. multilocularis*. The average prevalence was 24.55% (22.38–27.87). Out of 1249 rodents or insectivores belonging to the species *Apodemus sylvaticus*, *Arvicola terrestris*, *Clethrionomys glareolus*, *Microtus arvalis*, *Microtus agrestis* and *Sorex araneus*, only one *M. arvalis* (out of 914–0.11% (0.003–0.61) and one *C. glareolus* (out of 23–4.3% (0.1–21.9) were found to be infected. However, the muskrat (*Ondatra zibethicus*) seems to be a good intermediate host as 11.18% (9.72–12.76) of the animals ($n = 1718$) were found to be infected. A positive correlation was found between the prevalences in foxes and in muskrats in each of the different geological regions. This study indicates that the muskrat is highly sensitive to this zoonotic tapeworm and could perhaps represent a good bioindicator when studying the epidemiology of this parasitic infection in Belgium and in other countries where the muskrat is present.

© 2007 Published by Elsevier B.V.

Keywords: *Echinococcus multilocularis*; Red fox; Muskrat; Rodents; Belgium; Epidemiology

Fig : Prévalence de l'échinococcose alvéolaire chez le renard en Wallonie (2003-2004). Le diamètre des point est proportionnel à la taille de l'échantillon des animaux récolté par région.





Available online at www.sciencedirect.com

SCIENCE @ DIRECT®

Veterinary Parasitology 115 (2003) 257–263

veterinary
parasitology

www.elsevier.com/locate/vetpar

Echinococcus multilocularis (Cestoda, Taeniidae) in Red foxes (*Vulpes vulpes*) in northern Belgium

M. Vervaeke^{a,*}, P. Dorny^b, F. Vercammen^b, S. Geerts^b, J. Brandt^b,
K. Van Den Berge^c, R. Verhagen^a

^a Department of Biology, University of Antwerp, Groenenborgerlaan 171, B-2020 Antwerp, Belgium

^b Department of Animal Health, Institute of Tropical Medicine, Nationalestraat 155, B-2000 Antwerp, Belgium

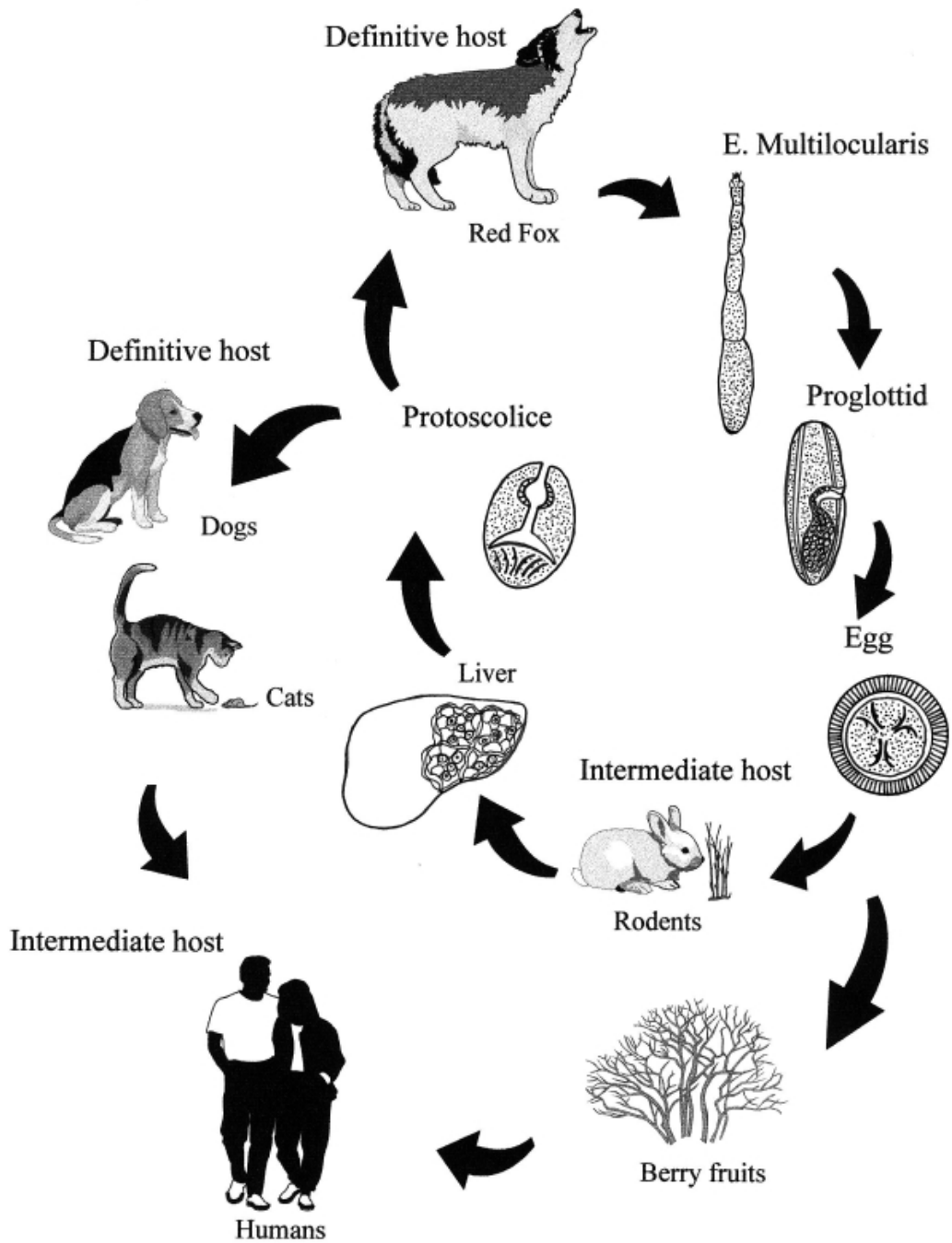
^c Institute for Forestry and Game Management, Gaverstraat 4, B-9500 Geraardsbergen, Belgium

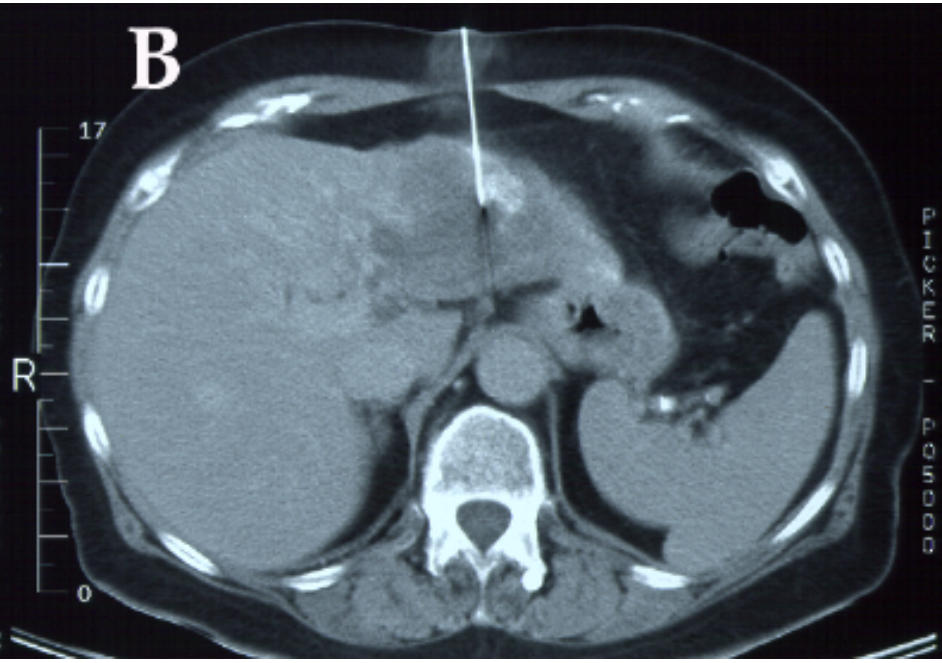
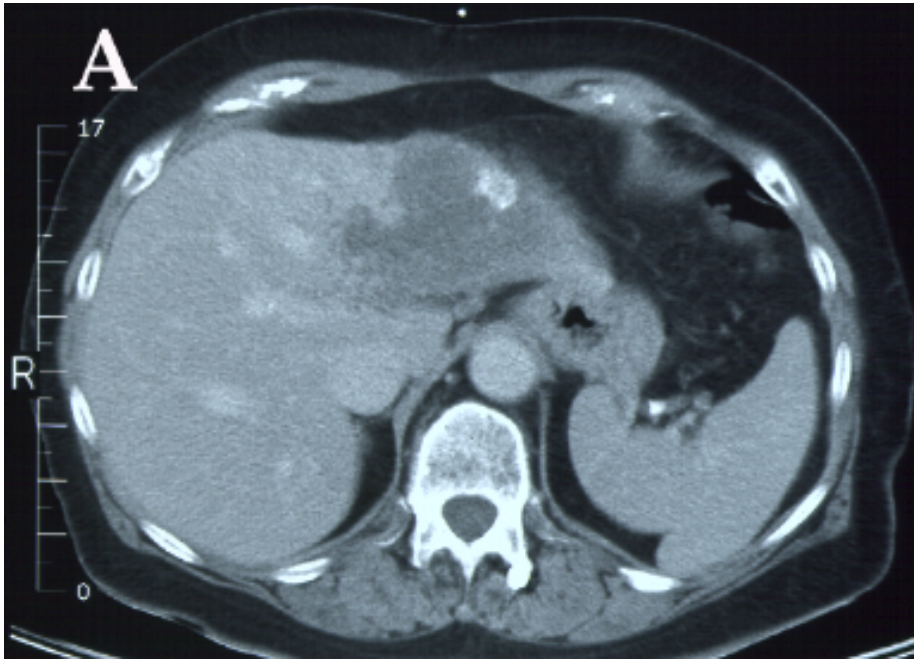
Received 3 December 2002; received in revised form 17 April 2003; accepted 7 May 2003

Abstract

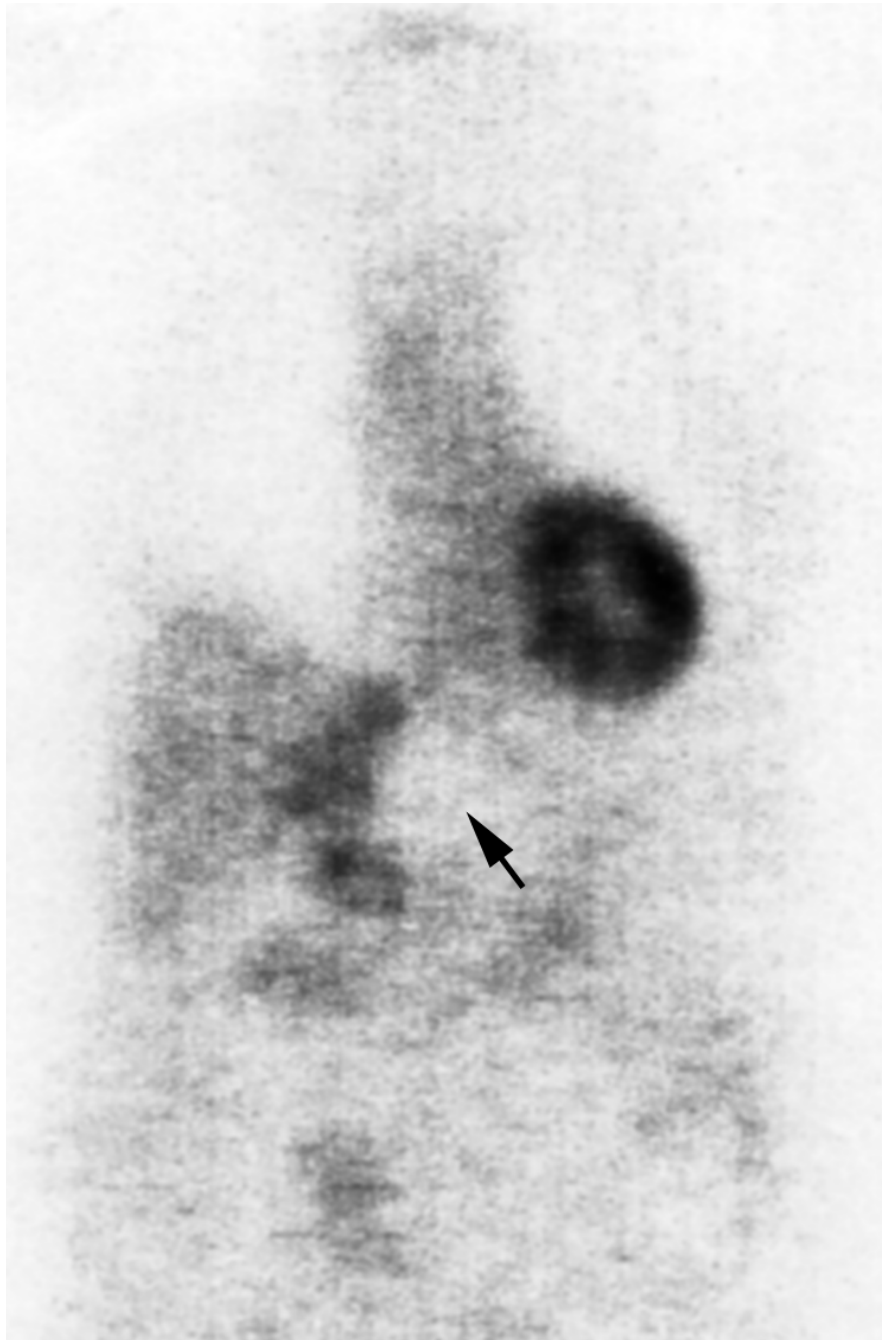
The first record of the tapeworm *Echinococcus multilocularis* (Cestoda, Taeniidae) in Red foxes (*Vulpes vulpes*) in northern Belgium is described. Between 1996 and 1999, 237 dead foxes were examined for the presence of this tapeworm using the intestinal scraping technique. Four foxes (1.7%) were found to be infected with *E. multilocularis* and showed medium to very high parasitic burdens. Three infected foxes originated from the south of the study area and the fourth animal came from the north of the study area near the border with The Netherlands. These findings are discussed in relation to the high endemicity of *E. multilocularis* in southern Belgium and to the increased distribution of the Red fox (*V. vulpes*) in northern Belgium during the last two decades. © 2003 Elsevier B.V. All rights reserved.

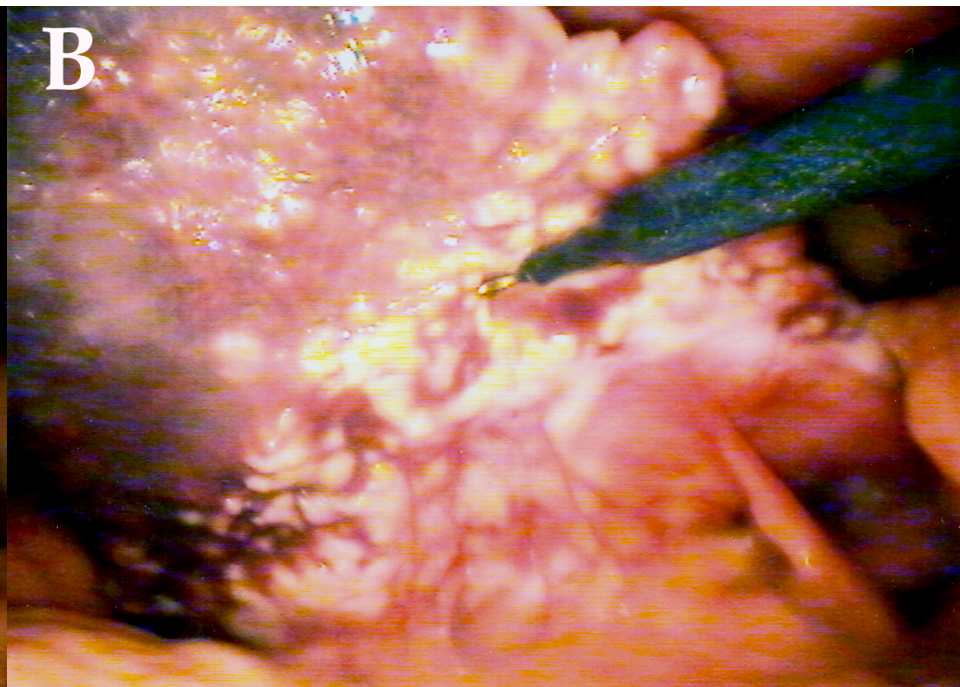
Keywords: *Echinococcus multilocularis*; *Vulpes vulpes*; Alveolar echinococcosis; Epidemiology; Belgium





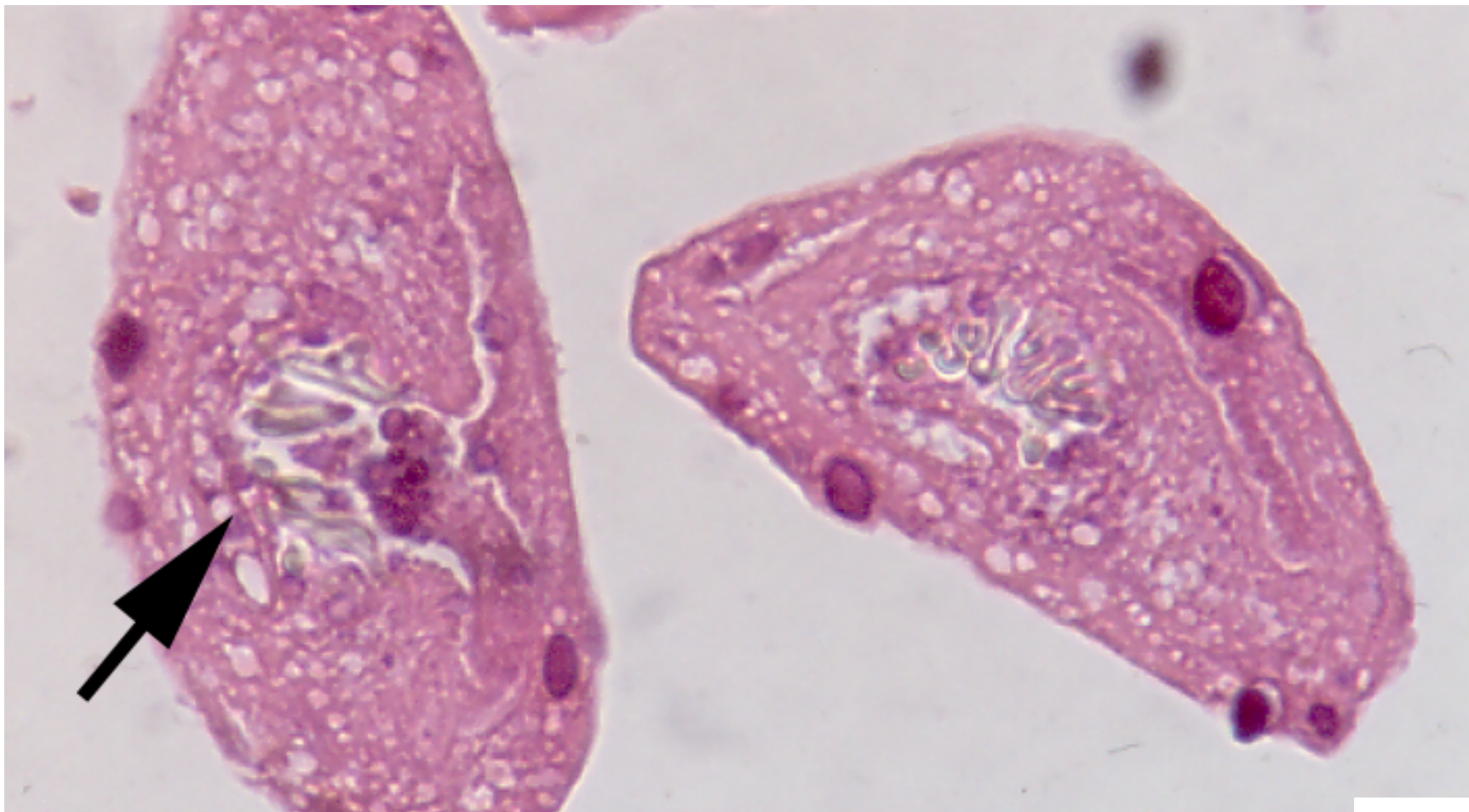


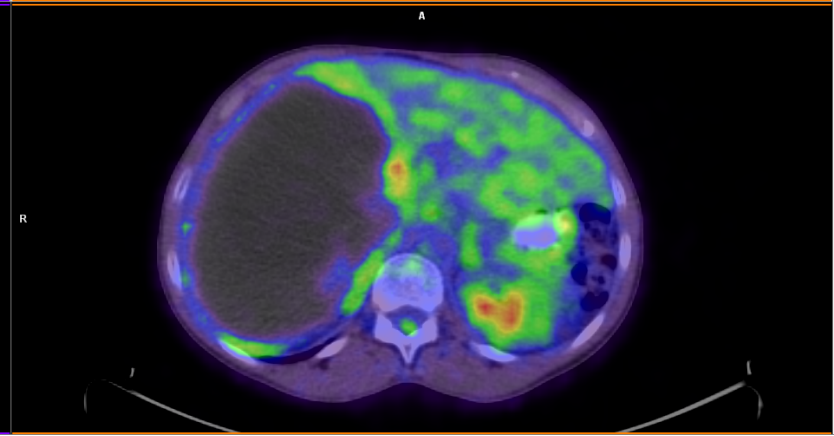
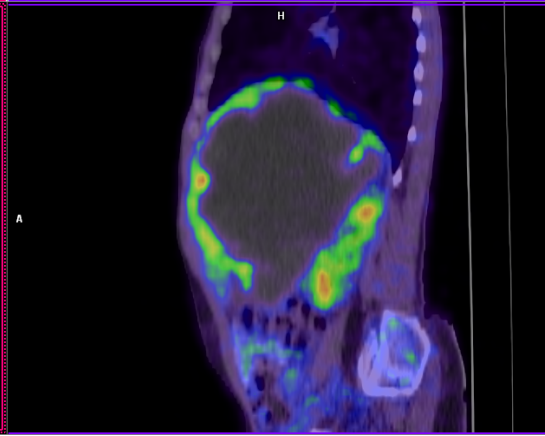
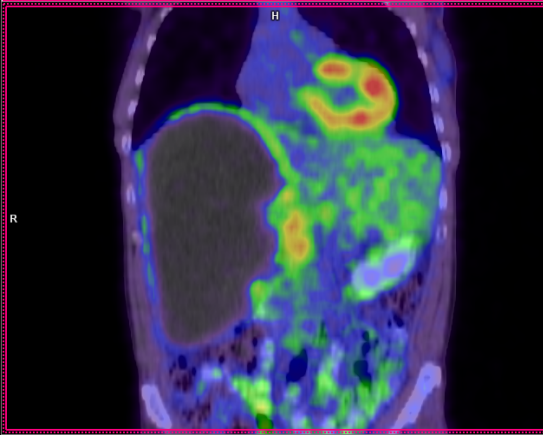
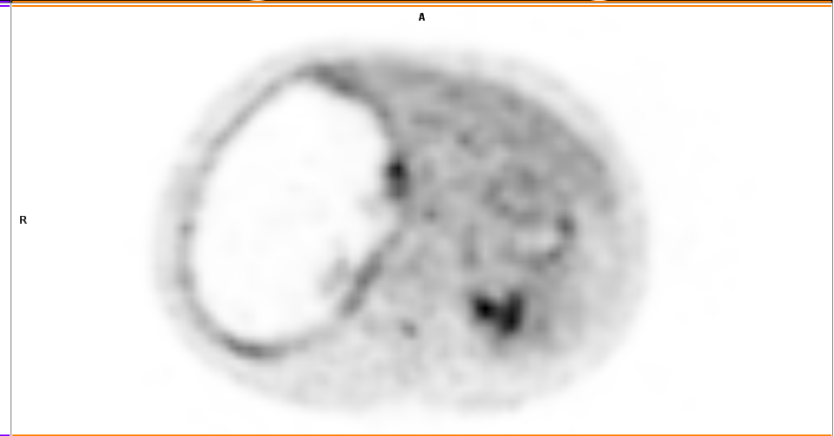






Echinococcose alvéolaire





Série CHU Liège

- 21 patients (14H, 7F)
- Age moyen: 66 ans (35-85)



Prise en charge

- 7 palliatifs sans chirurgie hépatique
- 1 palliative avec cirrhose et hépatectomie pour HCC

- Hépatectomie droite: 7
- Hépatectomie gauche: 5
- Hépatectomie à la demande: 1

CLINIQUE

- Incidentalome ou Σ aspécifiques (fatigue, perte de poids, hepatomégalie): 1/3
- Ictère: 1/3
- Épigastralgies: 1/3
- Rare: Σ spécifiques localisation extra-hépatique

Biologie

- VS ↑/ hypergammaglobulinémie
- Leucopénie/thrombopénie: stt si splénoM
- Lymphopénie: stade avancé
- Hyperéosinophilie: rare
- IgE anti-Echinococcus multilocularis (1/2)
- Cholestase

IMAGERIE

- Echographie abdominale
 - Masses hypodenses hétérogènes irrégulières
 - Svt sans paroi
 - Nécrose centrale fréquente
 - Calcifications
 - Parfois hémangiome-Like au début
- Scanner
- Discordance possible entre scan et écho
- IRM
 - Images typiques en rayons de miel
 - Meilleure définition anatomique
 - Calcifications peu visibles
- (Cholangiographie IV, rétrograde ou percutanée)/ C-IRM
- Pct° percutanée + PCR
 - sensibilité ?
 - risque de dissémination
- PET
 - Évaluation activité/viabilité
- Bilan extension poumon/SNC recommandé

ANTI-PARASITAIRES

- Benzimidazoles
 - Albendazole (Zentel)
 - 10-15 mg/kg/j en 2 doses avec repas (400mg bid)
 - 0,65-3 umol/l (4h après prise; à 4 et 12 sem)
 - Mebendazole (Vermox)
 - 40-50 mg/kg/j en 3 doses avec repas (max 6g/j)
 - > 250 nmol/l (74 ng/l) (4h après la prise; à 4 sem)
 - Attention posologie si insuffisance hépatique (monitoring)
- Amphotericine: sauvetage
- Praziquantel: pas pour EA
- Parasitostatique (rarement parasiticide)
- ES: troubles digestifs, perte cheveux, symptômes neuro (vertiges, céphalées), leucopénie, hépatotox
- Au moins deux ans
- Fonds de solidarité

Arrêt antiP si pas de chirurgie?

- A envisager si:
 - Au moins deux ans Tt
 - Négativation sérologie
 - Calcifications > 50%
 - PET scan négatif

- Suivi post-arrêt!

SUIVI

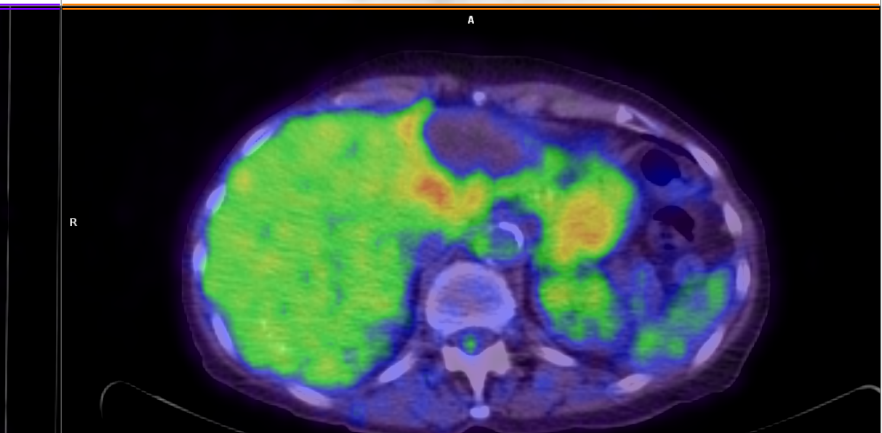
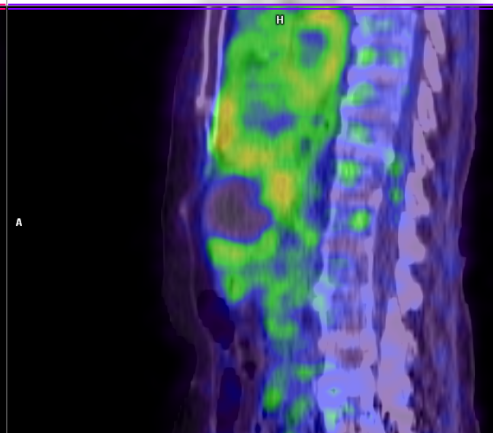
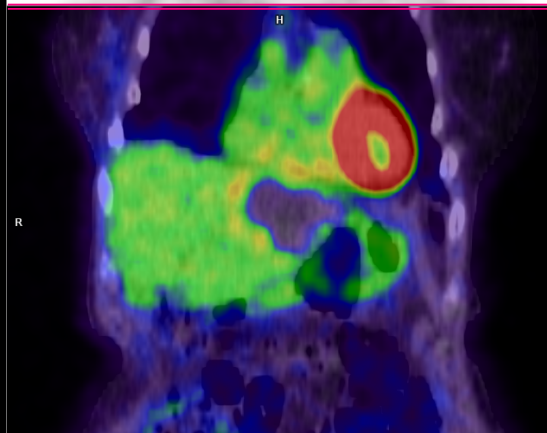
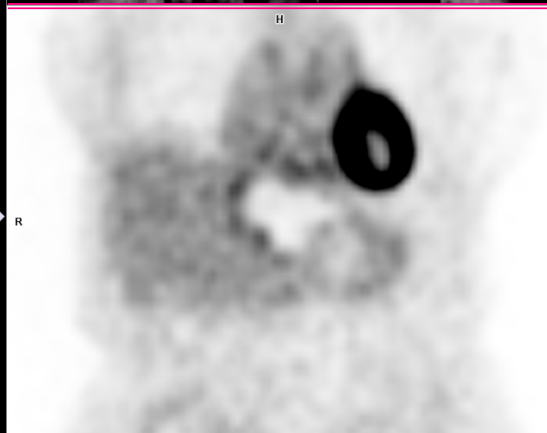
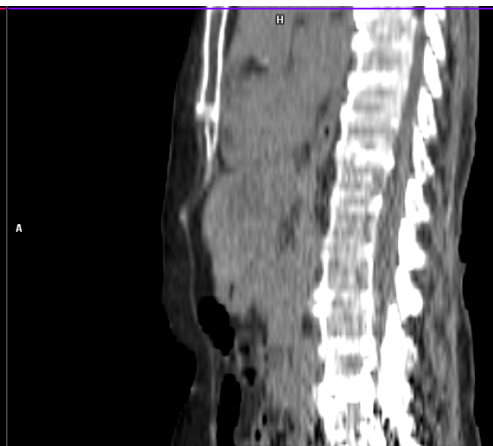
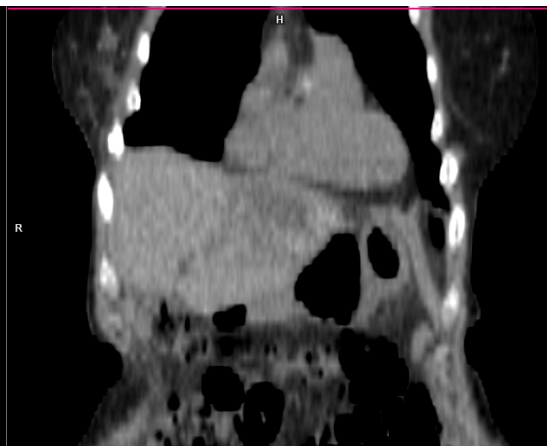
- Trois premiers mois
 - Suivi clin rapproché (mensuel?)
 - Hémogramme/15jours
- Ensuite bio/mois 1ère année puis bio/3mois
 - Hémogramme
 - Transaminases
- Monitoring BMZ
- Consultation tous les 6-12 mois sous TT
- Suivi au moins 10 ans post arrêt traitement

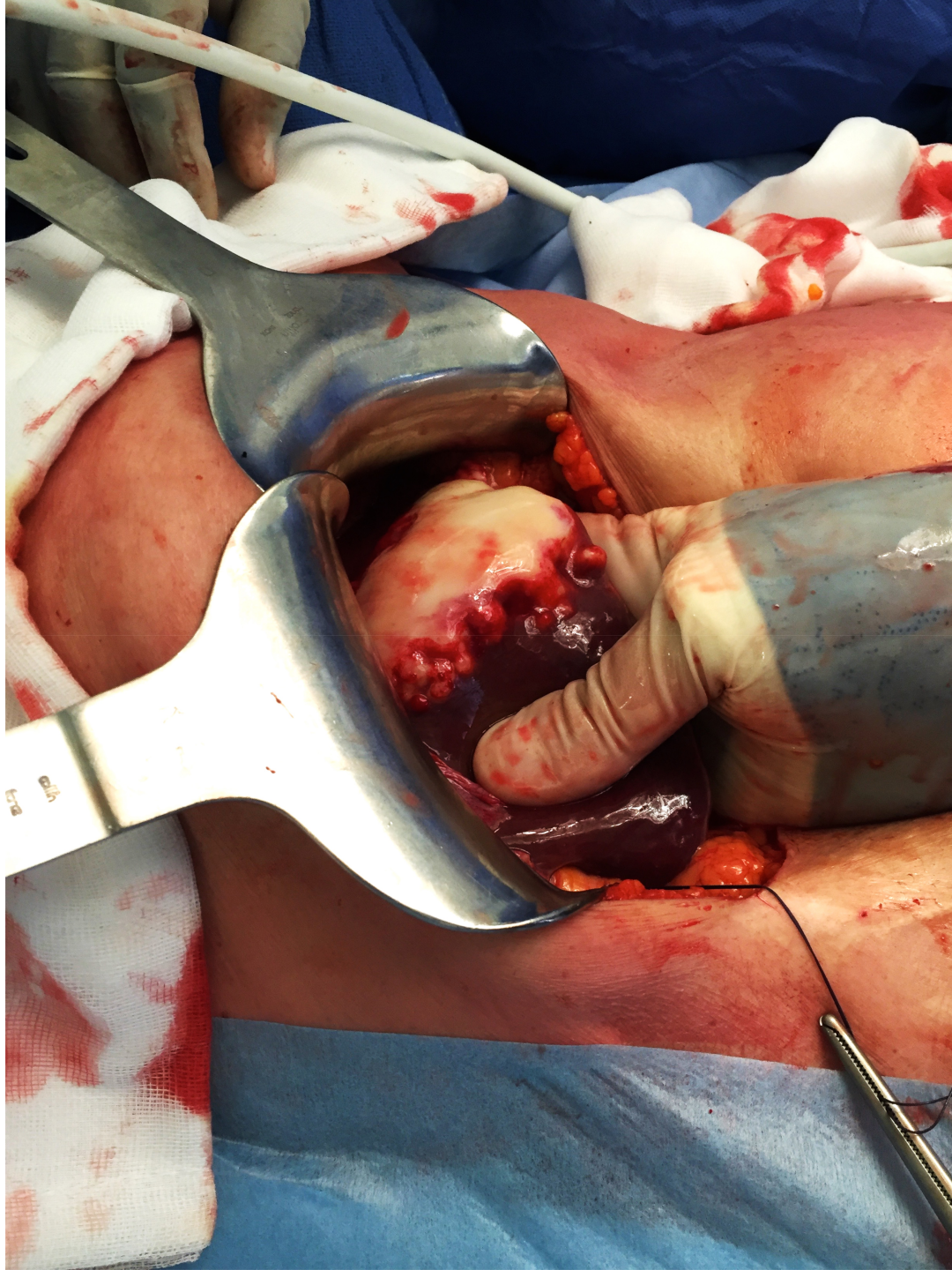
PREVENTION & SCREENING

- Traitement “sylvatique” praziquantel
- Traitement chats/chiens en zones endémiques
- Traitement chats/chiens “prédateurs”
- Mesures protection professions à risque
- Dépistage populations à risque
 - Sérologie
 - Echographie
- Laver/bouillir aliments possiblement contaminés
- Informations

Prise en charge multidisciplinaire

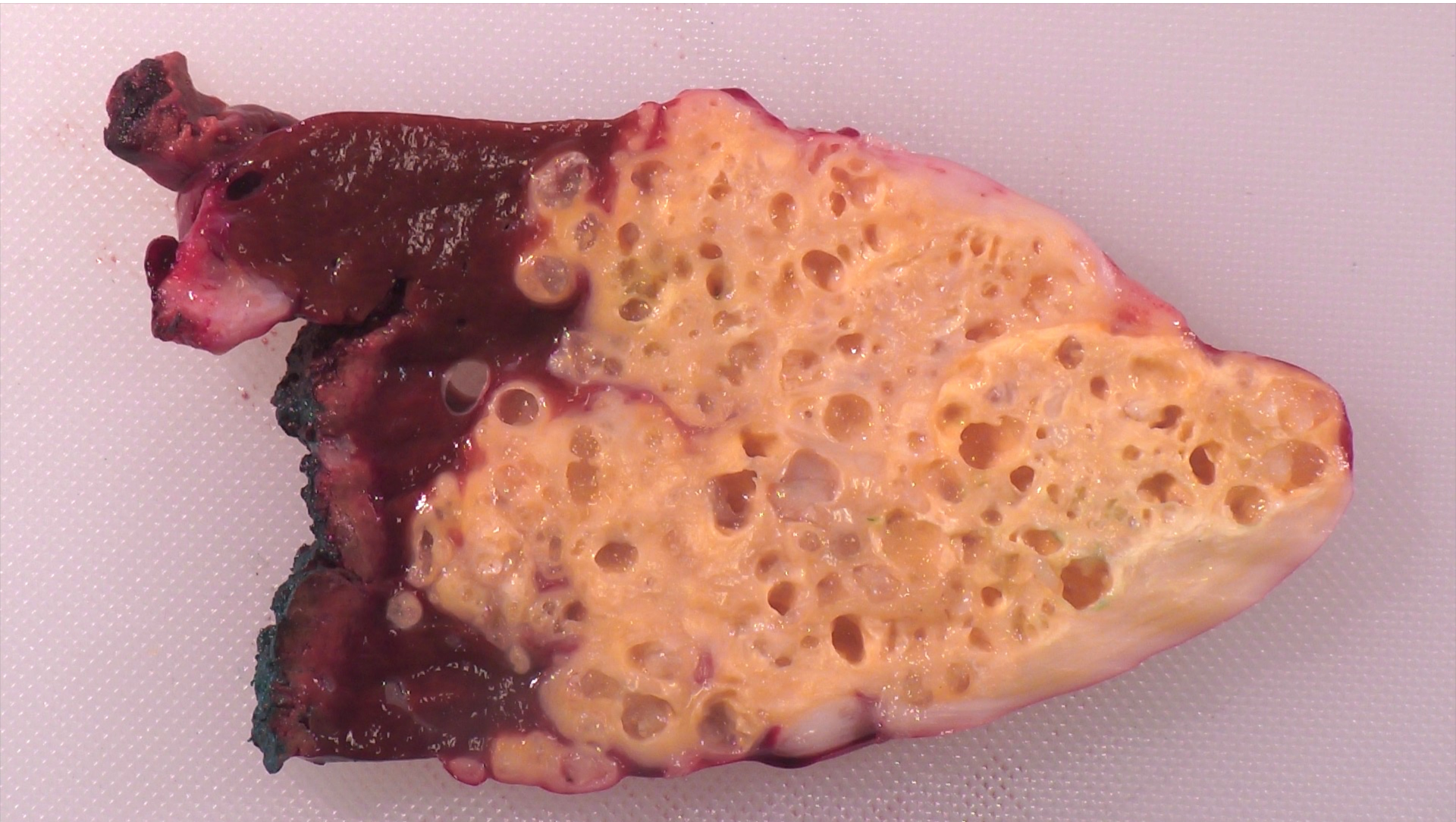
- Infectiologie
- Hépatologie
- Microbiologie
- Imagerie médicale
- Chirurgie
- Anatomopathologie
- Médecine vétérinaire



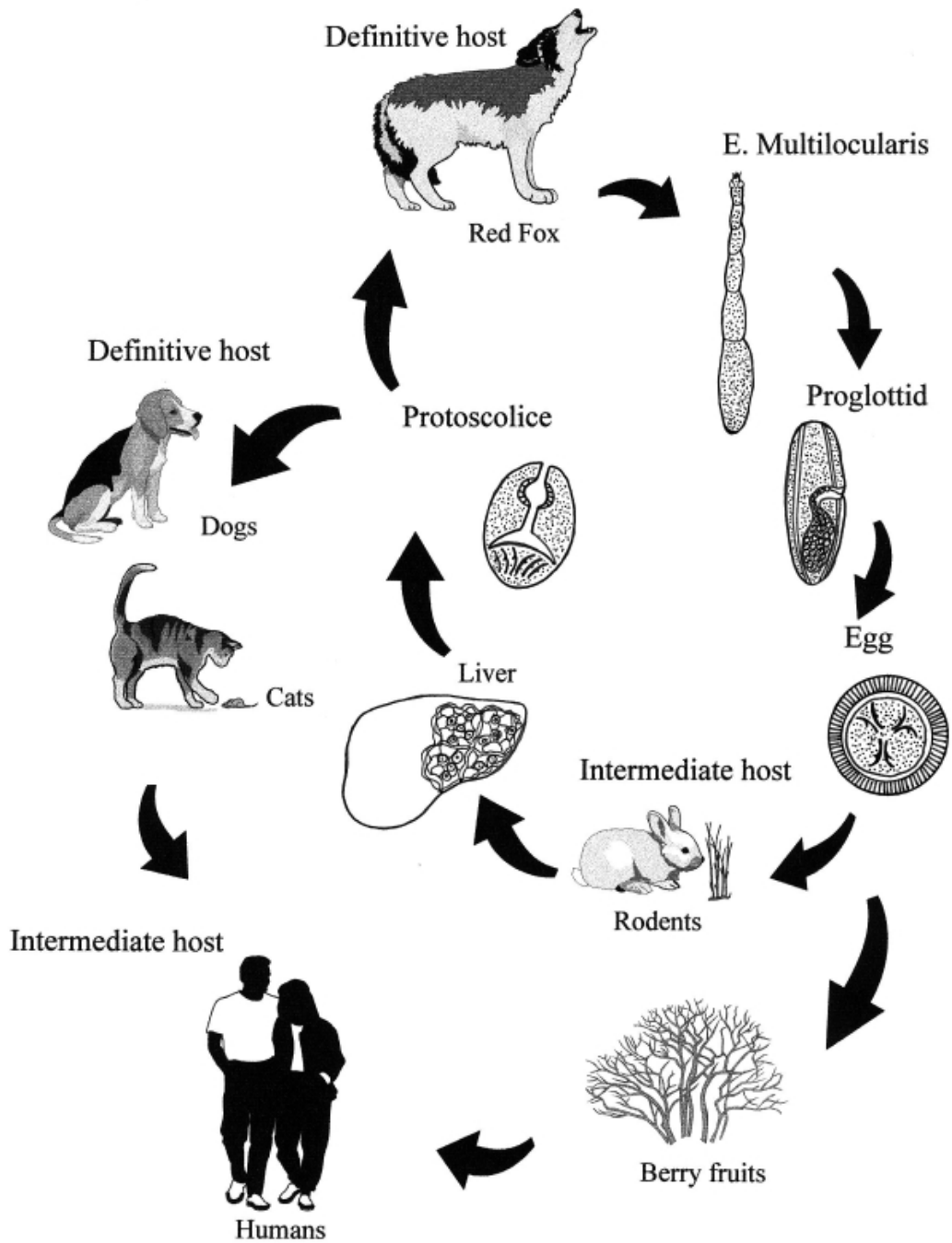












Conclusions

- Plus grande série belge
- Equipe multidisciplinaire
- Collaboration Fac Med Vétérinaire

- Centre Liégeois?? Groupe Liégeois??
- Quelles échinococcoses?
- Site Internet www.ecchinococcose.be
- Publications
- Financement