



Microchip Safety and Efficacy

Microchip Transponders and Cancer – "Is there any evidence that tumours form at the site of transponder implantation in companion animals?"

Rumours and media reports from various countries have recently hinted that implanting transponders into companion animals may predispose them to tumour development at the site of implantation.

The WSAVA Microchip Committee has reviewed the available evidence and come to the conclusion that from the tiny number of such cases reported compared to the huge numbers of animals that have been implanted this effect is extremely small, if it exists at all. The benefits of transponder implantation, backed up with a reliable, accurate and available database, far outweigh this risk. Further details and the WSAVA Microchip Committee position is provided below.

A Request for Information

However, in order to monitor the situation the Committee would be interested to receive details of any cases where tumours have developed in companion animals at the site of transponder implantation and where there is suspicion of an association. In the first instance details should be sent to the WSAVA secretariat at fasanne@fasanne.dk.

WSAVA Microchip Committee Position on Microchips and Cancer

Reports of concerns about a possible link between the implantation of RFID transponders and the formation of tumours have been brought to the attention of the WSAVA Microchip Committee.

- 1) Although these reports refer to scientific studies conducted in the 1990's no scientific reference is made to allow us to check the original papers
- 2) The Committee is aware of more recent scientific papers which have reported tumour formation at the site of implanted transponders in mice. The mice involved in these studies were either inbred strains or strains that have been genetically modified to predispose individual animals to cancer formation.
- 3) Many studies show that it is dangerous to transpose results from experiments in one species to other species, eg from genetically modified mice to normal pet dogs and cats.
- 4) Transponder safety has been reviewed by many national regulatory authorities responsible for the approval of implantable medical devices. These authorities have approved transponders as safe and effective ways of permanently identifying animals. Such approval would not have been granted if there had been significant evidence that implanting transponders induce tumour formation in the domestic animals concerned.
- 5) Many millions of companion animals have subsequently been implanted around the world with a tiny proportion reporting any type of problem. In the UK where there has been an informal reporting system for adverse reactions for over ten years only two of the 3.7 million implanted animals recorded on the Petlog database have been reported

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as developing a tumour at the site of implantation. In one of these cases the pathologist reported that the transponder was incidental to the tumour formation. Overall, the Committee is aware of less than ten reports of tumours forming in companion animals associated with an implanted microchip.

6) Millions of animals have carried their transponders for most of a natural life time without any adverse effects.

7) Conversely many thousands of implanted animals have been reunited with their owners after going missing by tracing the owner through a reliable database.

Conclusion

While it is not possible to claim that the reaction to an implanted transponder in a companion animal will NEVER induce tumour formation, the Committee is unanimously of the opinion that the benefits available to implanted animals far outweigh any possible risk to the health of the animal concerned.

From Dr. Linda Lord, an RFID researcher at Ohio State University in the USA

There is no evidence to suggest that companion animals implanted with a microchip are at a higher risk for developing a tumor. The mice used in the studies where an association between a microchip and development of a tumor occurred were genetically predisposed to cancer and do not represent the genetic diversity we see in our dogs and cats. In the United Kingdom where over half of the dog population has a microchip, the British Small Animal Veterinary Association has established a formal system for the reporting of adverse events related to microchips, including tumors. In ten years of collecting data, only 2 tumors were reported to their adverse event registry. When you weigh this extremely rare event against the thousands of pets that are reunited worldwide each year from a microchip, it seems obvious that the benefits from microchipping far outweigh any small risk from a tumor. All of my pets are microchipped and all my future pets will be as well. I don't every worry about cancer from a microchip, I worry about my pets getting lost and finding them.

WSAVA Microchip Committee: Failed Transponders

Although rare, failed microchips (transponders) do occur in previously implanted animals. Additionally, some animals are implanted with two transponders, particularly in situations where governmental regulations stipulate the use of an ISO transponder yet the animal has already been implanted with an older, non-ISO transponder (e.g., animals relocating with their owners from the United States to Europe). In an effort to document the occurrence and provide assurances of animal identification to authorities in these situations, the WSAVA has worked in conjunction with the ISO committee overseeing the global standardization of microchip technology (WG3). The result is a recommended protocol for identifying and documenting these occurrence with the form provided in a pdf from the WSAVA website Microchip page.

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We encourage WSAVA members that suspect a failed transponder in an animal to fill out the Failed Transponder Reporting Form and return it to the WSAVA for reporting purposes.

Recall of '999' microchips (letter)

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SIR, - With increased awareness of microchip identification among the general public, the announcement of the Pet Travel Scheme (PETS) and the introduction of compulsory thoroughbred identification, more and more animals are being implanted with identification microchips. In the ISO standard identification microchip, the first three digits of the number represent a code that identifies the manufacturer of the device. This helps to ensure the uniqueness of the rest of the identification number and helps to trace the manufacturer of any microchip that causes an adverse reaction.

Before being allocated an identification code, manufacturers must submit their products to testing by an independent body to be sure that they meet the requirements of the ISO standard. Such test microchips bear a code '999' as their first three digits and do not normally reach the general circulation. Recently '999' microchips have appeared on the market in the UK. This raises concern on two fronts. First, the code does not identify any particular manufacturer and if there was a need to trace the source of a microchip, this could cause difficulty. Secondly, if more than one manufacturer released '999' test microchips for sale, it is possible that the identification number could be duplicated.

Pet ID, the distributor of the '999' microchips, has now agreed to address this issue by ensuring that all microchips supplied after the beginning of October, 1999 carry a proper manufacturer code of '967' and by exchanging any of the '999' coded microchips still unused after October 4.

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All '999' numbers are carried on the Petlog database. Pet ID will also supply a complete list of all '999' coded microchips that they have distributed in the UK to help ensure their traceability.

Could I, therefore, ask that practices check the numbers of any microchips on their shelves and return any starting with '999' to their suppliers for replacement. Any microchips which start with other three-digit codes are obviously unaffected.

Lastly, I would like to thank the manufacturer concerned for acting so quickly and cooperatively in addressing this problem.

Any questions concerning the above should be addressed to Pet ID, directly (telephone 01444 441060).

Editor's note:

Since the above letter appeared, "999" Microchips have been identified in Australia and some European countries, although WSAVA Microchip Committee actions in concert with the ISO WG3 committee have since halted the distribution of "999" chips. However, readers are asked to notify the WSAVA microchip committee if this microchip identification code is found in their country.

Contact:

Fred Nind, chairman, WSAVA microchip Committee

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