

There's no doubt that microchipping helps reunite lost dogs with their owners, and it's a popular way of identifying pets, but are proposals to make chipping mandatory going a step too far? **Caroline Davis** takes a look at what's at stake...



Pic © Caroline Davis.

Microchip organisations say that thousands of pets have been returned to their families thanks to their microchip implanting and identification systems.

HOW MICROCHIPS WORK

Pet chips are based on inert radio frequency identification (RFID) technology. When an appropriate, battery-operated electromagnetic scanner is passed over the chip it will pick up that chip's unique ID code. When dogs are chipped, their and their owner's details are registered on a database. In the UK there are four databases – Petlog, PETtrac, Anibase (Identichip) and Virbac's BackHome; Anibase also manages the latter.

It is up to the owner to inform the database keeper of any contact alterations, such as change of address and phone numbers, and also when the pet dies so its details can be removed. Changing ownership details usually incurs a fee, which varies between £5 and £15. Petlog is hailed as being the central re-unification number (tel. 0870 606 6751) as it has the contact details of the other databases.

Usually chips are said to last for 25 years, and are guaranteed for a year against manufacturing faults.

READING THE CHIPS

There are different brands of chips used depending on the manufacturer that suppliers use in the UK, but universal scanners are available that read all chips. Those people that scan should be able to tell from scanning the chip which database holds the dog's details, and then be

Microchipped stray and found dogs that are handed in to authorities stand a better chance of being swiftly reunited with their owners than non-chipped pets.

What you may not know about...

Microchipping

'Microchip mania' appears to have beset the UK in recent years. According to many vets, dog charities and rescue centres, and those that make and sell microchips, microchipping is the safest and the best way forward to reduce the number of strays picked up each year, saves thousands of them being euthanised because their owners can't be identified, makes the theft of pets more difficult and reunites lost dogs with their owners. In addition, some MPs, including Martin Horwood and Richard Bacon, who are lobbying for mandatory microchipping of all dogs in the UK, say it will help save thousands of pounds spent on, and resources utilised in, caring for strays until owners can be identified or found, as well as being a vital tool against the use of dogs as weapons.

Speaking Out For Animals (SOFA), a group of schoolchildren in Norfolk, is campaigning for compulsory canine microchipping, as is the UK's largest dog charity Dogs Trust.

Says Clarissa Baldwin, Dogs Trust chief executive: "The one-off cost of microchipping a dog is a small price to pay for a lifetime of security. Dogs Trust is asking for the support and backing of all politicians in our push for compulsory microchipping."

With those that are for chipping constantly 'urging' people to have their dogs chipped as it is a 'huge part of being a responsible dog owner', because the 'importance of microchipping your beloved pet cannot be underestimated' and this 'preferred, quick and easy' method of pet identification 'gives peace of mind', it's akin to being branded as an

irresponsible owner if you don't heed their advice.

AN INFORMED CHOICE

Chipping is a permanent method of ID'ing dogs, and of course you have to have it done to take your pet abroad, but implementing mandatory chipping takes away people's freedom of choice in the matter – and some people simply do not want a chip implanting in their pet. And one of those is me. Why is that?

Well, there are several reasons, but the most important ones for me are that there are no guarantees that it won't cause ill health or my dog to die, the chip won't migrate and fail to be picked up by a scanner, the chip itself is failsafe – or that a local authority pound or rescue centre will, in fact, scan my dog at all if he ends up in one through straying. The

chances of these five instances happening are slim, but have nevertheless occurred.

Considering the cons as well as the pros of chipping has allowed me to make an informed decision. And knowing what they are will hopefully help you make up your own mind too about whether or not to have your dog chipped.

WHAT ARE MICROCHIPS?

Those who promote microchipping state that the chips (transponders) are tiny – the size of a large grain of rice, or a tic tac mint. One make is 11.5mm long, while others are up to 14mm long. Those 12mm and less are known as micro-transponders.

How a pet microchip compares in size to a grain of rice.

Pic © Liz McIntyre.



The chip and electromagnetic coil are encased in special glass ('bio-compatible glass', such as soda lime glass) that usually has a coating, or cap, designed to adhere to tissue so that the chip is less likely to move or migrate.

The main components of the 'bioglass'-contained chip found embedded in a liposarcoma (malignant tumour) and, in another case, immediately adjacent to a liposarcoma, in a dog were silicon, sodium, calcium, potassium, magnesium, iron and aluminium (M Vascellari, E Melchiotti and F Mutinelli, 2006). The interval times between implant and liposarcoma development were 18 and eight months respectively.

Chips are now available that are encased in bio-polymer material, which is said to be stronger and lighter than bio-glass.

able to get in touch with it in order to contact the dog's registered owner.

Generally, this system works smoothly and efficiently – but sometimes it doesn't – as one rescue worker recently told

Dogs Monthly:

"It's often frustrating because owners forget to update database details when they move house, so the owner cannot be found. In addition, armed as I always am with a microchip scanner, I scanned and found the microchip in a Jack Russell found wandering in the village. I phoned Petlog, which is manned 24 hours, was told it was an Anibase chip and advised to phone another number. This I did and was put through to an answer machine which talked all about chipping for five minutes, then diverted to another answer machine which said to leave a message and then informed me that the message box was full so I couldn't leave a message!

"I rang Petlog again to see if they could help further, but they couldn't. Overall the whole process took over half an hour. So there isn't a database network process that works 24/7 across all chip types. Not good, eh?"

Maybe, if chipping is to be made mandatory, it would be vital to have one database for all chips.

The BackHome chip is billed by its manufacturer, Virbac, as being 'the most effective way to address your pet's safety' and that its 'national database [Anibase] can be accessed rapidly by phone any time of day or night... a small price to pay for peace of mind'.



Pic courtesy of The Blue Cross

After a dog warden found Honey, a Saluki cross-breed, and took her to The Blue Cross hospital in London, she was reunited with her owner, Vikki Beckley thanks to her microchip – two years after she went missing!

However, the rescue worker discovered it could not be accessed 24/7, and peace of mind was not achieved, having spent a frustrating time phoning around fruitlessly.

IMPLANTING QUALIFICATIONS

Anyone can chip a dog in the UK after going on a short course, such as those organised by The Pet Chip Company lasting three or four hours, to learn how to chip pets, which costs around £30-£75 (depending on status) – and then earn money from doing so. The Pet Chip Company, which supplies pet-detect® microchipping equipment (all its Trovan-made chips are registered with the KC's Petlog), says up to 400 per cent profit per dog can be made.

All the equipment you need

National Microchipping Month
June 2009 saw Petlog-initiated National Microchipping Month (NMM), where charities – including the Kennel Club (KC), Dogs Trust, PDSA and the Blue Cross – supported the drive to get dogs chipped at a lower cost than usual at vets and rescue centres. The KC owns and manages Petlog, the largest chipping database in the UK. In 2007, the KC reported that NMM saw over 300 registered chipping events nationwide, with one veterinary clinic reporting that they normally did 50 chip pet implants a month, but that June when NMM took place, they did 715. If all 300 events saw around 700 animals implanted that month, that's 210,000 in just four weeks or so. Figures for 2008's NMM event tally were unobtainable from the KC at the time of going to press.

How much does chipping cost?

It depends on who chips your dog and where. Prices range from £9.50 at a Dogs Trust centre, up to £30 or more at a veterinary surgery. Some town councils even offer free chipping to residents 'in an effort to reduce straying'. During NMM, discounts are offered – one vet, for instance, offering to chip for £20 instead of the usual £32.

to set up as an implanter is available to buy quite cheaply online through chip suppliers.

MICROCHIP SAFETY

There is no proven scientific fact that microchipping is 100 per cent safe – nor that it isn't – but there is research to suggest that there are causes for concern with regard to possible links to cancer.

At least two cases have been documented in recent years (see 'What are microchips?'), while there are lots of freely available reports on various website forums from owners whose pets have developed tumours at chip sites. However, the latter cases of adverse reactions were not reported by the vets concerned, or were shrugged off by the vet saying they had never heard of chips causing tumours and that the idea of it was nonsense.

In February this year, a Chihuahua died after being microchipped in Dulce Agua, USA, where chipping is

mandatory [see "My dog died after chipping!" on page 14].

In the UK, a struggling kitten died in 2004 as a direct result of chipping, where the chip was accidentally injected into its brain stem, while another cat was paralysed when the implant went into its spinal column. There have also been reports of horses suffering permanent neurological damage, abnormal growths, abscesses and infection due to the injection procedure and chip implants.

Those who implant the chips can get it wrong if the animal moves suddenly at the crucial moment of implant, or the chip can be put in too deep if the needle is held at the wrong angle, as two researchers who regularly implant animals admitted.

MICROCHIP ADVISORY GROUP

In 1997, the year after concern regarding soft tissue sarcomas at vaccination sites in cats led to the formation of the Vaccine-Associated Feline Sarcoma Task Force (VAFSTF) in America, the British Small Animal Veterinary Association (BSAVA) and Federation of European Companion Animal Veterinary Associations implemented a laudable scheme to record information on adverse reactions to vaccination as well as microchips.

The BSAVA provides an adverse reaction form (with regard to microchips), which is available online to download via the association's website, for vets to fill in and return to them. Any resulting information depends on information received, as vets are not obliged to do it.

Returned forms are passed on to the BSAVA's Microchip Advisory Group (MAG); its chairman, 'who is to be independent', is appointed by the BSAVA.

The MAG is 'a group of organisations established to form a focus for the use of microchips in companion animals, including equines'. Administration is provided by the BSAVA. The group is 'made up of representatives from companies in the field of microchips, animal welfare

groups and veterinary organisations'. It is currently chaired by vet Chris Laurence (veterinary director of Dogs Trust since 2003).

Membership 'is intended to cover all those who are actively involved in the sale or use of microchips'. Current membership comprises microchip manufacturers, distributors, databases, major purchasers and major implanters.

The BSAVA reported, in 2003, that there was a marked increase in the number of reports received through the adverse reaction scheme and that 'it was significant that several reports were received from some quite small practices, while many larger practices filed no reports at all. This suggests that there is an element of under-reporting, which may be happening for a variety of reasons.'

ADVERSE REACTIONS

Adverse reaction reports available from the BSAVA indicate that the number in the UK, from 1996 to May 2009, are small, with migration being the highest problem at 182 reported to them over this 13-year period: 66 chips were 'lost', 30 failed, 13 caused infection, 11 caused swellings and two caused tumours. The highest incidences of time to reaction were in a one to 12-month period. The majority of these were in dogs.

In response to this, a Dogs Trust spokesperson says: "The adverse reaction data shows how small a proportion of microchips cause a problem in relation to the numbers of chips implanted. Even if we assume significant under-reporting of reactions and double the numbers, the proportion is minuscule.

"With regard to tumours our argument is that even if both reports of tumours over the years died as a result, the number of dogs killed because their owners can't be traced is infinitely greater. As far as migration goes, it's not an issue as long as the dog is scanned properly."

Two things stand out here: 'as long as the dog is scanned properly'; and there will always be a problem of what

to do with the constant supply of dogs requiring homes – logic is that if owners cannot be found for them is to either keep them in dogs' homes (and build more to accommodate an ever-increasing dog population) and implement a continual low-cost, or free, public neutering programme or destroy them as need dictates.

Says Chris Laurence of Dogs Trust: "There is a significant cost in terms of welfare and money for those dogs that are not returned directly to their owners because they cannot be identified immediately. Compulsory microchipping would resolve a very high proportion of those incidents."

UNWORKABLE SOLUTION

Owners reclaiming their pets from local authority pounds or animal shelters have to pay a finder fee to get their dogs back – one quote was £50 plus £7 a day keep fee. If a dog is not claimed, or the owner cannot be found, after seven

days the pound has the choice of putting the animal down, giving it to a rescue centre to be rehomed, or selling it to a member of the public that wants it to help recoup costs.

In addition, it's an unfortunate fact that an element of the public would not wish their dogs to be chipped so they cannot be identified for various reasons. And they would be unlikely to bother claiming their dog back from a pound if they had to pay to do so. So

Richard Bacon MP.



it would be the law-abiding that, as usual, are paying out to stay on the right side of the law, while the ones that wish to be unknown to the 'pet police' will avoid doing so. As a rescue worker told **Dogs Monthly**: "In my experience, a lot of strays are 'deliberate'." The credit crunch is not helping, as an increasing number of owners find they cannot afford to keep their dogs.

So, the argument that compulsory chipping will reduce 'unwanted' strays, or those dogs that are bred for, and used as 'weapons', as put forward by those involved in the microchipping 'market' and some MPs – including Martin Horwood and Richard Bacon – who are lobbying for mandatory chipping, does not really add up in my view.

Richard Bacon MP says: "There are important questions over whether making it mandatory to microchip all dogs in the UK would work in practical terms. For instance, the government would

A painless procedure?

Chipping is said to be painless by those that promote the procedure. Some dogs do feel momentary pain when injected, just as some humans react more than others when injected. Some dogs have thicker skins than others, which can make it more difficult for the needle to penetrate it.

The needles used to implant chips are 12 or 13 gauge in thickness – they are large. As comparisons, hypodermic needles used to take blood from humans are thinner, usually 21 gauge, while 16 or 17 gauge needles are used for blood donations.

Chips are normally packed in sterilised needles ready to be

inserted into an implant gun, and these are inserted usually between the shoulder blades of dogs to minimise migration.

One rescue worker commented: "I've found chips in all sorts of places – they can migrate down into the 'socks', along the back, into the chest. I've found chip migration to be a common occurrence, so I ensure I am meticulous to scan the dog all over its body."



A microchip implant gun.

need to set up a national dog registration scheme, but this has been tried before. The dog licence was abolished in 1987

because it was too expensive to run and very few dog owners took any notice of it.



Martin Horwood MP (centre) says: "If people can't afford £20 [for microchipping], they can't afford to keep a dog. If they can afford to keep a dog, I'm sure they can afford £20 that will make their dog more safe."



Some strays are 'deliberate', therefore such owners are unlikely to comply with mandatory microchipping.



Pic courtesy K. Albrecht.

Dr Katherine Albrecht.

In America, Dr Katherine Albrecht Ed.M, a Harvard scholar and researcher, has been proactive in spotlighting and campaigning against intrusion into personal privacy and freedom issues. Following years of scientific study, her detailed report on her findings regarding microchipping, both in pets and humans, can be found at www.antichips.com/faq/html/faq-toc.html. Although the report is damning about chip implants, it does state that 'the fact that we have not seen an epidemic of cancers in pets would suggest that only a small number will be affected.'

"Mandatory microchipping would place an additional burden on the police and local authorities, diverting resources from other pressing problems. Many dog owners are also worried that microchips can cause cancer and will want to choose for themselves whether or not to run this risk. "There are also strong arguments in favour of

microchipping: should your dog ever go astray, microchipping undoubtedly gives you the best chance of being reunited with him. I've had my Jack Russell chipped, but I do not wish to force people to microchip their dog if they do not want to."

Said Martin Horwood, when questioned on removing the public's choice in the matter of compulsory chipping: "The trouble is, if you don't remove an element of freedom, then responsible dog owners will always do the right thing and get their dogs microchipped and those that are the very problem, certainly in the context of dangerous dogs, won't do it and you still have that side of the problem."

What is obvious, though, is that the microchipping market is worth a lot of money to those involved in selling and promoting it to the owners that want to stay on the right side of the law – in more ways than one.

"MY DOG DIED AFTER CHIPPING!"

In other countries, such as New Zealand, Canada and America, microchipping dogs is mandatory in some states. However, some people are extremely unhappy that they don't have a choice in the matter – so much so, that in San Marcos, Texas, months of protest by dog owners in March 2009 forced the city council to rescind its compulsory chipping ordinance that was due to take effect in April.

The dog owners' views that microchip mandates are an inappropriate incursion on their rights was given further weight when a tiny dog bled to death hours after being mandatorily chipped against his owner's wishes. The vet involved, Dr Reid Loken, confirmed that the dog died from blood loss associated with the microchip, citing "an extreme amount of bleeding" from the "little hole in the skin where the [microchip implant] needle went in" was the cause of death.

The bleeding could not be attributed to a congenital blood clotting problem since,

Charlie Brown died after being microchipped in February 2009.



Scanning for a microchip implant: in cold weather, some implanters have reported that some scanners do not work efficiently unless warm enough.

the vet said, that the dog had been neutered and had a tooth extraction without incident just weeks before.

Charlie Brown, a long-haired Chihuahua, was owned by Lori and Ed Ginsberg, of Agua Dulce, California, who, while devastated by the loss of the pet, bear no ill-feeling towards their vet. Says Lori: "This [microchip] technology is supposedly so great – until it's your animal that dies. Dr Loken is a great and respected vet and this was not his fault. The real blame is with the people who forced us to implant our dog against our better judgement."

The Ginsbergs now have another Chihuahua, but refuse to have him chipped – even though it's against the law and they could be prosecuted and fined.

Says Lori: "Although we can't be 100 per cent certain that the implanting killed Charlie, there's no way I would have a pet chipped again. In most cases [chipping] doesn't negatively affect animals, but no-one ever told us that our dog could die from it. It should not be forced on people – how invasive can the government be?! The dog has no say-so in the matter, it doesn't have a choice.

"While it's said that chips are tiny in comparison to large dogs or humans, one would be the equivalent of the size of a Bic lighter size when put in a small dog like Charlie."

"This [microchip] technology is supposedly so great – until it's your animal that dies."

MORE TO THE STORY...

In 2007, an investigative reporter from the Associated Press (AP), Todd Lewan, unearthed information that puts an alternative slant on the whole concept of chipping dogs. It concerns microchip implants being linked to animal tumours.

Wrote Lewan for the AP in September 2007: 'When the US Food and Drug Administration [FDA] approved implanting microchips in humans, the manufacturer said it would save lives by letting doctors scan the tiny transponders to access patients' medical records almost instantly.' Implanting prisoners was another possible use for the chips that was being explored around the same time.

'But neither the company nor the regulators mentioned that a series of veterinary and toxicology studies, dating to the end of the mid-1990s, stated that chip implants had 'induced' malignant tumours in some laboratory mice and rats.'

The company concerned, VeriChip Corp, sees a target market of 45 million Americans for its medical monitoring chips, and insists the chips are safe. It is spending millions to assemble a national network of hospitals equipped to scan chipped patients. Chipping, using VeriChip implants, was carried out in a 2007 pilot programme on patients at an Alzheimer's community care facility in Florida.

The FDA is overseen by the Department of Health and Human Services. Lewan discovered that two weeks after the chip approval took effect in 2005, the department head, Tommy

Thompson, left his Cabinet post and five months later was a board member of VeriChip Corp. He was compensated in stock options and cash. Thompson was a candidate for the 2008 Republican presidential nomination.

It's been reported that British ministers have, for some time, been looking at implanting microchips in prisoners, quoting a senior Ministry of Justice official, in an effort to create more space in prisons, while the idea of chipping sex offenders has also been raised. However, a parliamentary source says this is – and always has been – 'bunkum'.

In light of the Lewan exposé, and having reviewed the rodent research, leading cancer specialists [in both animals and humans] said that while animal test results do not necessarily apply to humans, the findings troubled them. Some said they would not allow family members to receive implants, and all urged further research before the bioglass transponders are widely implanted in people.

Lewan reported: "Before microchips are implanted on a large scale in humans," said Dr Robert Benezra, of the Memorial Sloane-Kettering Cancer Center in New York, "testing should be done on larger animals, such as dogs or monkeys."

Additionally: 'Dr Cheryl London, a veterinary cancer specialist at Ohio State University, said she saw a need for a 10-20-year study of chipped canines... to see if you have a biological effect.'

"Before microchips are implanted on a large scale in humans, testing should be done on larger animals, such as dogs or monkeys."

Dr London's statement was backed by another veterinary oncologist at the National Cancer Institute, who added that reactions from implants affecting up to 10 dogs in 100,000 would not be a cause for concern, but 20-30 would raise red flags.

If a 10-20-year study is deemed necessary, it's already been 12 years since the BSAVA's introduction of adverse reaction reports in the UK. And, as a cancer specialist commented, what better way to conduct a study than on a population of millions of pet dogs. The thought ran through my mind that there would be few better ways to do this on the vast number of dogs required – and get the unsuspecting

public to pay for it – than via mandatory canine chipping.

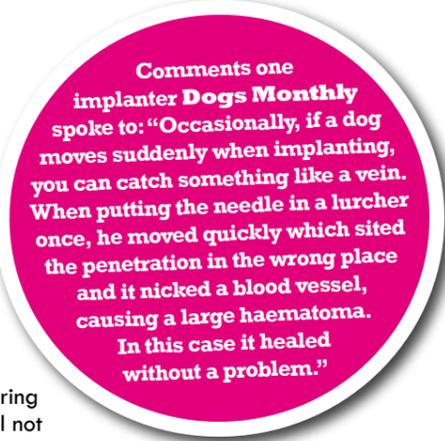
Says Lori Ginsberg: "There's an American saying that's apt here: If you put a frog in a pan of boiling water it will jump out immediately to save itself, but if you put the frog in cold water and bring it to the boil slowly, it will not perceive the danger and will be cooked to death."

FOR YOU TO DECIDE

In conclusion, there is no doubt that microchips work, and indeed are a real boon, in identifying pets and who their owners are, as long as the chip works, is scanned, is picked up by a scanner and if registration details held on databases are current. Other, non-invasive, ways of ID'ing pets, include the traditional collar and tattooing, although both can be removed far more easily than a chip.

While the earning potential from mandatory pet microchipping is enormous, the potential, in terms of collecting data about people, and possibly from chipping people themselves, is vast.

Given the cons, as well as the pros, whether you want your pet chipped – and are



Comments one implanter Dogs Monthly spoke to: "Occasionally, if a dog moves suddenly when implanting, you can catch something like a vein. When putting the needle in a lurcher once, he moved quickly which sited the penetration in the wrong place and it nicked a blood vessel, causing a large haematoma. In this case it healed without a problem."

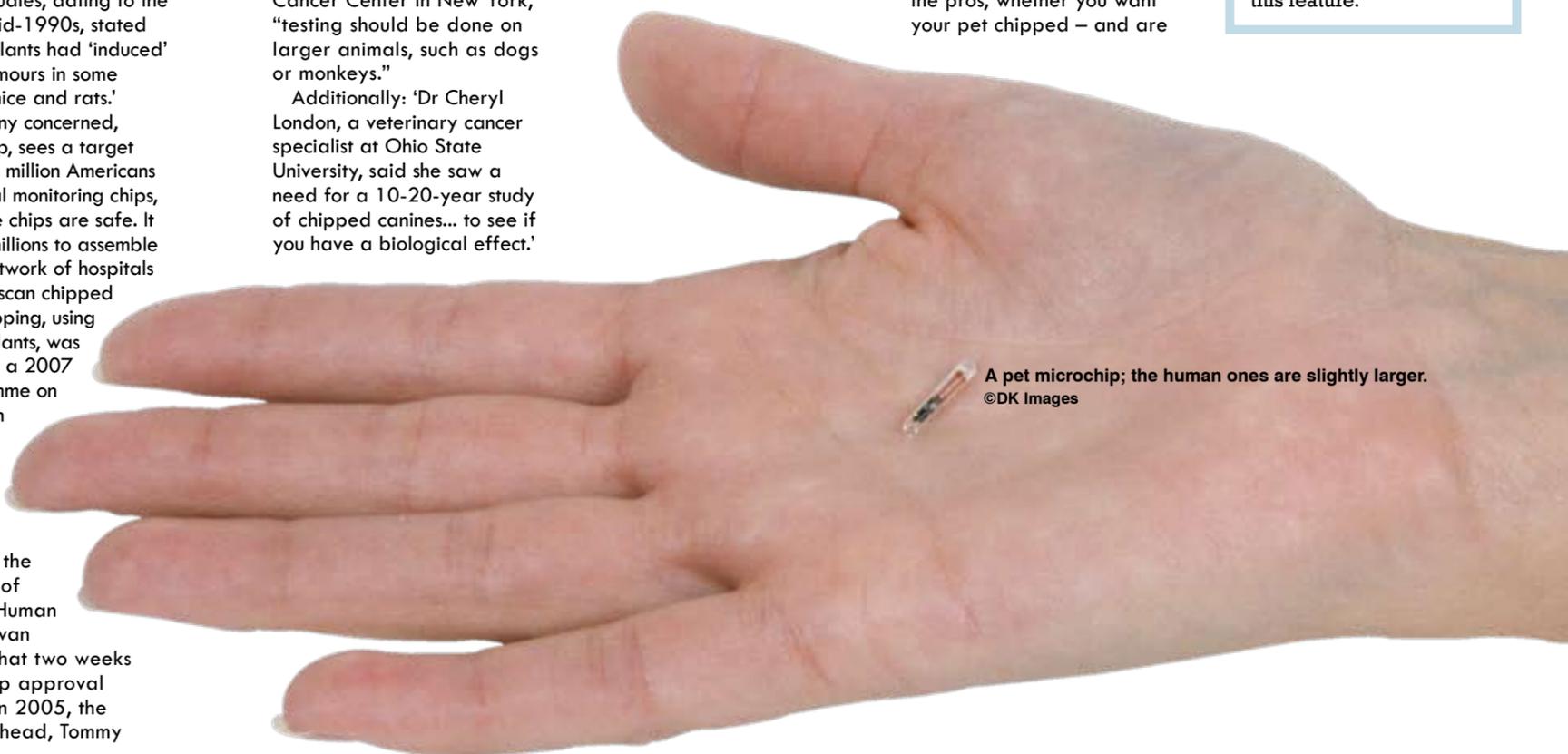
happy for this procedure to be made mandatory – is for you to decide.

If your pet is already chipped, then check him all over, not just at the implant site, regularly for lumps, bumps, heat and tenderness. If anything unusual is found, ask your vet to investigate further to be on the safe side. ●

● **What do YOU think about mandatory microchipping of pet dogs? Send your views to caroline.d@dogsmoonthly.co.uk**

Special thanks

Thanks to Todd Lewan, Dr Katherine Albrecht and many others who provided information for this feature.



A pet microchip; the human ones are slightly larger.
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