

AURÉLIEN BUSTIN - VICTOR DE VILLEDON DE NAÏDE - AMBRE DUPONT - *Matyo*

# ONCE UPON A TIME IN AN MRI MACHINE

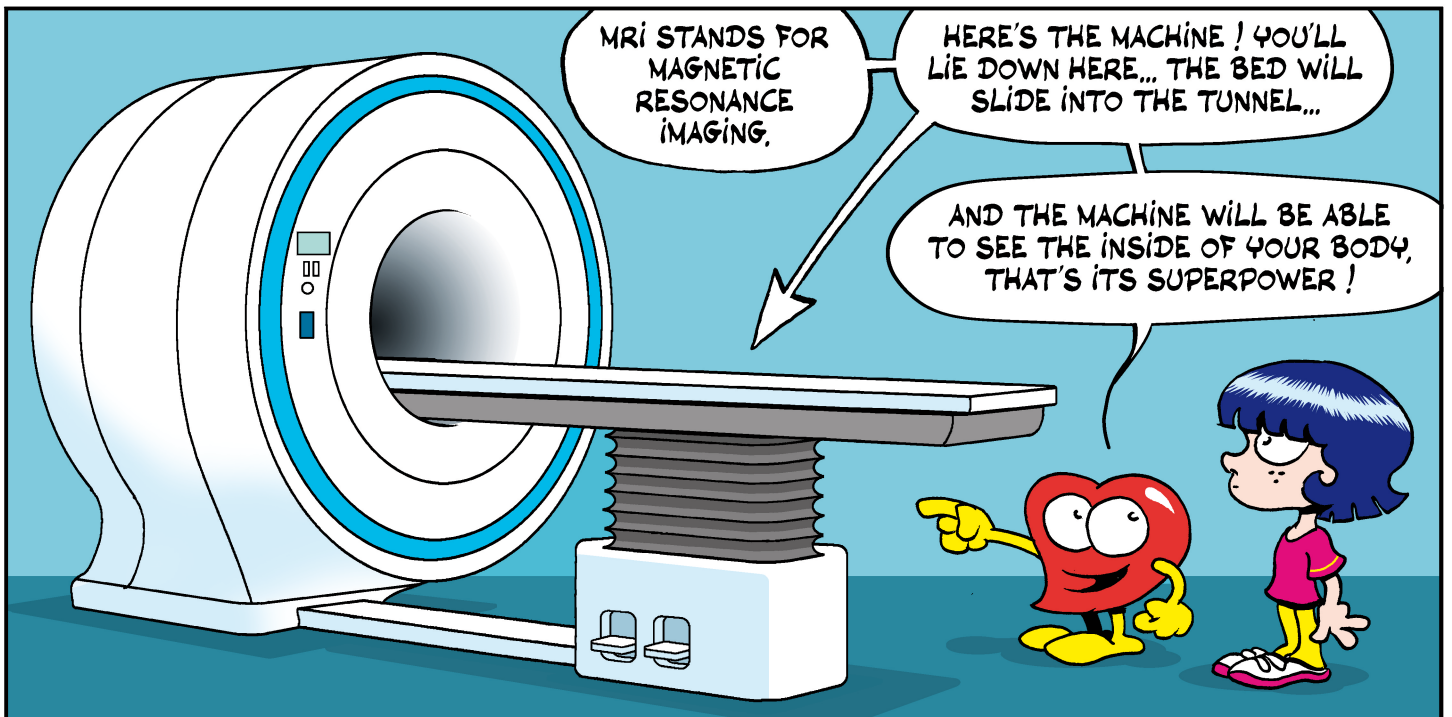
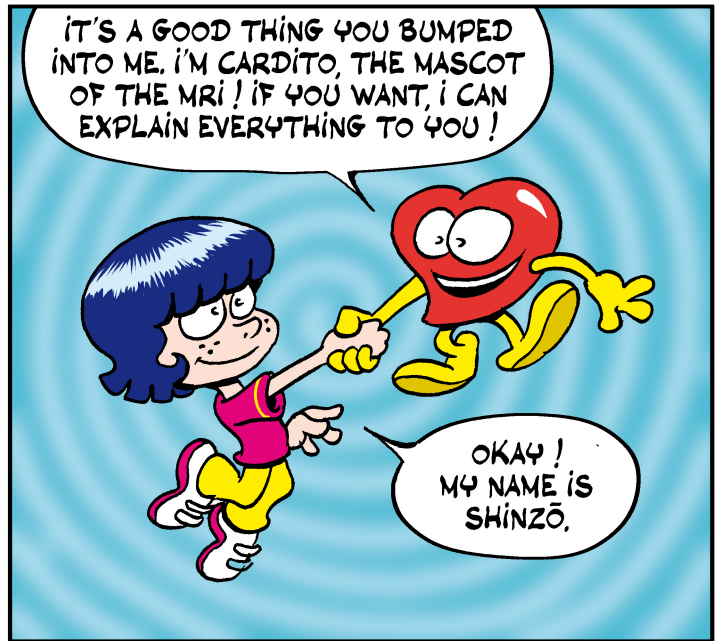
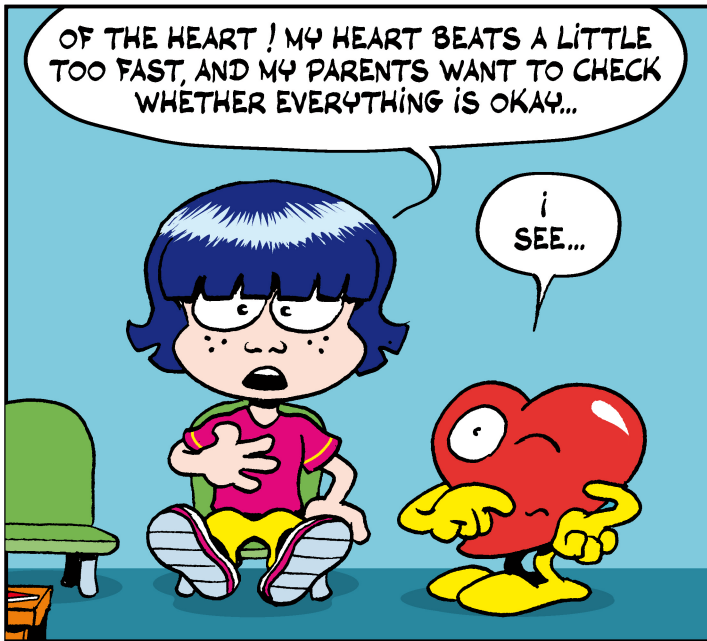


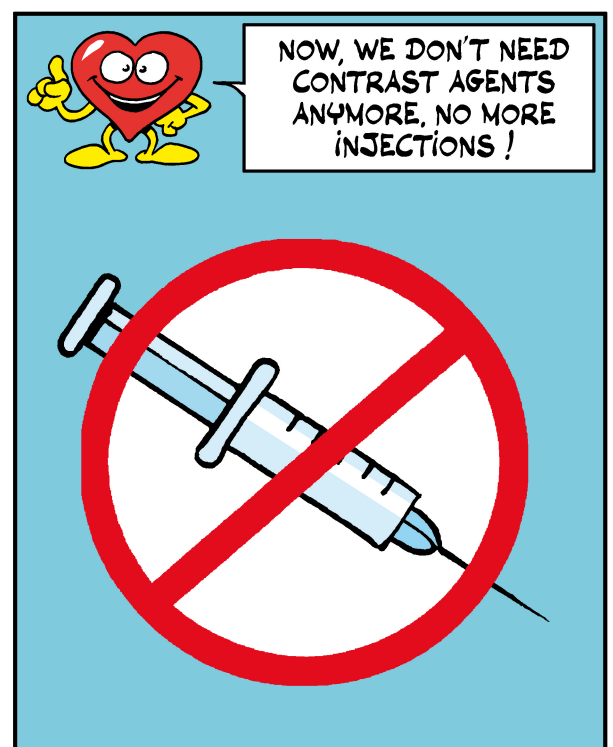
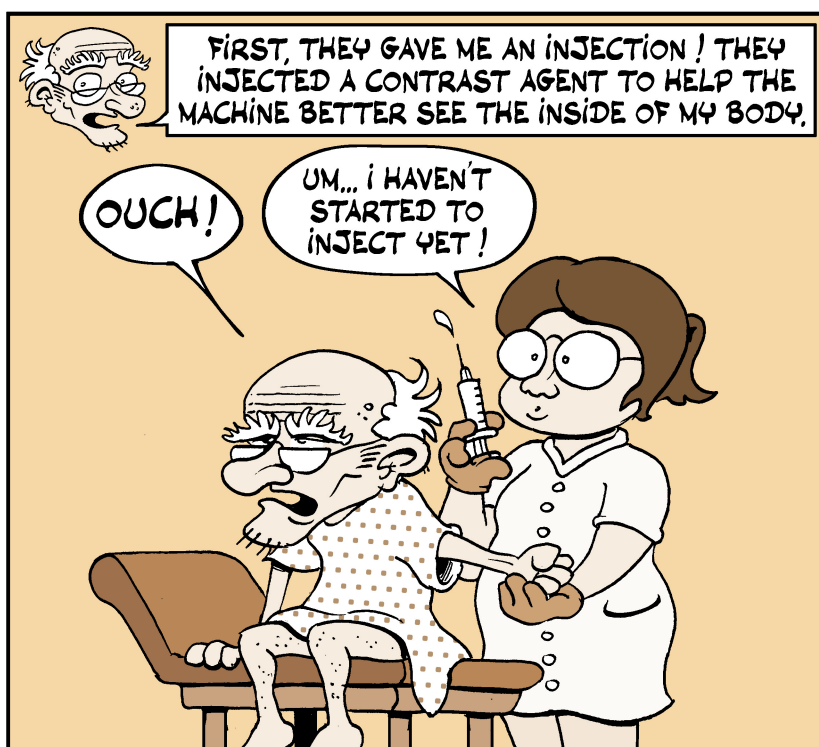
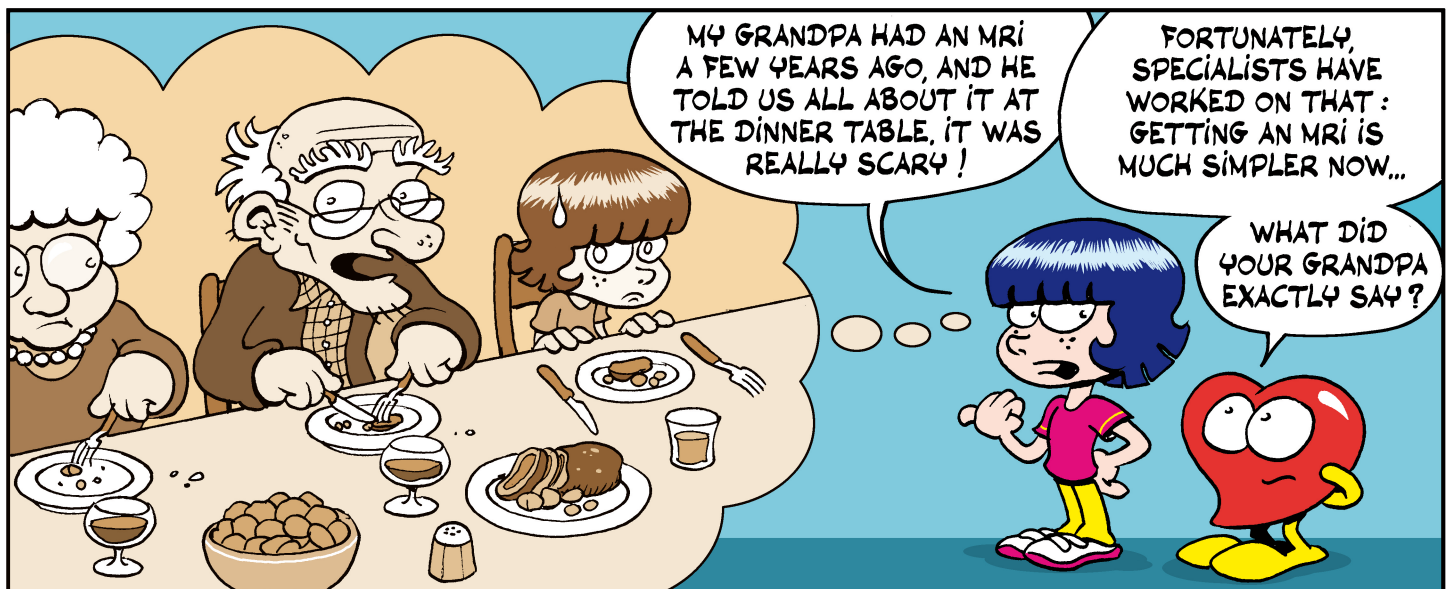
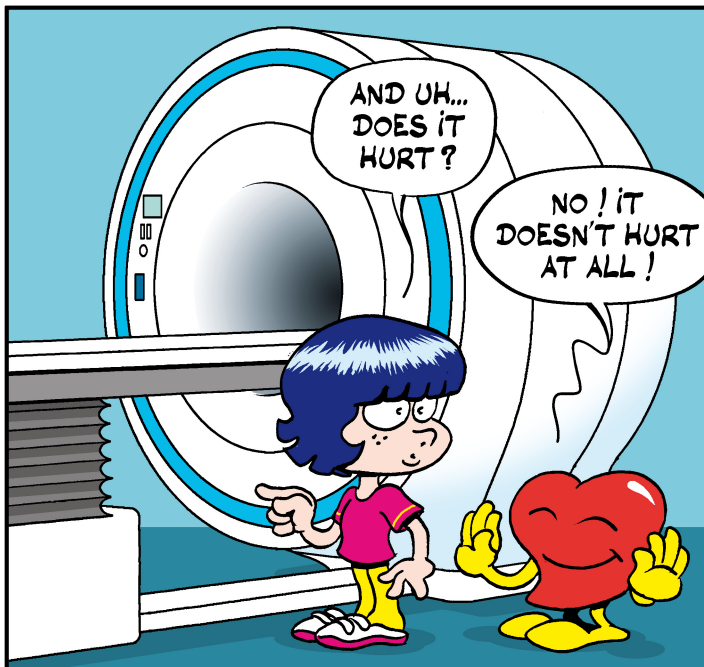






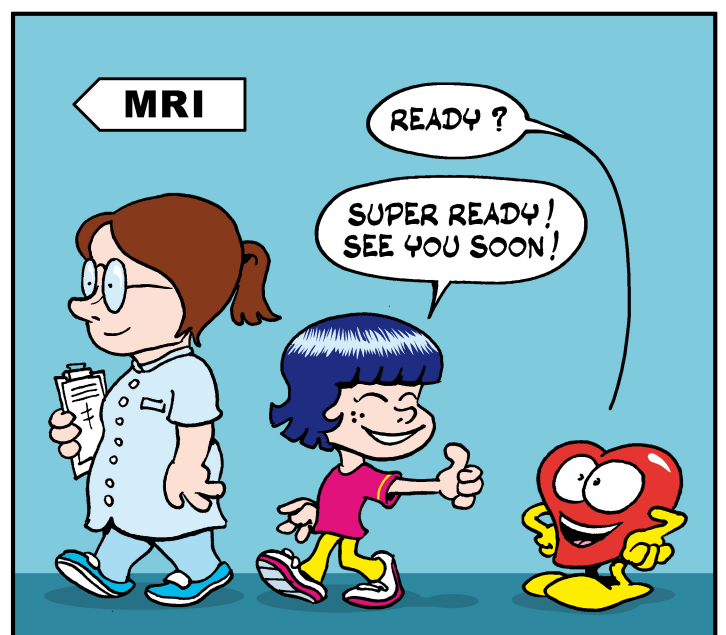
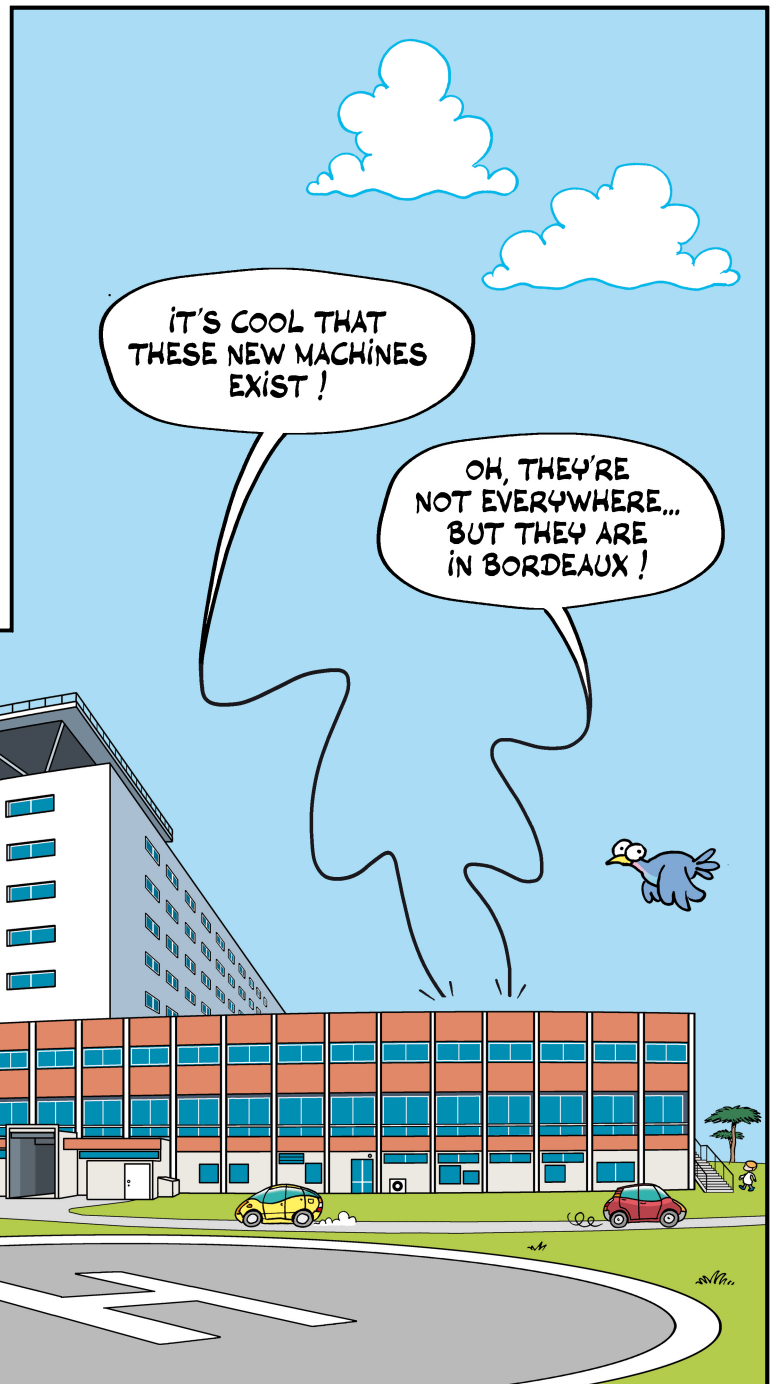
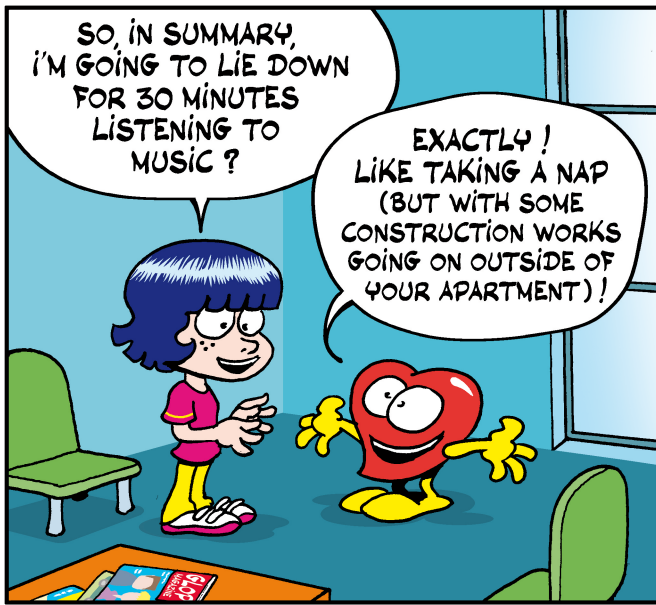






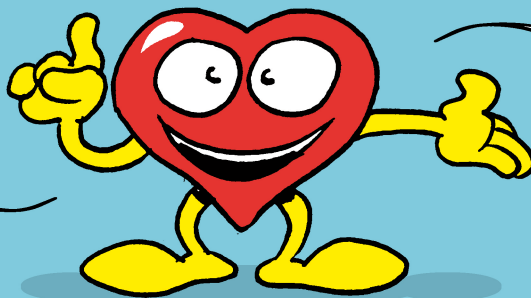








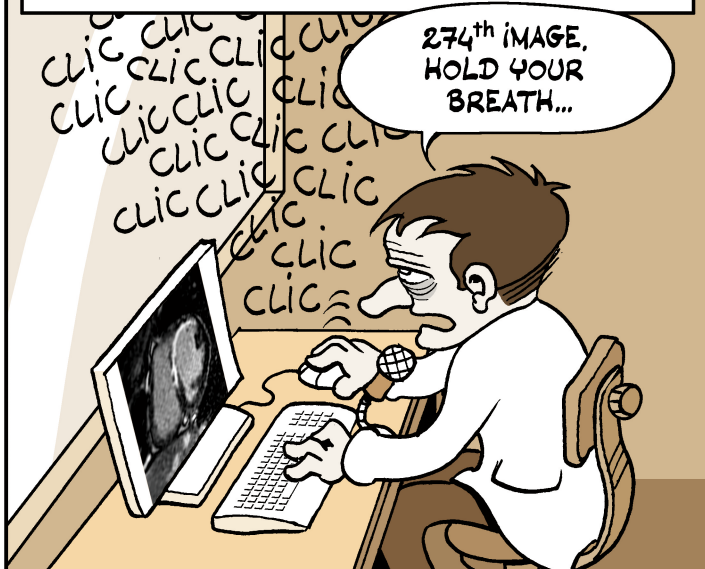
WHILE SHINZŌ IS  
HAVING HER MRI,  
I'D LIKE TO ADD  
SOMETHING...



THE NEW  
MACHINES ARE ALSO  
GREATLY APPRECIATED  
BY THE PEOPLE WHO  
ARE WORKING  
WITH THEM !

**- THE OPERATORS -**

BEFORE, THEY HAD TO COLLECT  
BETWEEN 800 AND 4000 IMAGES IN 2D,  
WHILE TALKING TO THE PERSON  
INSIDE THE MACHINE...

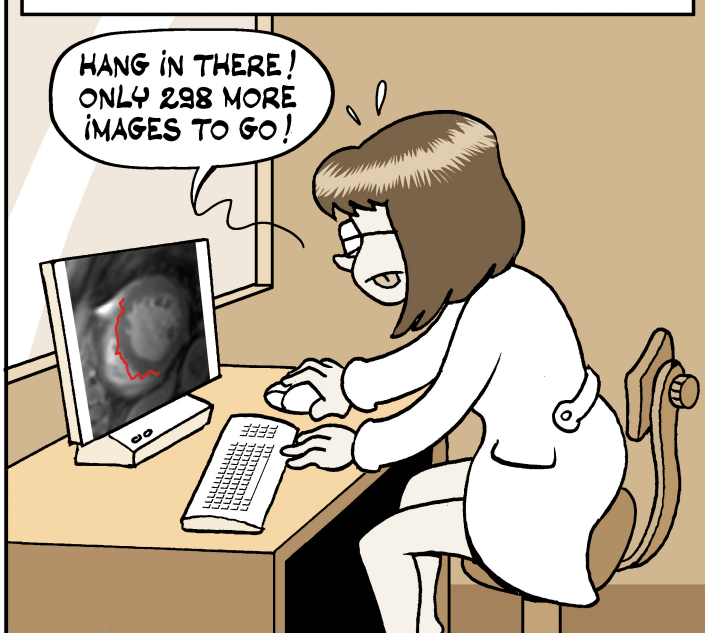


NOW, THEY JUST NEED TO CLICK  
THE MOUSE ONCE TO RECEIVE  
ALL THE IMAGES !



**- THE RADIOLOGISTS -**

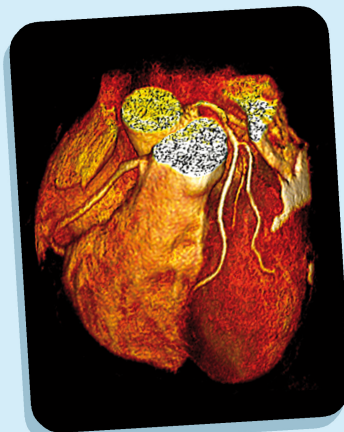
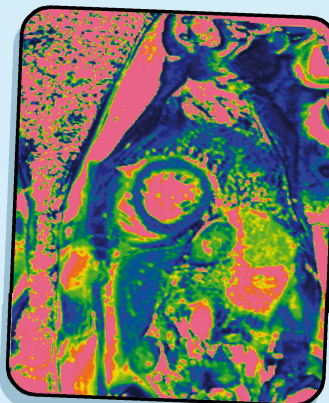
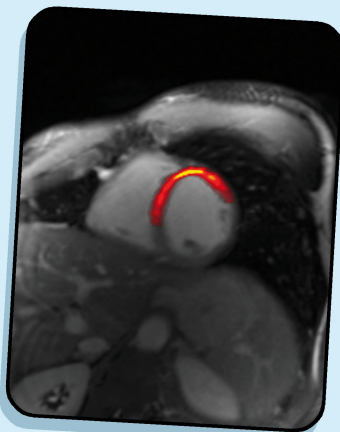
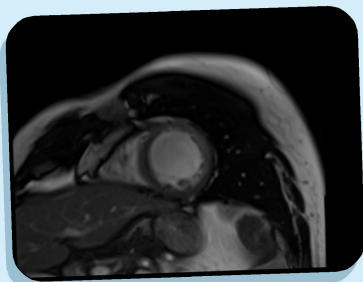
BEFORE, THEY HAD TO OUTLINE  
HUNDREDS OF IMAGES FOR HOURS  
TO PROPERLY LOCATE THE HEART AND  
PROBLEM AREAS (LIKE INFARCT SCARS, ETC.)



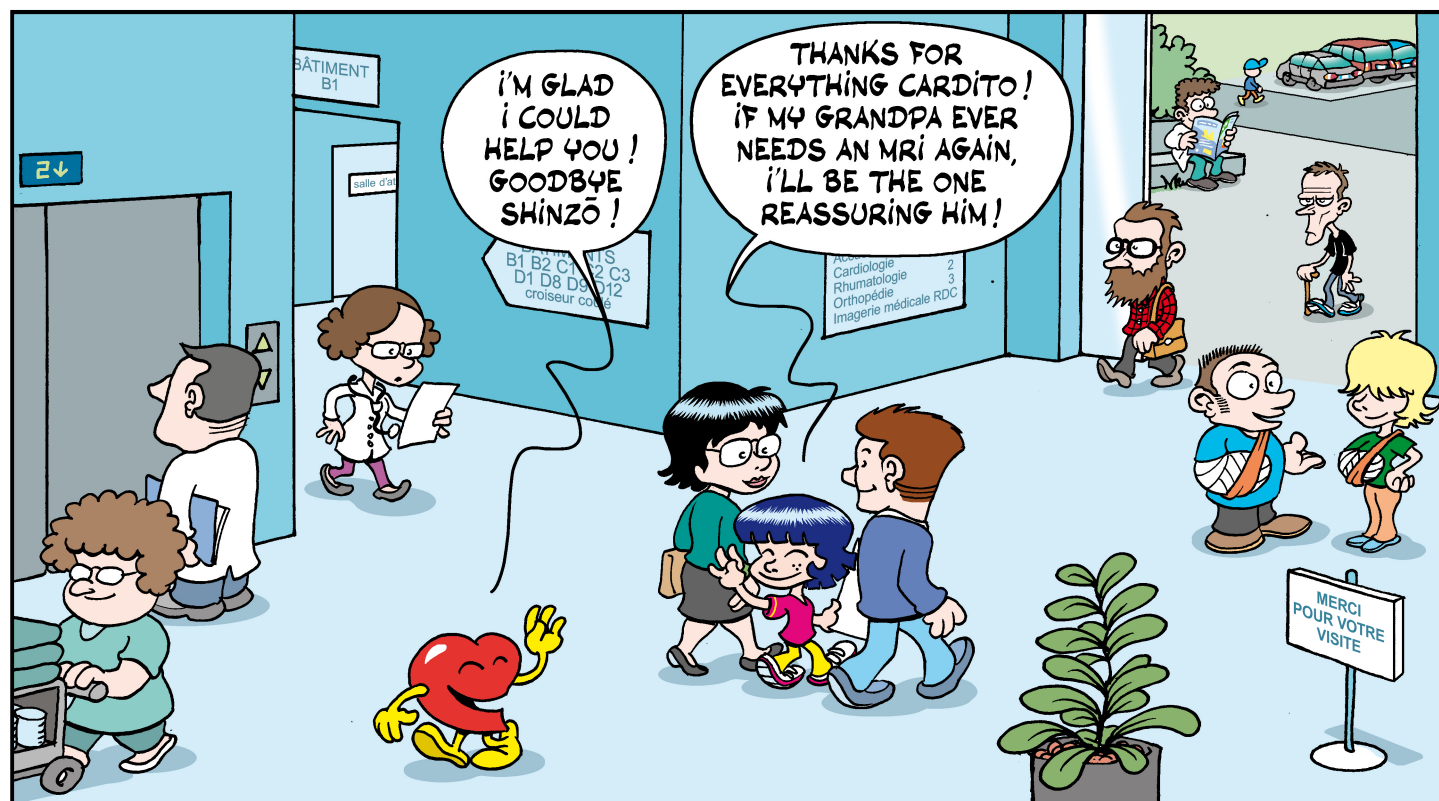
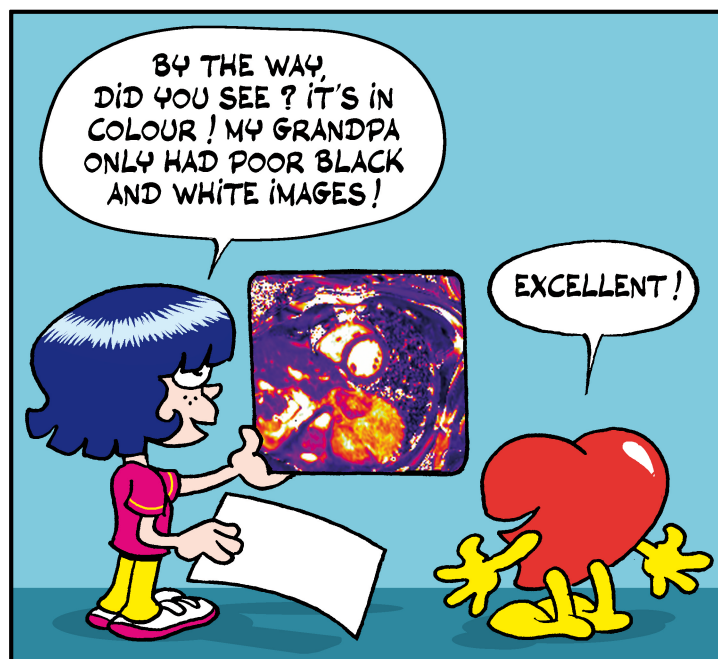
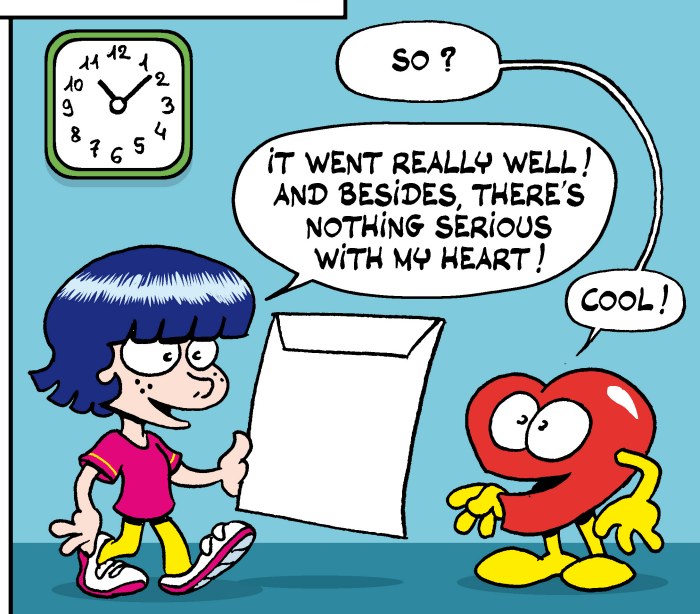
NOW, COMPUTERS CAN DO THAT  
ON THEIR OWN, VERY QUICKLY, AND HELP  
RADIOLOGISTS WITH THEIR DIAGNOSIS !



HERE ARE SOME IMAGES OBTAINED WITH THE NEXT-GENERATION MRI (THESE AREN'T SHINZŌ'S).

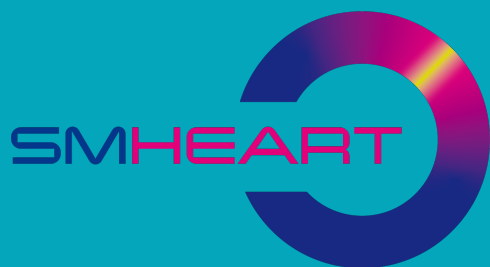


HALF AN HOUR LATER...



TRANSLATED FROM ORIGINAL VERSION TO ENGLISH BY PROF. MATTHIAS STÜBER





Next generation cardiac imaging

SMHEART aims to revolutionize cardiac magnetic resonance imaging (MRI). Our mission is to invent a powerful, comfortable, and fully automated MRI system at all levels. Based on innovative tools and a multidisciplinary scientific team, we offer healthcare professionals tools to improve the management of cardiovascular diseases.



The technology shown in this comic represents high-end research instruments that are constantly evolving, and some of which are still in a developmental phase. They are currently undergoing rigorous testing at Bordeaux University Hospital.

*SMHEART has received funding from the European Research Council (ERC) under the European Union's Horizon Europe research and innovative programme (Grant agreement No. 101076351)*

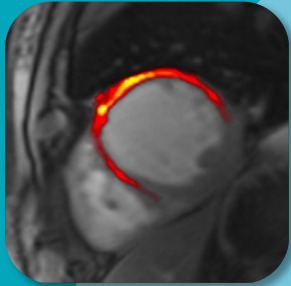
## Images seen in the comic book

In this comic strip, you have discovered a set of images that are captured on a daily basis at the Bordeaux University Hospital. These images are of crucial importance for gathering information about the functioning of the heart. All these data contribute in a unique way to the diagnostic and therapeutic process. We will now present them to you:



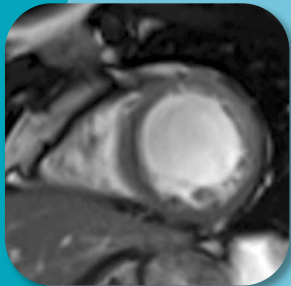
PSIR

Detection of infarct scars, which, if present, appear white on the image. A contrast agent is used.



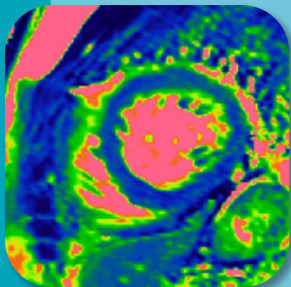
SPOT

Detection of infarct scars, but this time in color!



CINE

Dynamic visualization of the beating heart



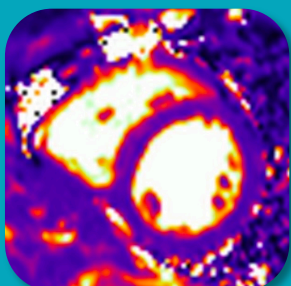
T1 $\rho$  map

Detection of heart diseases without the need of a contrast agent



Coeur 3D

3D visualization of the entire heart



T2 map

Detection of acute cardiomyopathies (myocarditis, inflammation, edema, ...)

Our partners:



**European Research Council**

Established by the European Commission



université  
de **BORDEAUX**



**Centre hospitalier  
universitaire vaudois**

Contact: <https://www.smheart.eu>  
Contact Matyo: [contact@matyo.net](mailto:contact@matyo.net)







# ONCE UPON A TIME IN AN **MRI** MACHINE

AURELIEN BUSTIN - VICTOR DE VILLEDON DE NAÏDE - AMBRE DUPONT - *Matyo*