

Chapter

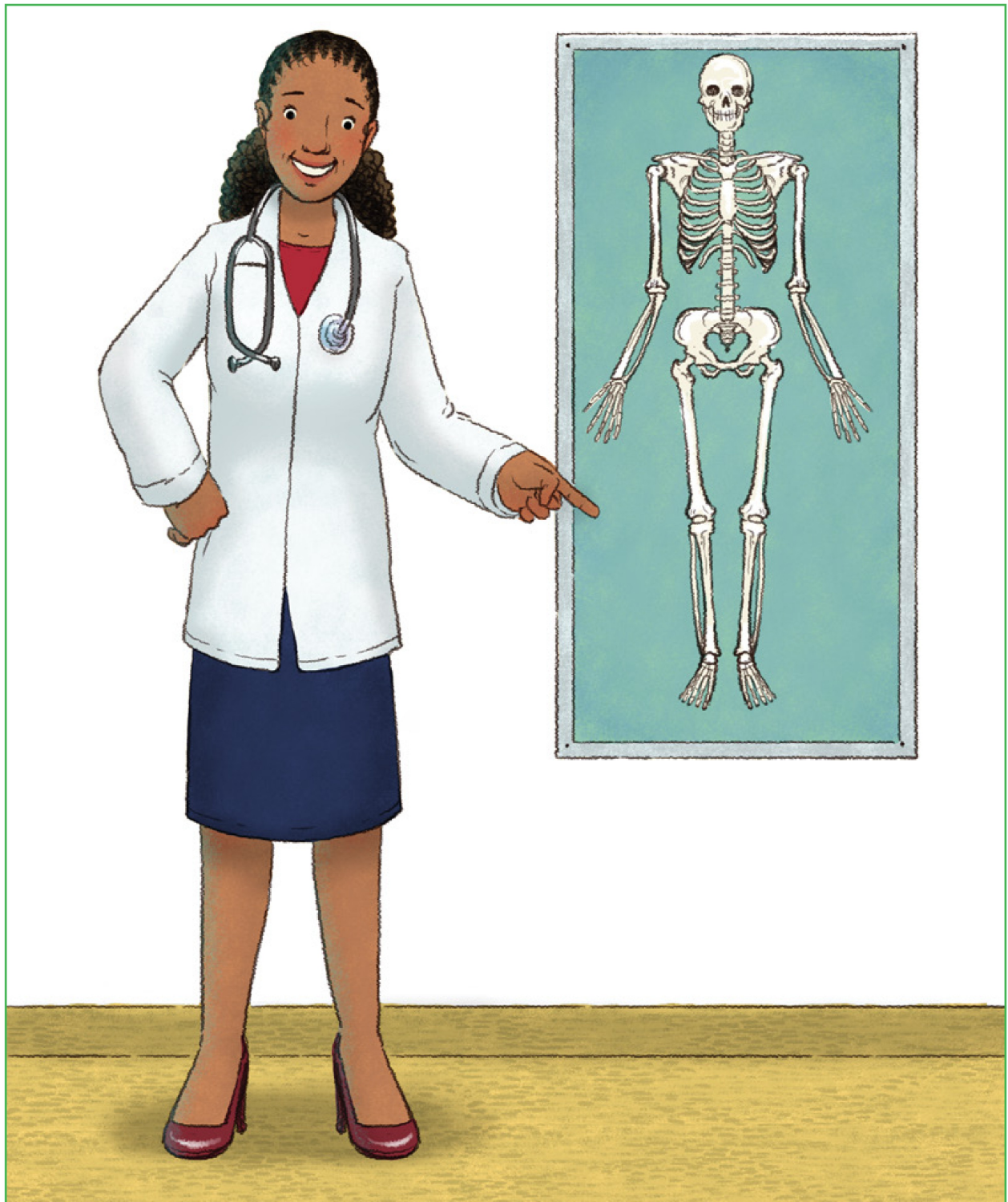
2 All About Bones

Last time, we learned the names of some of the bones in the body. Today, I'd like to tell you a little more about bones.

The bone I'm pointing to is the human fibula bone. The fibula, you may recall, is one of the bones in your leg.

The outer part of a bone is hard. It is made up of the same stuff as a seashell you might find at the beach. That stuff is called **calcium**.

Do you like milk? Milk and other **dairy** products like cheese have lots of **calcium** in them. They are good for your bones. One way to take good care of your bones is to eat a healthy diet with **dairy** products and other foods that provide **calcium** like beans and green leafy vegetables.

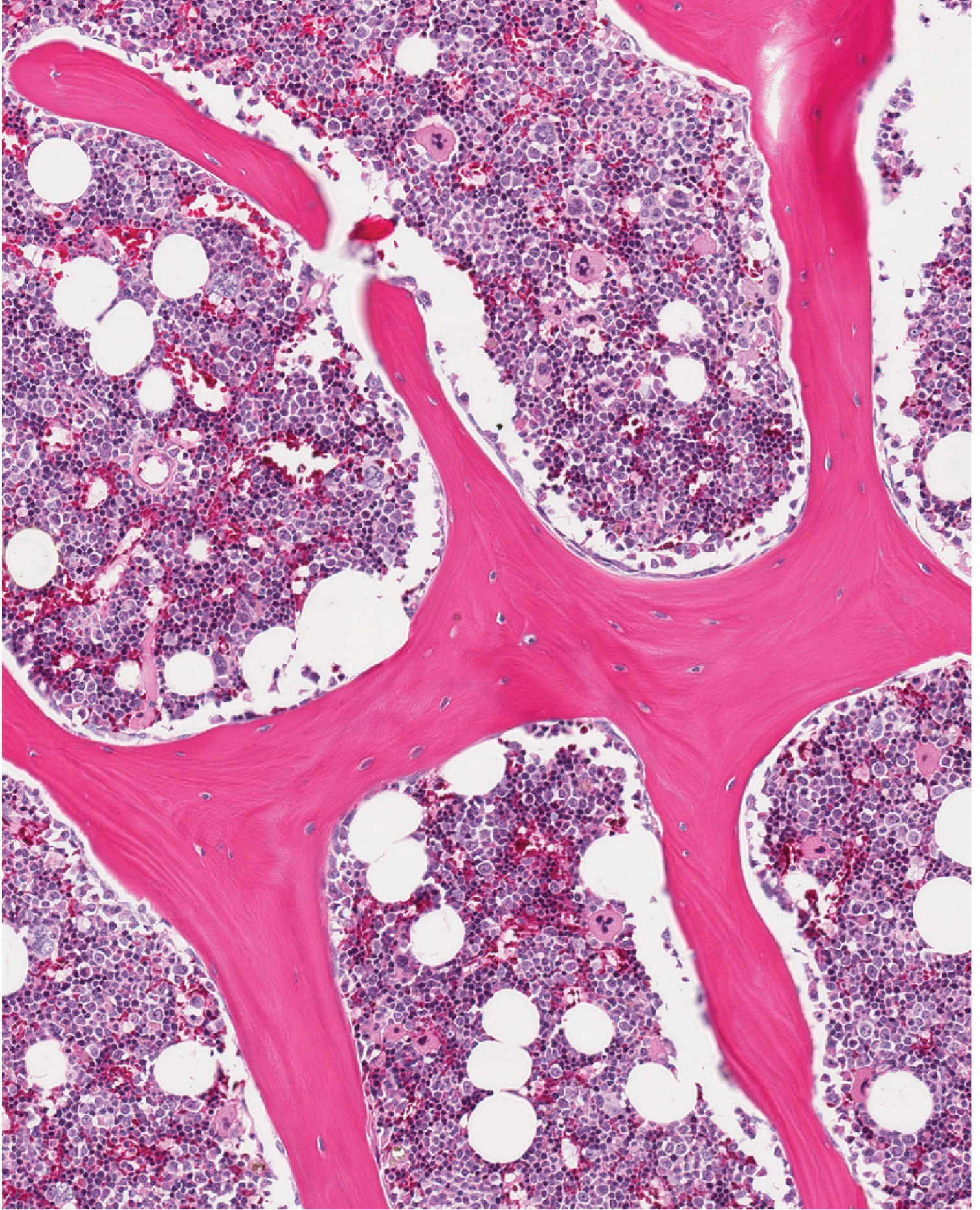


Dr. Welbody points to the fibula.

If you could look inside a bone, you'd see something called bone **marrow**. Since you can't see inside this bone, I'll show you a slide.

This slide shows bone **marrow cells**. I think you may already know a little about **cells**. Is that right? If you look at things with a strong microscope, you can see that many things are made up of tiny **cells**. Your skin is made of **cells**. So are your bones.

Here you can see some bone **marrow cells**. There are millions of **cells** like these inside your bones. The bone **marrow cells** have an important job. They are like little factories. They produce red blood **cells**. Then, the red blood **cells** carry oxygen all around the body.



*A view of bone **marrow cells** through a microscope*

As you get older and taller, your bones grow with you. Bones are strong. They can support a great deal of weight. However, if we put too much pressure on them, or if the pressure comes from the wrong direction, bones can break.

This next slide shows a broken bone. This is a special kind of picture called an **x-ray**.

X-rays are part of the invisible light spectrum. When you aim **x-ray** light at your body, some parts of the body absorb a lot of **x-rays** and some do not. Your bones are hard. They absorb a lot of the **x-ray** light. The soft **tissue** around your bones absorbs less **x-ray** light. That is why doctors like **x-rays**. We can aim **x-rays** at a part of your body and get a picture of the inside of your body. We can use **x-rays** to find out if any bones are broken. You will learn much more about **x-rays** in a later unit about light and sound.



*An **x-ray** image of a broken bone—do you see exactly where the bone is broken?*

Have any of you ever broken a bone?

I fix lots of broken bones each year. Would you like to know how I do it?

I start by taking **x-rays**. That's how I find out if the bone is really broken. If the **x-rays** show that a bone is broken, then I set the bone. That means I put the bone pieces back in the right place. Once the bones are in the right place, I put on a **cast**.

One of the remarkable things about the bones in your body is that they are able to heal themselves. Once a broken bone has been set, it grows back just like it was before it was broken.

Here's a boy I fixed up last summer. He broke one of the bones in his arm. I put the **cast** on to hold the bones in the right place so they would heal. He had to wear the **cast** for two months while the bones healed. Then, I cut the **cast** off for him.

He's just fine now. His bone has healed and his arm is as good as new.



*The **cast** helps the boy's broken arm heal.*