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PATIENT & CAREGIVER EDUCATION

# Understanding Your Liver Elastography (FibroScan®) Results

This information will help you understand your FibroScan results. Your doctor will talk with you about your results and give you more information during your appointment.

## About Liver Elastography and FibroScan

Liver elastography is a non-invasive test your healthcare provider can use this to learn about your liver's health. Non-invasive means nothing is put inside your body.

FibroScan is a type of liver elastography. FibroScan is a special ultrasound technology that measures liver stiffness (hardness) and fatty changes in your liver. These measurements help your healthcare provider learn more about your liver disease.

Here are some helpful terms to know related to your FibroScan results:

- **Fibrosis (fy-BROH-sis):** Scarring in your liver.
- **Liver stiffness:** Hardness of the liver related to liver scarring.
- **Fatty change:** An abnormal buildup of fat in your liver.
- **Steatosis (STEE-uh-toh-sis):** A condition caused by having too much fat in your liver.
- **CAP score:** The way the percentage of fatty change in your liver is measured.

Fibrosis and steatosis are measured separately from one another. Your healthcare provider will talk with you about your results during your appointment.

The rest of this resource explains your FibroScan results in more detail. You can keep reading to learn more about your results.

Your FibroScan Results	
Date:	_____
FibroScan steatosis result (CAP score):	_____ decibels per meter (dB/m)
<b>Steatosis grade:</b>	_____
FibroScan fibrosis result:	_____ kilopascals (kPa)
<b>Fibrosis score:</b>	_____

## About Your CAP score

Your healthcare provider will use your CAP score to find out your steatosis grade. Your CAP score is measured in decibels per meter (dB/m). This score will range from 100 dB/m to 400 dB/m. Your CAP score and steatosis grade can go up or down over time.

The following table shows ranges of CAP scores, and the matching steatosis grades. It shows how much of your liver is affected by fat buildup. Normal livers can have up to 5% of fatty changes in them. A score below 238 dB/m means the amount of fatty change in your liver is not higher than normal.

CAP Score	Steatosis grade	Portion of your liver affected by fatty change
238 to 260 dB/m	S1	Less than $\frac{1}{3}$ (11% to 33%)
260 to 290 dB/m	S2	Between $\frac{1}{3}$ and $\frac{2}{3}$ (34% to 66%)
290 to 400 dB/m	S3	More than $\frac{2}{3}$ (67%)

# About Your Liver Stiffness Result

Your liver stiffness result is measured in kilopascals (kPa). Normal results are usually between 2 and 7 kPa. Your result may be higher than the normal range if you have liver disease. The highest possible result is 75 kPa.

## Using Your Liver Stiffness Result to Find Your Fibrosis Score

Your healthcare provider will use your liver stiffness result and medical history to find out your fibrosis score. Your results can range from normal to advanced.

- **Normal:** This means your liver has no scarring, or mild scarring.
- **Moderate and severe:** This is liver scarring that can be reversed (undone) by treating your liver disease. Good nutrition and healthy lifestyle changes can also slow down or reverse the buildup of scarring in your liver. You may not have any symptoms of moderate liver scarring.
- **Advanced:** Cirrhosis (seh-ROH-sis) is a late form of advanced liver scarring. This happens over time in chronic (long-term) liver disease.

You can use the following table to look up your liver's health. This is based on your diagnosis, liver stiffness, and fibrosis scores. Not all diseases are listed in the table. If you do not see your disease listed, ask your healthcare provider to go over your results with you. If you have more than one liver disease, this table may not apply to you.

To use the table:

1. Find the liver disease you have in the first column on the left.
2. Find your liver stiffness result in the second column from the left. Follow the row that has your results. **The ranges of liver stiffness scores in the table are estimates (not exact).**
3. Read across the rest of that row from left to right. You will find your fibrosis score in the third column from the left. The last column tells you how much scarring is in your liver.

<b>Disease Diagnosis</b>	<b>Liver Stiffness Result</b>	<b>Fibrosis Score</b>	<b>Your Liver</b>
Alcohol-Related Disease	2 to 7 kPa	F0 to F1	Is normal.
	7 to 11 kPa	F2	Has moderate scarring.
	11 to 19 kPa	F3	Has severe scarring.
	19 kPa or higher	F4	Has cirrhosis.
Cholestatic Disease	2 to 7 kPa	F0 to F1	Is normal.
	7 to 9 kPa	F2	Has moderate scarring.
	9 to 17 kPa	F3	Has severe scarring.
	17 kPa or higher	F4	Has cirrhosis.
Hepatitis B	2 to 7 kPa	F0 to F1	Is normal.
	8 to 9 kPa	F2	Has moderate scarring.
	8 to 11 kPa	F3	Has severe scarring.
	12 kPa or higher	F4	Has cirrhosis.
Hepatitis C	2 to 7 kPa	F0 to F1	Is normal.
	8 to 9 kPa	F2	Has moderate scarring.
	9 to 14 kPa	F3	Has severe scarring.
	14 kPa or higher	F4	Has cirrhosis.
HIV/HCV Coinfection	2 to 7 kPa	F0 to F1	Is normal.
	7 to 11 kPa	F2	Has moderate scarring.
	11 to 14 kPa	F3	Has severe scarring.
	14 kPa or higher	F4	Has cirrhosis.
Non-alcoholic Fatty Liver Disease (NAFLD or NASH)	2 to 7 kPa	F0 to F1	Is normal.
	7.5 to 10 kPa	F2	Has moderate scarring.
	10 to 14 kPa	F3	Has severe scarring.
	14 kPa or higher	F4	Has cirrhosis.

# Conditions That Can Affect Your Fibrosis Results

Certain conditions can cause a liver stiffness result that's too high, which makes it incorrect. You may have less scarring than your results suggest. This can happen if you have:

- **Liver inflammation (swelling):** This can be caused by a recent liver illness. It can also be caused by long-term, heavy alcohol use.
- **Benign (not cancer) or cancerous (cancer) tumors in your liver.**
- **Liver congestion:** This means that your liver is too full of blood or other fluids. This is usually caused by heart failure.

FibroScan may give less accurate results, or no results at all if you have:

- **Obesity:** This means your body mass index (BMI) is higher than 30 (a high, unhealthy amount of body fat).
- **Ascites:** Fluid building up in your belly.
- **Biliary obstruction:** A blockage that does not let enough bile flow out of your liver.
- **Scar tissue:** Tissue from surgery or radiation built up near your liver.

Your healthcare provider may use imaging tests, such as ultrasound, CT, or MRI, to see your liver. They may use blood tests or a certain type of MRI to measure scarring and fatty changes in your liver. Call your healthcare provider if you have any questions.

If you have questions or concerns, contact your healthcare provider. A member of your care team will answer Monday through Friday from 9 a.m. to 5 p.m. Outside those hours, you can leave a message or talk with another MSK provider. There is always a doctor or nurse on call. If you're not sure how to reach your healthcare provider, call 212-639-2000.

For more resources, visit [www.mskcc.org/pe](http://www.mskcc.org/pe) to search our virtual library.

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