

# Stem cell treatments and ethics



## Slide 1: Preparation and introduction

This lesson was initially created for use by two researchers visiting a school, but we have provided all the materials and guidance needed to allow teachers to use the activities too. The lesson is aimed at students aged 12 to 14 years and takes 50-60 minutes. The notes accompanying each slide describe how we have found the lesson to work best and provide plenty of guidance for facilitators of different backgrounds. We hope you will use and adapt the activities to suit your needs – let us know what works for you; we are always interested in hearing your suggestions for making the lesson even better. Contact us at [www.eurostemcell.org/contact](http://www.eurostemcell.org/contact).

### *Starting the lesson*

Start by introducing yourself and what the lesson is going to be about. Say briefly and simply who you are, where you work and what you do. You will need to briefly explain what you mean by ethics, and ensure the students also know the term 'stem cell', though no detailed knowledge of stem cells is needed for this lesson. You might say something like: "We are x and y from the University of z. We're scientists and we study stem cells. Stem cells are a special type of cell the scientists like us hope we can use to develop new ways to treat diseases. We've come to here today to hear your opinions about stem cell treatments and how they might be used in the future. We're going to think about some of the decisions we might all have to make when new treatments are discovered. We always need to think about how new scientific discoveries will affect people and how they might be used. What are the right ways to use new technology and how shouldn't it be used? When we're trying to decide what the right or wrong thing to do is in a situation, we often call this ethics. So today's lesson is all about stem cell treatments and ethics." It is ideal if the students have already been introduced to stem cells in previous lessons (for example using our Discover Stem Cells and CSI: Cell Science Investigator lessons), but this is not essential. If they have not discussed stem cells any more you could spend a minute or two saying a little more about what stem cells are and their role in repairing damage in the body when you introduce Monika's story on slide 4.

## What we're going to do today

1. Look at some situations where new stem cell treatments might be used
2. Think about different people's opinions
3. Discuss in groups what YOU think



### Slide 2: Introduction (cont.)

Briefly explain that students will be working in groups and looking at some different situations during the lesson, thinking about their own opinions and trying to make group decisions about what the right thing to do is. We want everyone to have a chance to give their opinion and to think about what others have to say.

## Dilemmas and decisions

dilemma think  
question decision  
talk discuss



### Slide 3: Warm-up activity

Introduce the warm-up activity, ***Dilemmas and decisions***. Each group of students will be given a set of five ***Dilemmas and decisions*** cards with descriptions of every day situations on them. Their task is to take one situation at a time, discuss it in their group and decide what they would do and why. It doesn't matter if they don't have time to discuss all the situations but they must work as a group to come to a joint decision and they should think about what SKILLS they are using to do this. They will have about 5 minutes to do this and then you will ask them what they have decided, why and what skills they used.

The purpose of this activity is to get students talking in groups and to start them thinking about different viewpoints, considering different ways of looking at situations. The skills aspect is important because it sets the tone for the rest of the lesson and is useful in terms of the teaching goals of many school curricula.

Circulate while students are discussing the scenarios. Encourage them to look at the situations from as many perspectives as possible and to consider the views of everyone in their group. After about 5 minutes, or once you judge all groups have had a good discussion of at least one scenario, bring the class back together and ask for volunteers to tell you what their group has discussed, what they decided and why. Ask how they came to their decision (e.g. did they vote or how did resolve any conflicts?). Ask the class what skills they used to do this activity: you should be able to get them to brainstorm a list including listening, respecting others' views, perhaps negotiating or persuading, compromising etc.

## Monika and her liver



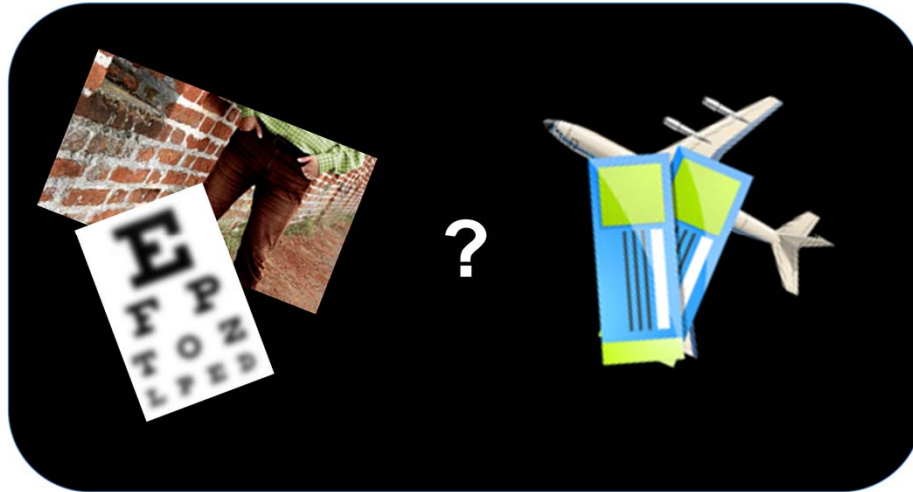
### Slide 4: Scenario 1 – Monika and her liver

We've seen that there are often quite a few different ways to look at a situation. The next activity introduces the story of Monika and a stem cell treatment that might be available in the future.

To run the activity:

1. Give each group of students an A3 sheet showing Monika's scenario. Students should read about Monika and in their groups and decide whether they think she should get the treatment or not.
2. Allow the students a few minutes to read the scenario and discuss it. They are usually fairly quick to come to a conclusion. Don't ask for feedback yet, but once they have had an initial discussion give each group of students a set of the four **Opinion cards** about Monika's scenario. Ask the students to turn over their A3 sheet, discuss the four opinions they have been given and place them on the sheet according to how much they agree or disagree with each opinion. Does this change their own views on Monika's situation or not? As before, they need to make their decisions as a group.
3. Circulate while the students are discussing the issues, answer questions and where appropriate challenge them to think beyond their first impressions. You can use the **Discussion prompts** provided in the lesson plan to help you.
4. Once students have completed the task, bring the class back together and take a vote on whether Monika should be given the treatment or not.

## Peter and his treatment



### Slide 5: Scenario 2 – Peter and his treatment

Classes often reach agreement about Monika's situation fairly easily but should now be settled into discussion mode. The next situation is a bit more complicated so there is more to think about.

This time, run the activity in a staged way:

1. Give the students the A3 sheet with Peter's situation on it and ask them to read it in groups and think about what Peter should do.
2. Once they have had a very brief initial discussion, ask them to turn over the sheet and each write their own individual advice to Peter in one of the boxes on the left hand side. Just a simple note – yes (if they think he should go for the treatment), no (if they think he should not) or don't know is fine for now.
3. Once they have done this, give them the four **Opinion cards** about Peter's scenario. They should now discuss their own views and why they gave that opinion, as well as the four views on the cards. They should also think about any other issues or views that might be important. They then need to come to a group agreement about what advice they want to give Peter and complete the statement on the bottom right of the A3 sheet. They should give at least two reasons for their decision. Their advice could be to go for the treatment or not, or something else if they think there is anything else important he should do.
4. Circulate during the discussion and help students to think about the issues. Use the **Discussion prompts** in the lesson plan to help you develop the discussion where appropriate. It is important to let the students form and express their own opinions, use the prompts only to help widen the discussion to include as many relevant aspects as possible.
5. Bring the class together and ask each group to say what they have decided and why. If you have time, give the class an opportunity to comment on each others' views and on how easy or difficult the task was.

## What we've discussed today

- Each situation gives us lots to think about
- There are usually several different points of view
- For new stem cell therapies, we think it is important to consider...



### Slide 6: What we've discussed today

Use this slide to summarise the key messages of the lesson, encouraging the students to tell you what they got from the lesson. Remind the students that decisions and opinions about ethical issues are often not as simple as 'right or wrong'.

For the last bullet point on the slide, ask the class to help you make a list on the board of all the things they think we should think about if we're deciding whether a treatment is ready to give to a patient. They will have plenty of ideas from the discussion of Peter's scenario. The list could include ideas about evidence, risk, benefits, qualifications of those offering the treatment, support in case things go wrong, type of disease, existence of alternative therapies, costs etc. A good reference document for background for teachers or facilitators is the ISSCR Patient Handbook at [www.closerlookatstemcells.org](http://www.closerlookatstemcells.org)

# Thanks for all your work!

Please tell us what you thought of today's lesson



## Slide 7: Feedback

Thank the students for their hard work and ask them to give you some feedback before leaving. Explain that it is important to know what they thought of the lesson so that we can keep improving it for other students. Feedback forms are provided with the material for this lesson. There is also a form for the teacher. It is helpful to arrange to get some verbal feedback from teachers at the end of your visit too.

We hope you enjoy using the lesson. Don't forget to send us your comments and experiences, and any important feedback from the schools you visit, at [www.eurostemcell.org/contact](http://www.eurostemcell.org/contact)



# Acknowledgements and licensing

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