Should I Take Prophylactic Cranial Irradiation (PCI) or Not?
A decision aid to discuss options with your doctor

This decision aid is for you if:

☐ Your doctor says you have small cell lung cancer that is only within your chest
☐ You have had some shrinkage of your tumor with chemotherapy and chest radiation treatment

What is Prophylactic Cranial Irradiation, often referred to as PCI?

☐ PCI is outpatient treatment in a radiation center with 10 treatments, each taking less than 30 minutes
☐ PCI is painless

What are your options?

☐ No PCI
☐ PCI - Prophylactic Cranial Irradiation

Three things to take into account. Which one do you want to know about first?

☐ Mortality
☐ Metastases to the brain
☐ Memory
MORTALITY

Blocks of 100 persons show a ‘best estimate’ of what happens to 100 people with small cell lung cancer who have PCI or no PCI. The shaded areas show the number of people affected. There is no way to know in advance if you will be one of the affected.

If 100 people have PCI, 5 more people (shown in medium grey) will be alive at 3 years.

No PCI - 15 alive  
85 not alive

PCI - 20 alive  
80 not alive

METASTASES

If 100 people have PCI, 25 fewer people (shown in medium grey) will develop brain metastases

No PCI - 58 get brain metastases  
42 avoid this

PCI - 33 get brain metastases  
67 avoid this
MEMORY
(If age 60 years or less)

If 100 people age 60 years or less have PCI, 25 more people (shown in medium grey) will have some mild memory problems a few months later, likely due to the PCI treatment.

An example of a memory problem after PCI is more need to make a grocery list rather than just trying to remember everything.

These mild memory issues are permanent.

However, even patients who do not have PCI may also develop memory issues, some due the brain metastases that can develop and others due to getting older.

![Memory Issues Diagram](image)

No PCI - 25 get some memory problems
75 avoid this

PCI 50 get some memory problems
50 avoid this

In addition to the permanent mild memory problems, there are other mild temporary harms from PCI. You may experience one or more of these.

- Fatigue in 30 of 100 people. It starts during PCI and usually lasts for a few weeks.
- Headache in 24 of 100 people, usually mild.
- Nausea in 23 of 100 people, usually mild, and often occurs at the same time as headaches.
- Complete hair loss on scalp in 100 of 100 people. It usually occurs by the end of PCI or within a week of finishing PCI. The hair comes back a few months later but sometimes thinner than it was before.
MEMORY
(If age more than 60 years)

If 100 people more than 60 years old have PCI, 55 more people (shown in medium grey) will have mild memory problems a few months later, likely due to the PCI treatment.

An example of a memory problem that could happen after PCI is more of a need to make a grocery list rather than just trying to remember everything.

These memory issues are permanent.

However, even patients who do not have PCI may also develop memory issues, some due the brain metastases that can develop and others due to getting older.

<table>
<thead>
<tr>
<th>No PCI - 25</th>
<th>PCI - 80</th>
</tr>
</thead>
<tbody>
<tr>
<td>get some memory problems</td>
<td>get some memory problems</td>
</tr>
<tr>
<td>75 avoid this</td>
<td>20 avoid this</td>
</tr>
</tbody>
</table>

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- Fatigue in 30 of 100 people. It starts during PCI and usually lasts for a few weeks.
- Headache in 24 of 100 people, usually mild.
- Nausea in 23 of 100 people, usually mild, and often occurs at the same time as headaches.
- Complete hair loss on scalp in 100 of 100 people. It usually occurs by the end of PCI or within a week of finishing PCI. The hair comes back a few months later but sometimes thinner than it was before.
What matters most to you?
Common reasons to choose each option are listed below. Check √ how much each reason matters to you on a scale from 0 to 5.
‘0’ means it is not important to you
‘5’ means it is very important to you

Reasons to choose PCI

How important is it to you to not get brain metastases?

Reasons to choose not to have PCI

How important is it to you to keep all your memory and concentration?

How important is it to you to not lose your hair temporarily?

What other health factors may affect your choice?
Check √ any that apply and discuss your concerns with your Healthcare Provider.

- Difficulty with lying flat for 15 to 30 minutes
- Fatigue
- Claustrophobia
- None of these apply to me

What other factors may affect your choice?
Check √ any that apply and discuss your concerns with your Healthcare Provider.

- Financial concerns
- Transportation problems
- None of these apply to me

What else do you need to prepare for decision making?
Find out how well the decision aid helped you learn the key facts.
Check √ the best answer:

Which option has the highest chance of preventing brain metastases?

Which option has the lowest chance of causing mild memory or concentration problems?
Which option do you prefer?
Check √ only one.

☐ No PCI
☐ PCI
☐ I don’t know

This information is not intended to replace the advice of a healthcare provider.

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References


