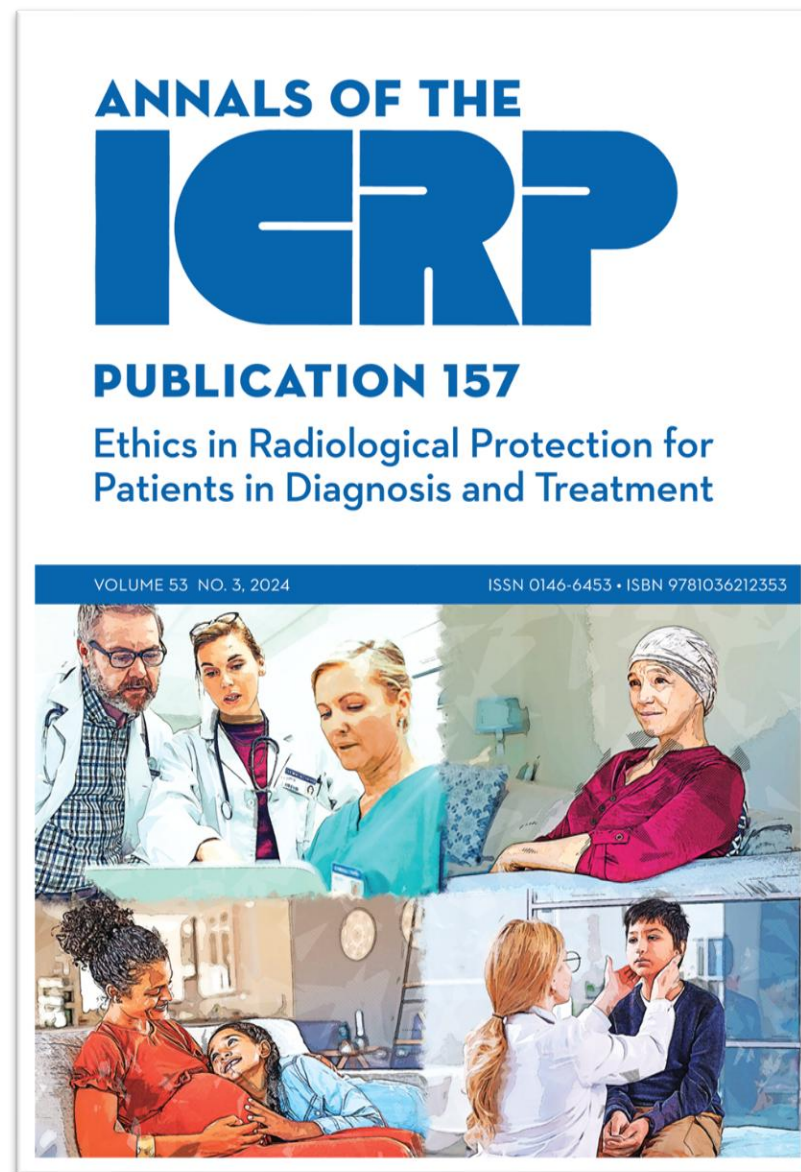


ICRP Publication 157 Ethics in Radiological Protection for Medical Diagnosis and Treatment

ICRP Webinar
22 August 2025



François BOCHUD, ICRP – TG109 Co-chair

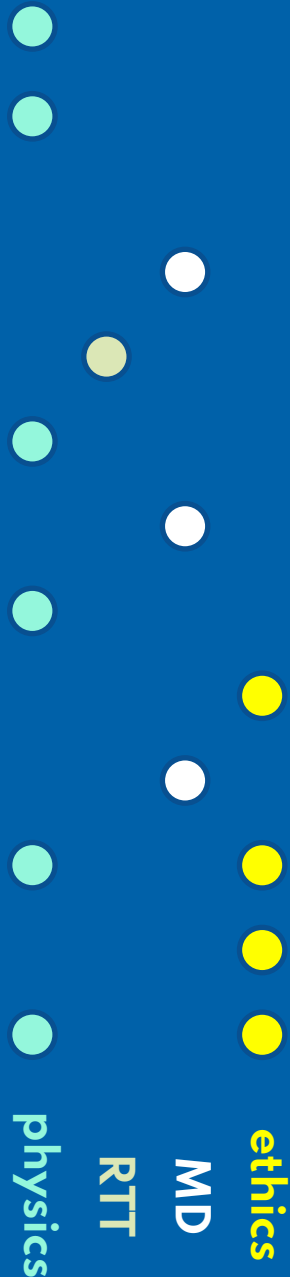
This webinar is dedicated
to **Marie Claire Cantone**,
co-chair of the Task Group,
who passed away in
December 2024



P 157

Members
of the TG

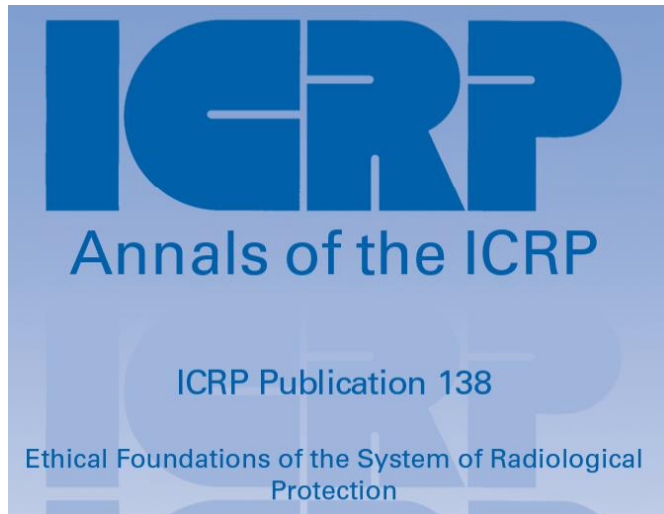
and their
core competences



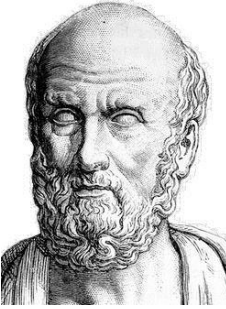
- François Bochud
- Marie-Claire Cantone
- Kimberly Applegate
- Mary Coffey
- John Damilakis
- Maria del Rosario Perez
- Frederic Fahey
- Chieko Kurihara-Saio
- Bernard Le Guen
- Jim Malone
- Lynette Reid
- Friedo Zölzer

Mandate of the TG

- To develop an ICRP publication presenting the **ethical aspects in the use of radiation in medicine**
- build upon **Publication 138**



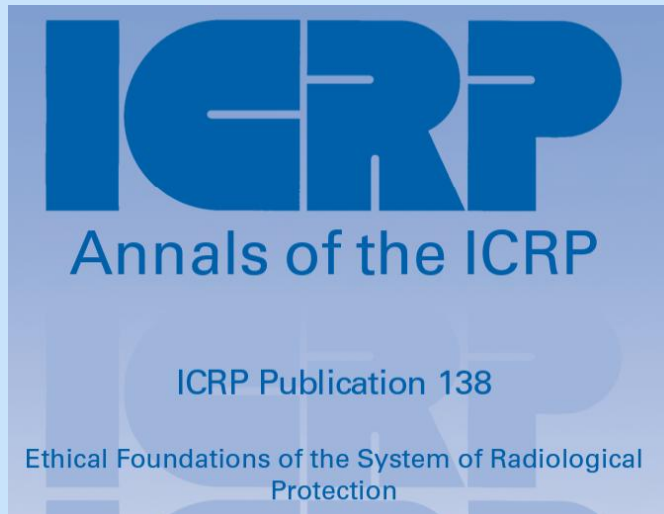
We have to be modest



Hippocrates

values made explicit
only in 2018

long explicit history
&
living culture of ethics



what is
already there



specificities
of RP



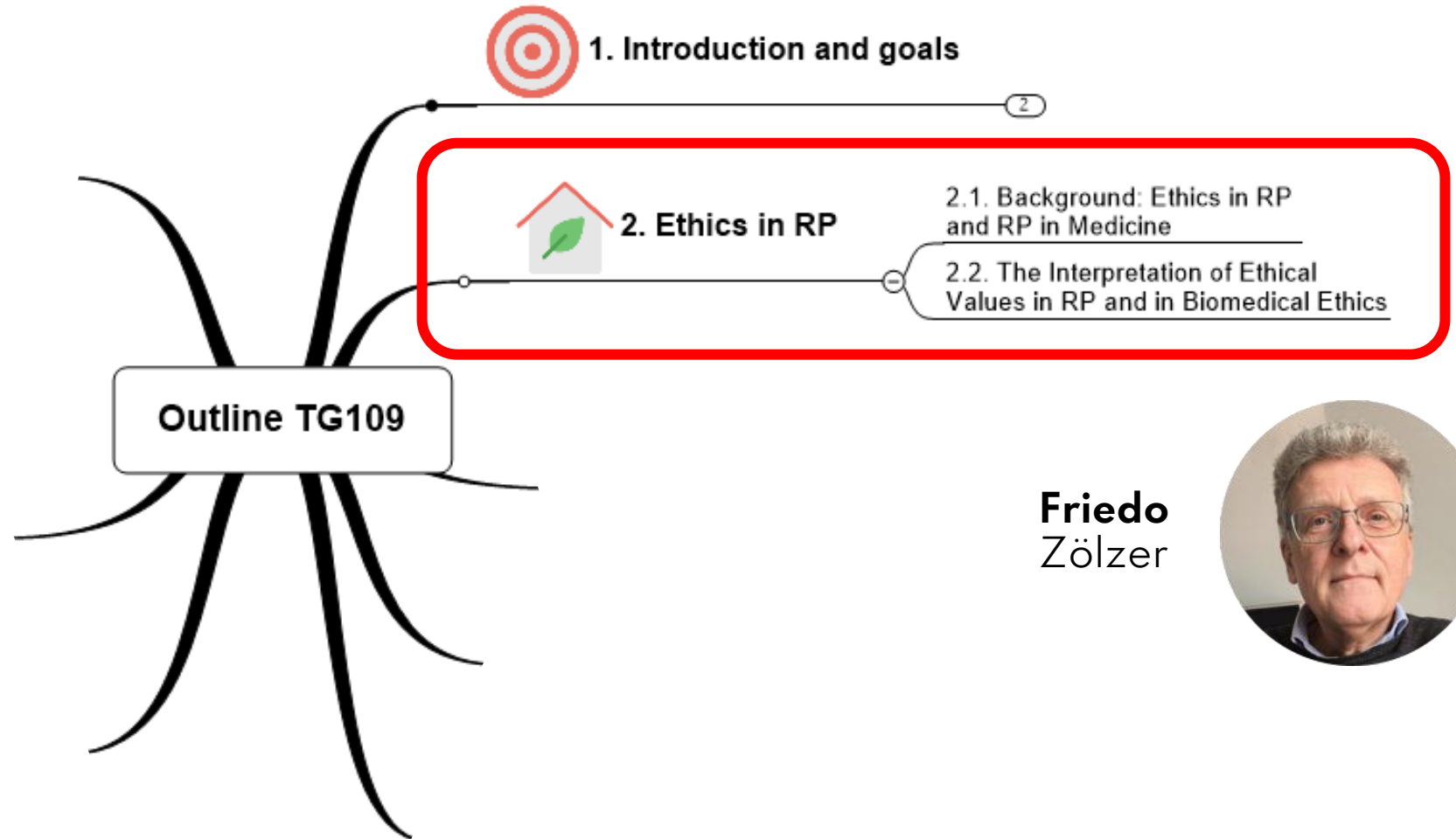
Purpose of the report

- **Bridge the gap** between the **communities** in terms of ethics
 - build on P 138

medical
community



RP
community

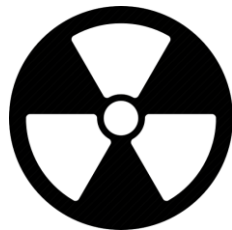


Friedo
Zölzer



Pairing the values

radiological
protection



biomedical
ethics

five core values

beneficence
non-maleficence

justice

dignity

prudence



inclusiveness

accountability / transparency

other principles

solidarity

precaution

empathy

honesty

beneficence
non-maleficence

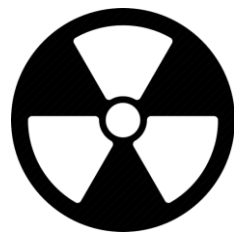
justice

autonomy

four principles

Pairing the values

radiological
protection



biomedical
ethics

beneficence
non-maleficence

beneficence
non-maleficence

justice

solidarity

justice

dignity

autonomy

prudence

precaution

inclusiveness

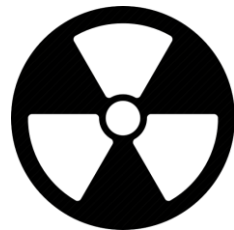
empathy

accountability / transparency

honesty

Pairing the values

radiological
protection



biomedical
ethics

beneficence & non-maleficence

justice

solidarity

justice

dignity

autonomy

prudence

precaution

inclusiveness

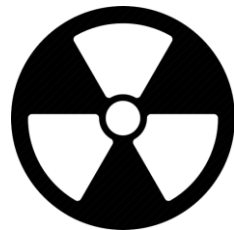
empathy

accountability / transparency

honesty

Pairing the values

radiological
protection



biomedical
ethics

beneficence & non-maleficence

justice & solidarity

dignity

autonomy

prudence

precaution

inclusiveness

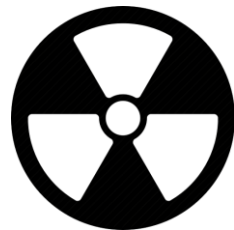
empathy

accountability / transparency

honesty

Pairing the values

radiological
protection



biomedical
ethics

beneficence & non-maleficence

justice & solidarity

dignity & autonomy

prudence

precaution

inclusiveness

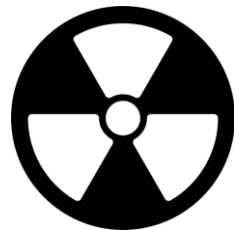
empathy

accountability / transparency

honesty

Pairing the values

radiological
protection



biomedical
ethics

beneficence & non-maleficence

justice & solidarity

dignity & autonomy

prudence & precaution

inclusiveness

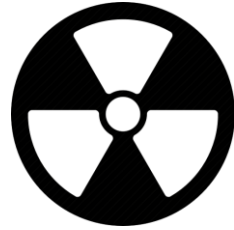
empathy

accountability / transparency

honesty

Pairing the values

radiological
protection



biomedical
ethics

beneficence & non-maleficence

justice & solidarity

dignity & autonomy

prudence & precaution

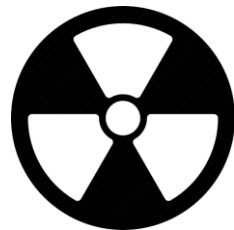
inclusiveness & empathy

accountability / transparency

honesty

Pairing the values

radiological
protection



biomedical
ethics

beneficence & non-maleficence

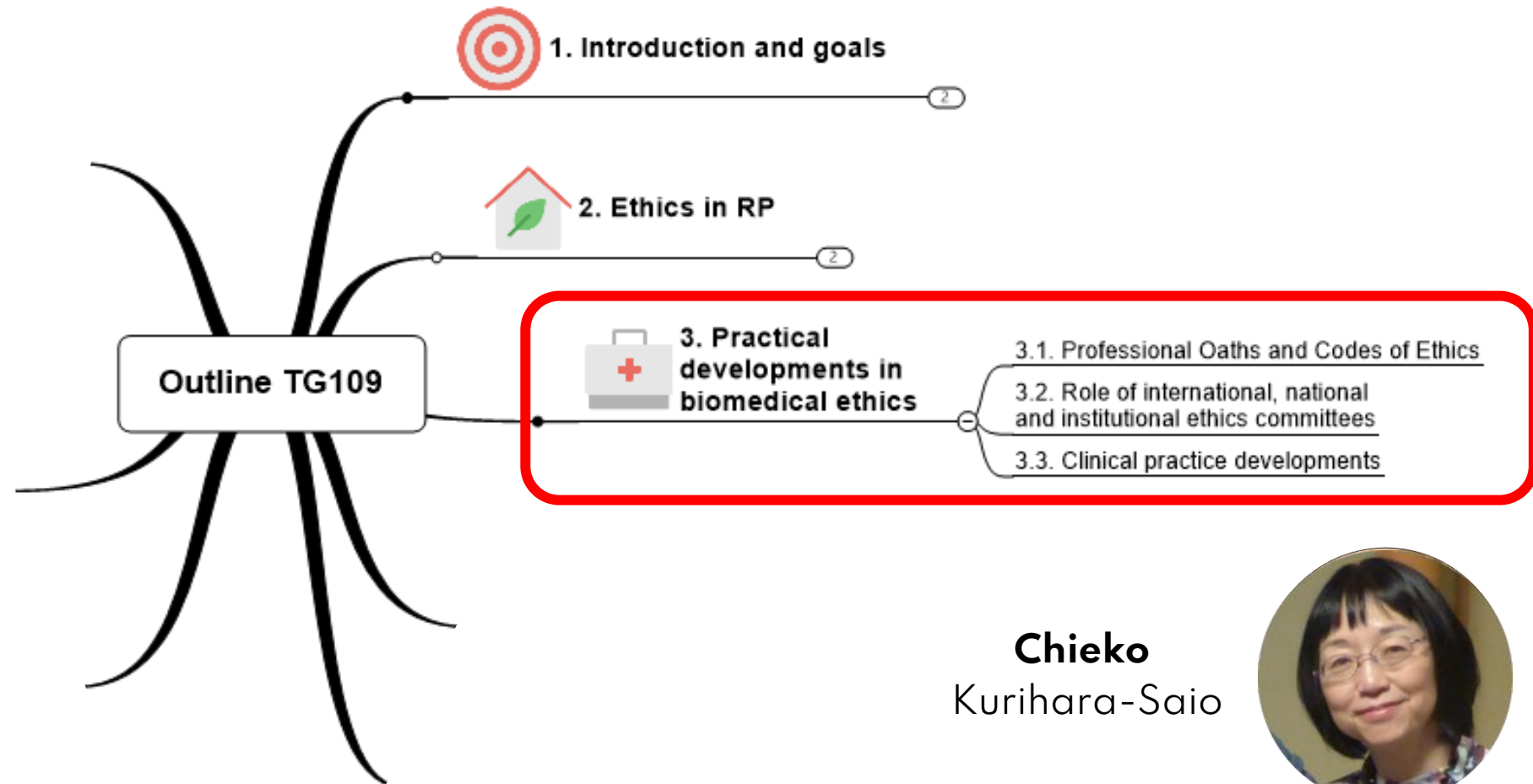
justice & solidarity

dignity & autonomy

prudence & precaution

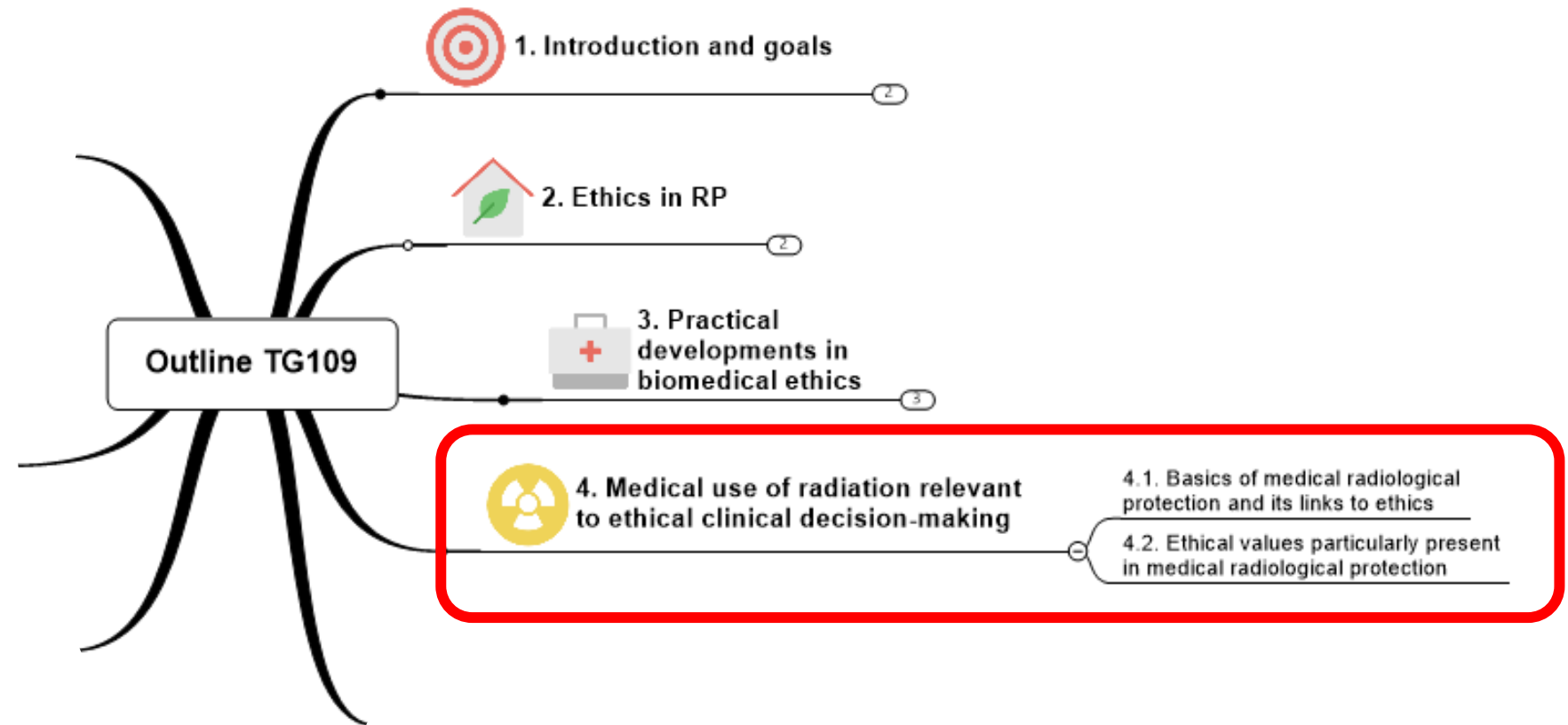
inclusiveness & empathy

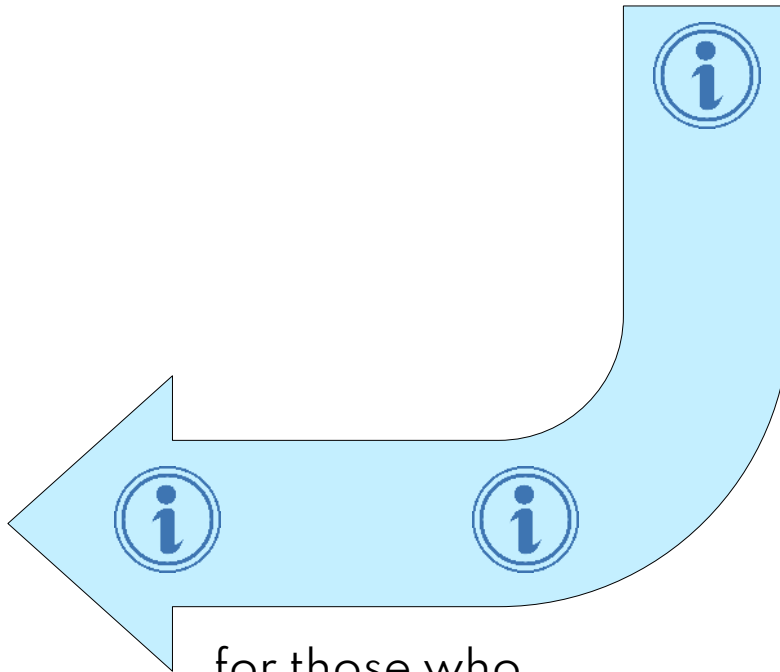
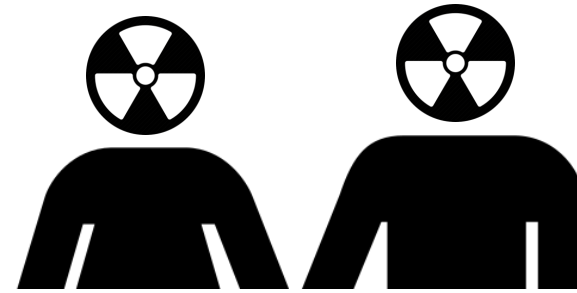
accountability / transparency & honesty



Chieko
Kurihara-Saio







for those who
know more about ethics

For those who know more about biomedical ethics than RP

Stochastic effects & Tissue reactions

classical RP subject
with an ethical approach
precautionary principle
dose threshold

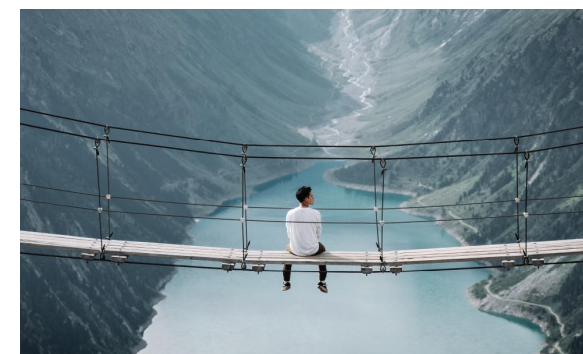
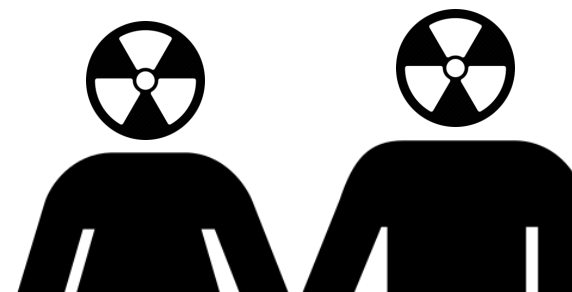
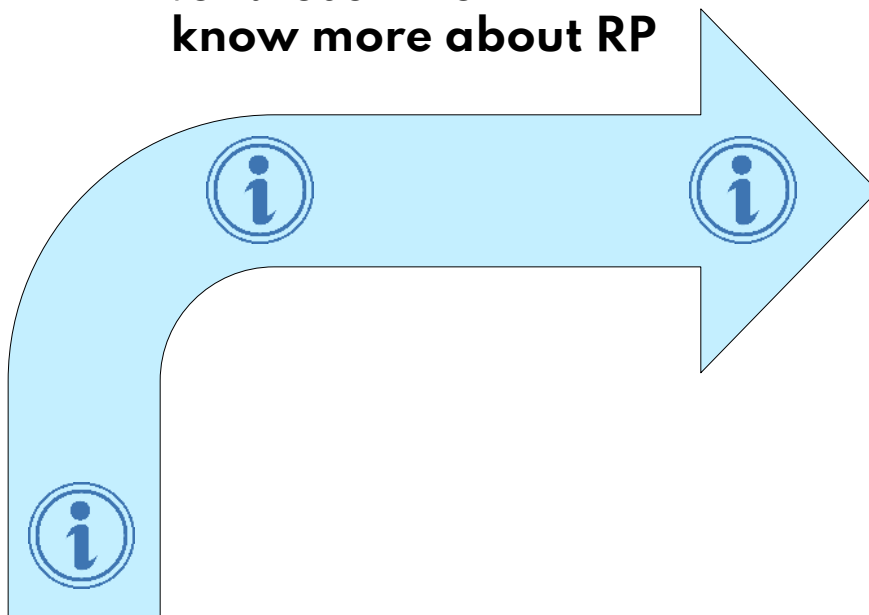
Particular factors affecting radiation sensitivity

age and sex
individual sensitivity

Uncertainties

of the dose received
of the risk associated to the dose
integrating them to education & training

for those who
know more about RP



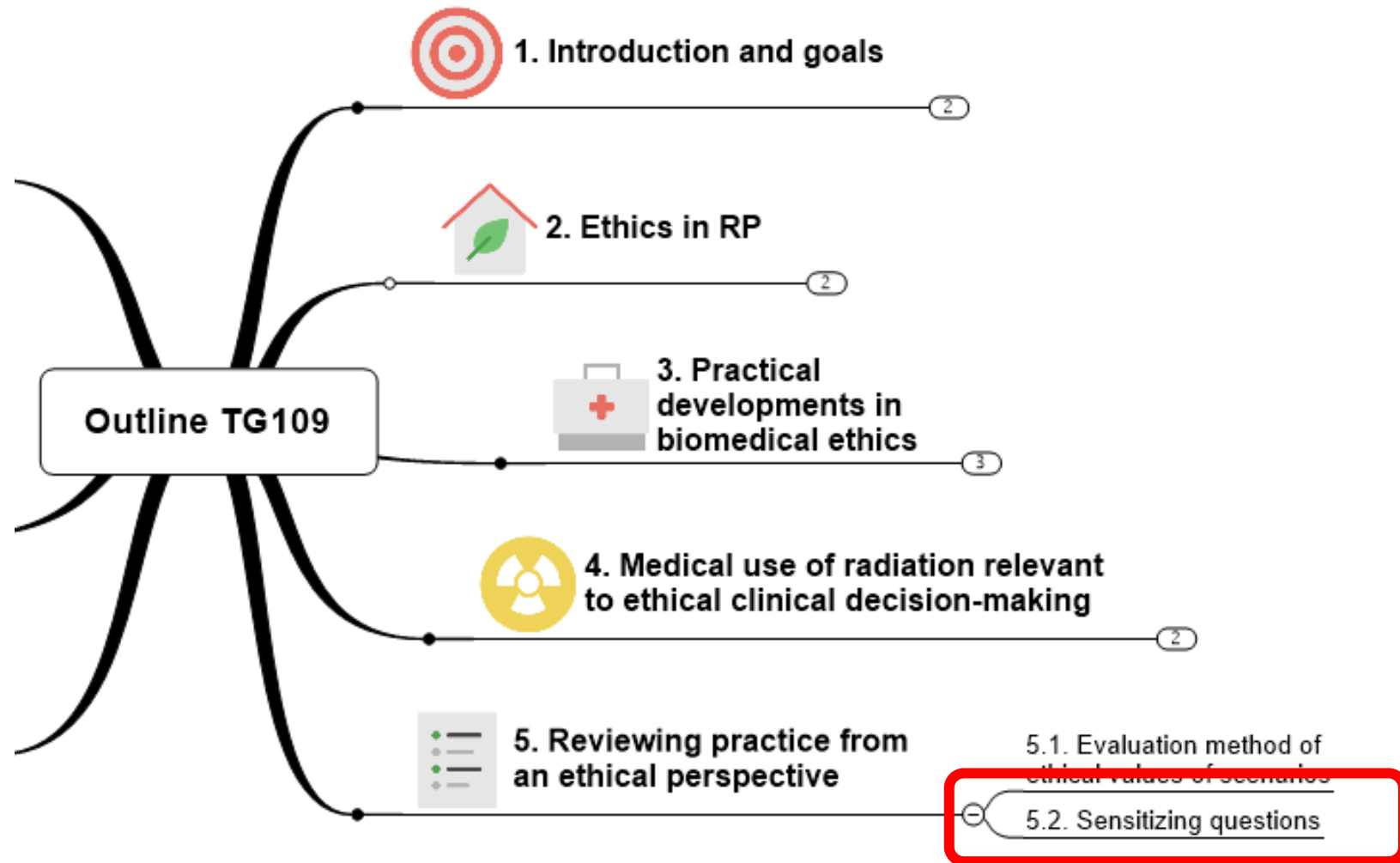
For those who know more about RP than biomedical ethics

Special aspects of medical use of radiation

deliberate exposure
voluntary (informed consent)
demography (different than usual RP population)

Medical ethics and application of the principles of RP

justification
optimization
level of efficacy (image quality)



Lynette
Reid



Mary Coffey



Outline TG109



1. Introduction and goals

2



2. Ethics in RP

2



3. Practical developments in biomedical ethics

3



4. Medical use of radiation relevant to ethical clinical decision-making

2



5. Reviewing practice from an ethical perspective

2

5.1. Evaluation method of ethical values of scenarios

5.2. Sensitizing questions



7. Case based examples in therapy

7



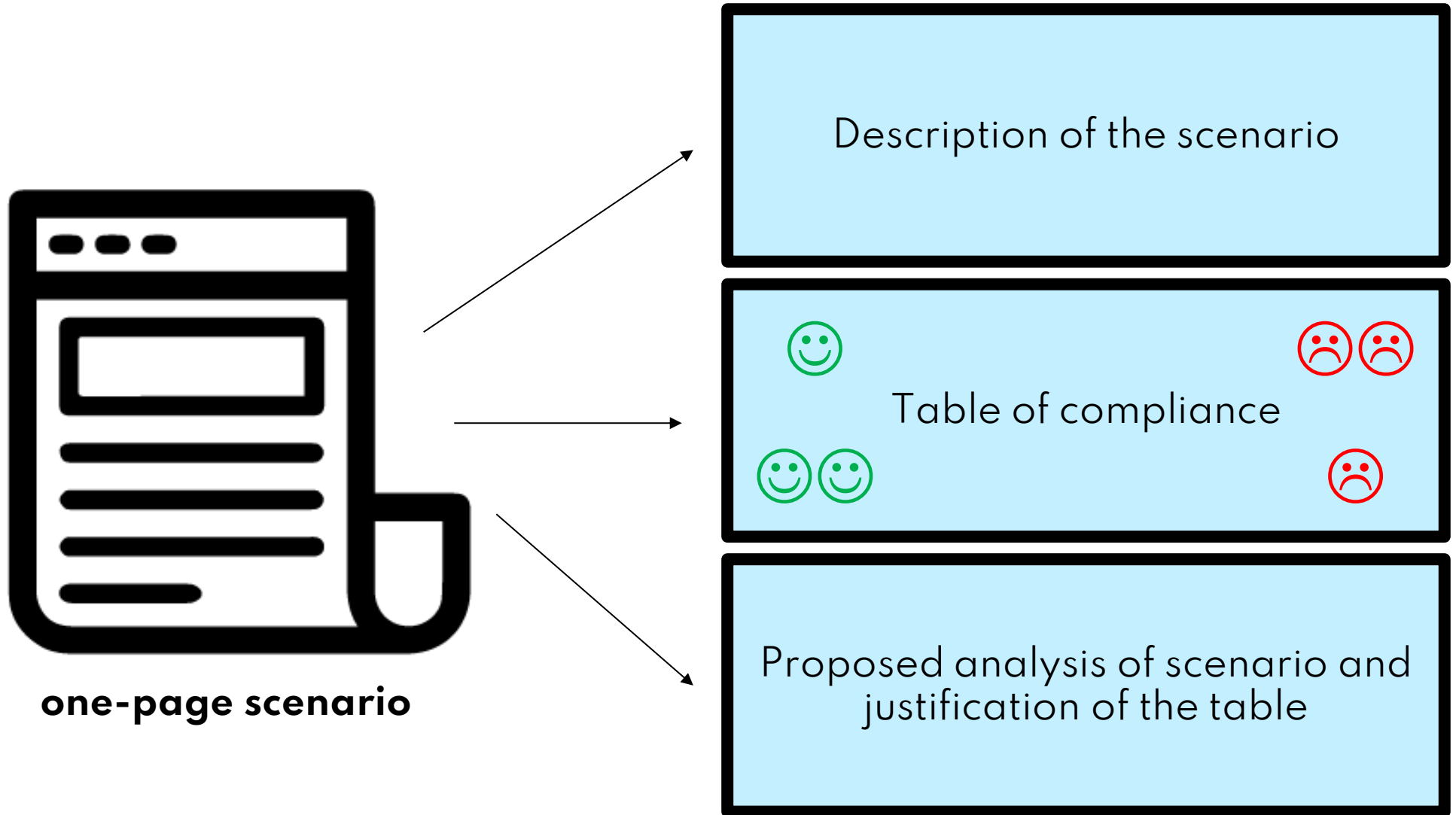
6. Case based examples in diagnostic

16

Jim Malone



Evaluation method

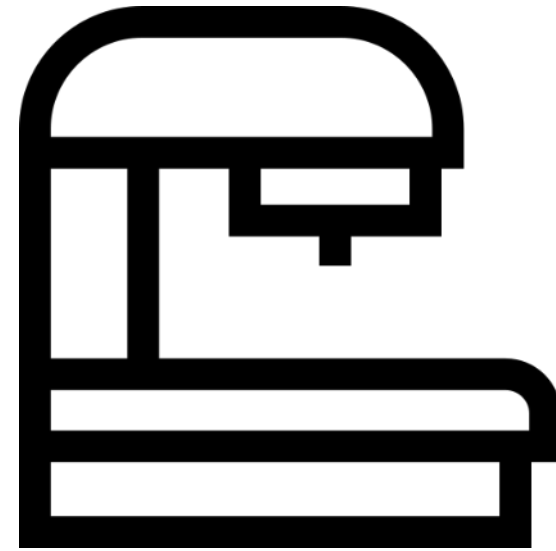


Scenarios covering many practical situations



11

in imaging procedures



10

in therapy

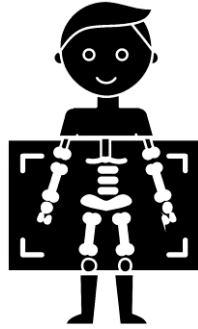
Scenarios covering many practical situations



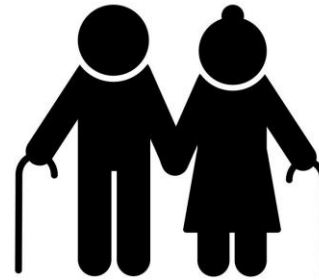
Pregnancy



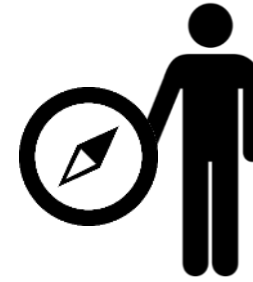
Breast feeding



Children



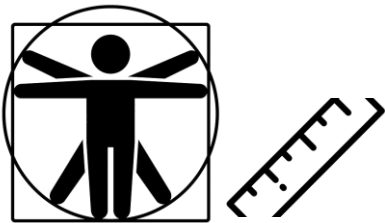
Elderly



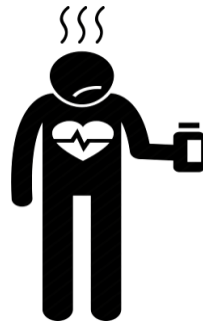
No guidelines



Protons or x-rays?



Health assessment



Chronic disease



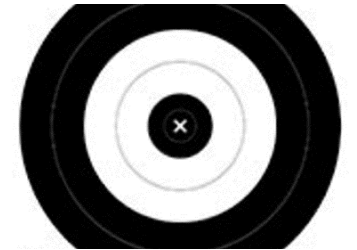
End of life



Organized screening

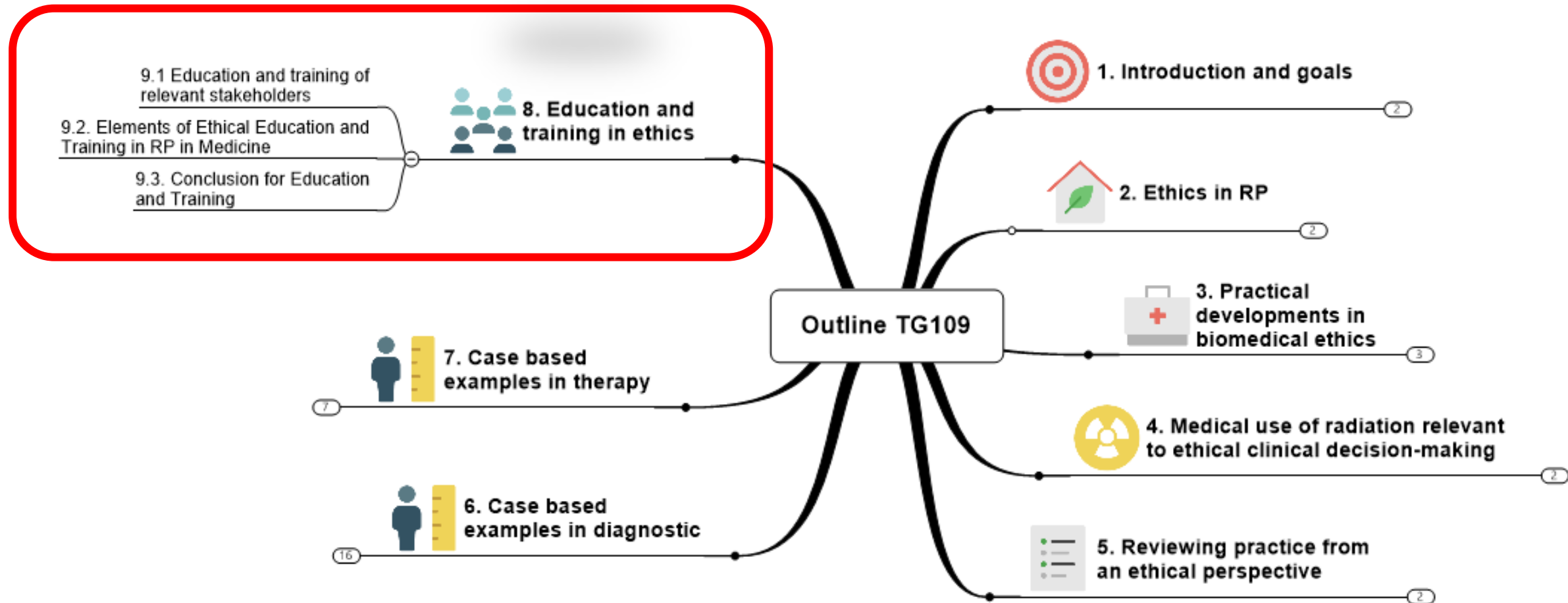


Multifraction instead of monofraction



Incorrect field placement

Kimberly
Applegate

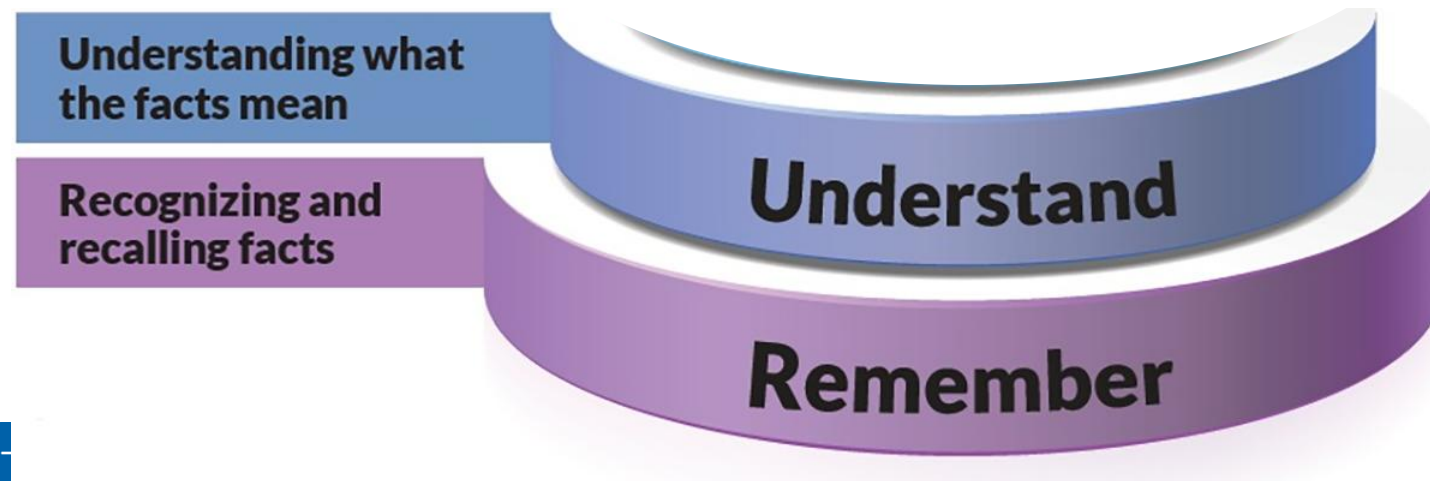


Elements of Ethical E&T in RP in Medicine

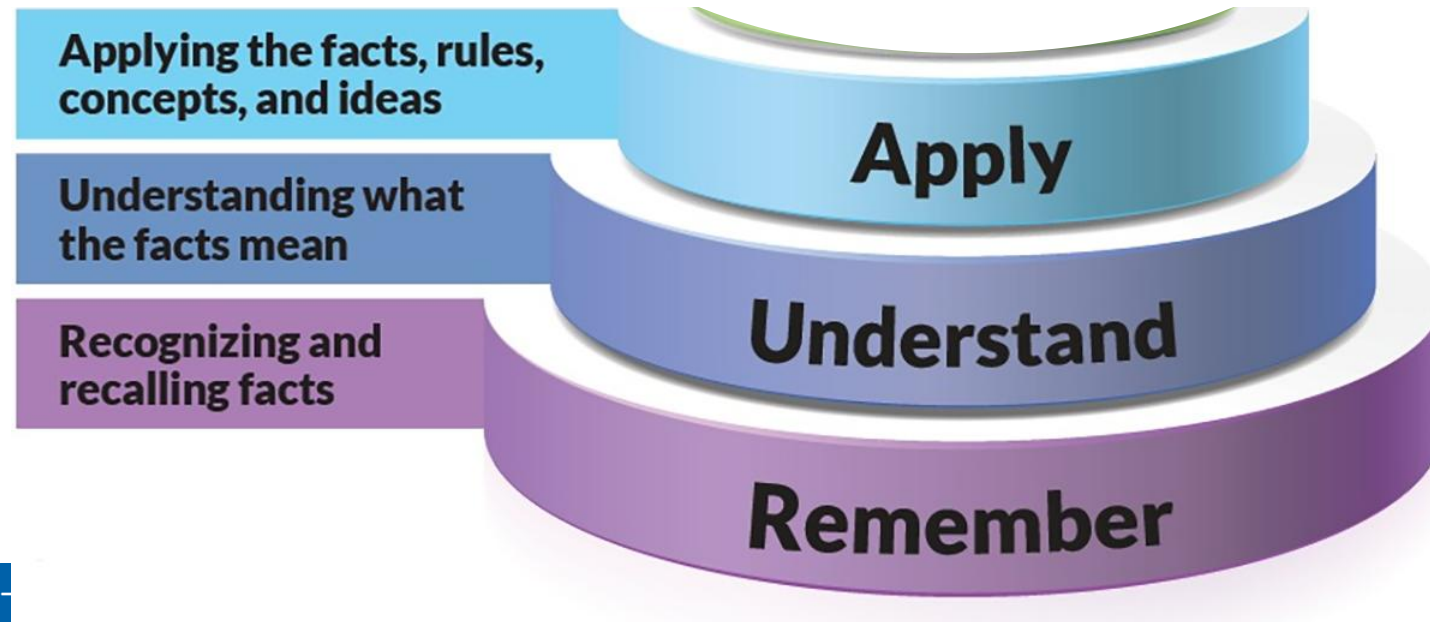
Recognizing and
recalling facts

Remember

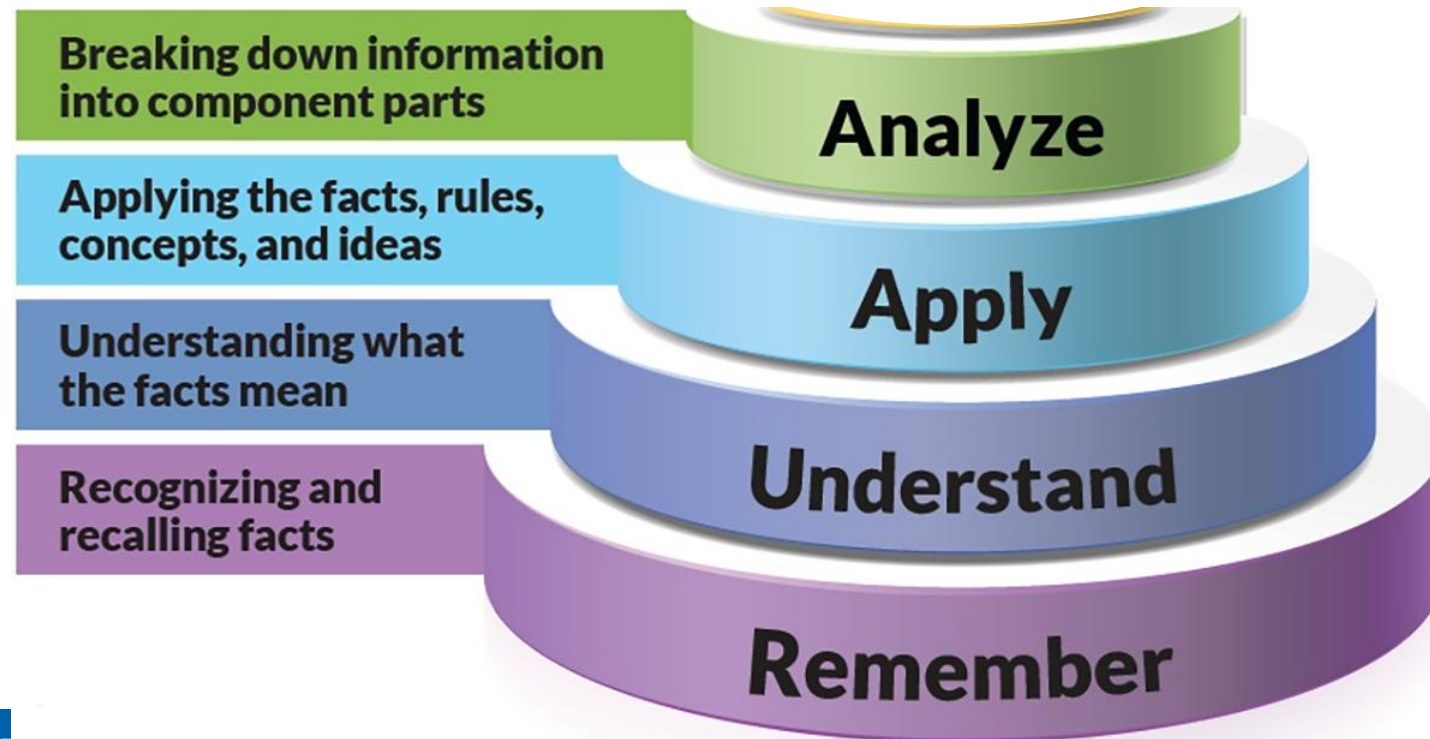
Elements of Ethical E&T in RP in Medicine



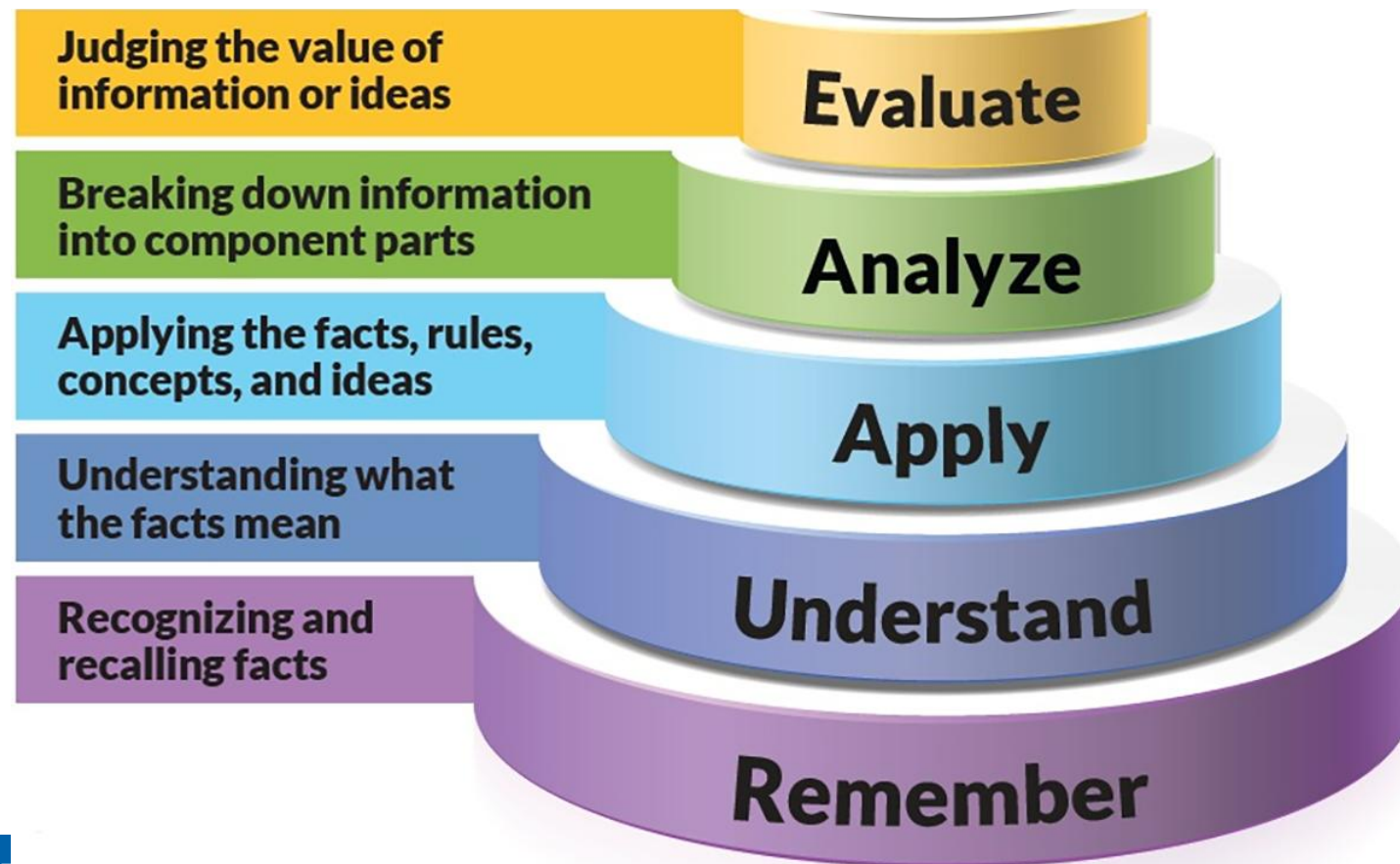
Elements of Ethical E&T in RP in Medicine



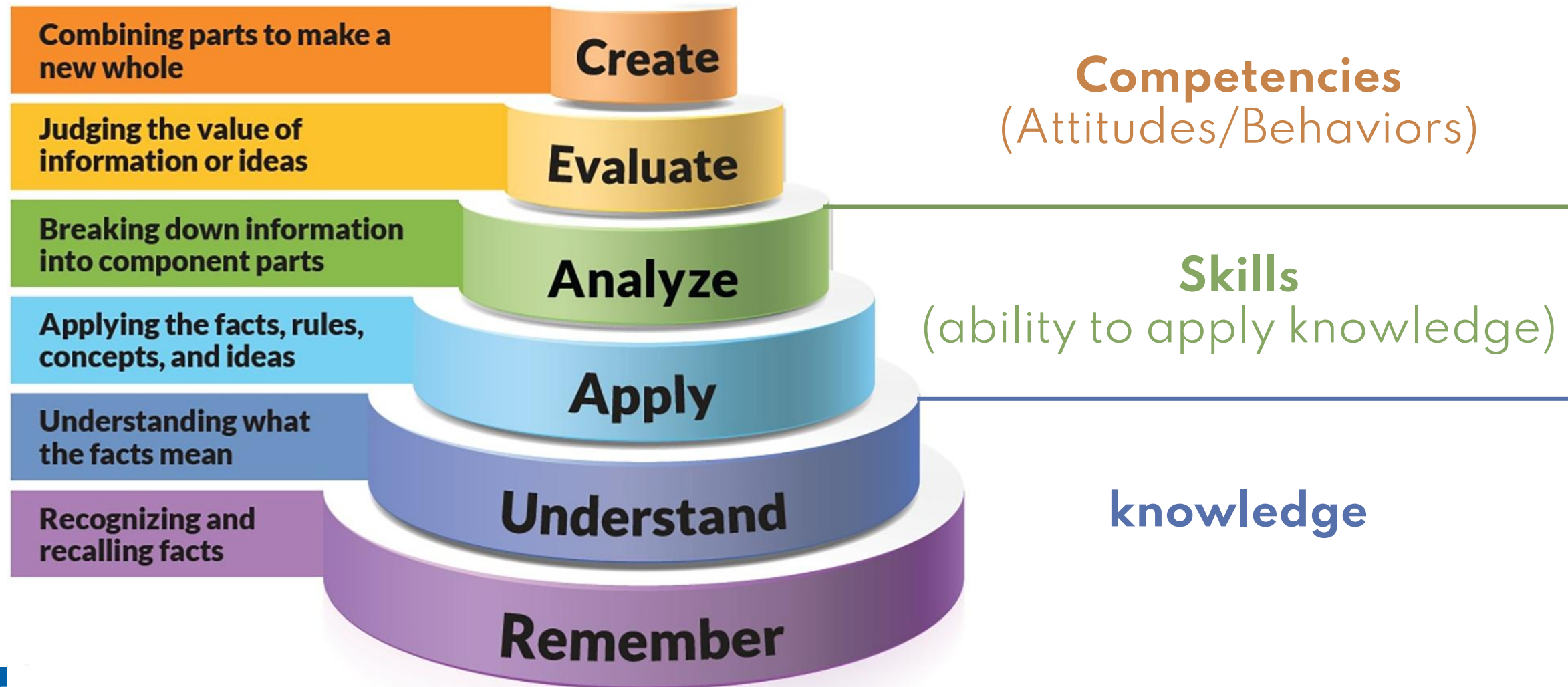
Elements of Ethical E&T in RP in Medicine



Elements of Ethical E&T in RP in Medicine



Elements of Ethical E&T in RP in Medicine



Elements of Ethical E&T in RP in Medicine

Knowledge	Skills (ability to apply knowledge)	Competencies (Attitudes/Behaviours)
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Example of a framework

Elements of Ethical E&T in RP in Medicine

Knowledge	Skills (ability to apply knowledge)	Competencies (Attitudes/Behaviours)
Core and procedural values of ethics of radiological protection in medicine		

Elements of Ethical E&T in RP in Medicine

Knowledge	Skills (ability to apply knowledge)	Competencies (Attitudes/Behaviours)
Core and procedural values of ethics of radiological protection in medicine		
<ul style="list-style-type: none">• Identify the core components of dignity/autonomy• ...		

Elements of Ethical E&T in RP in Medicine

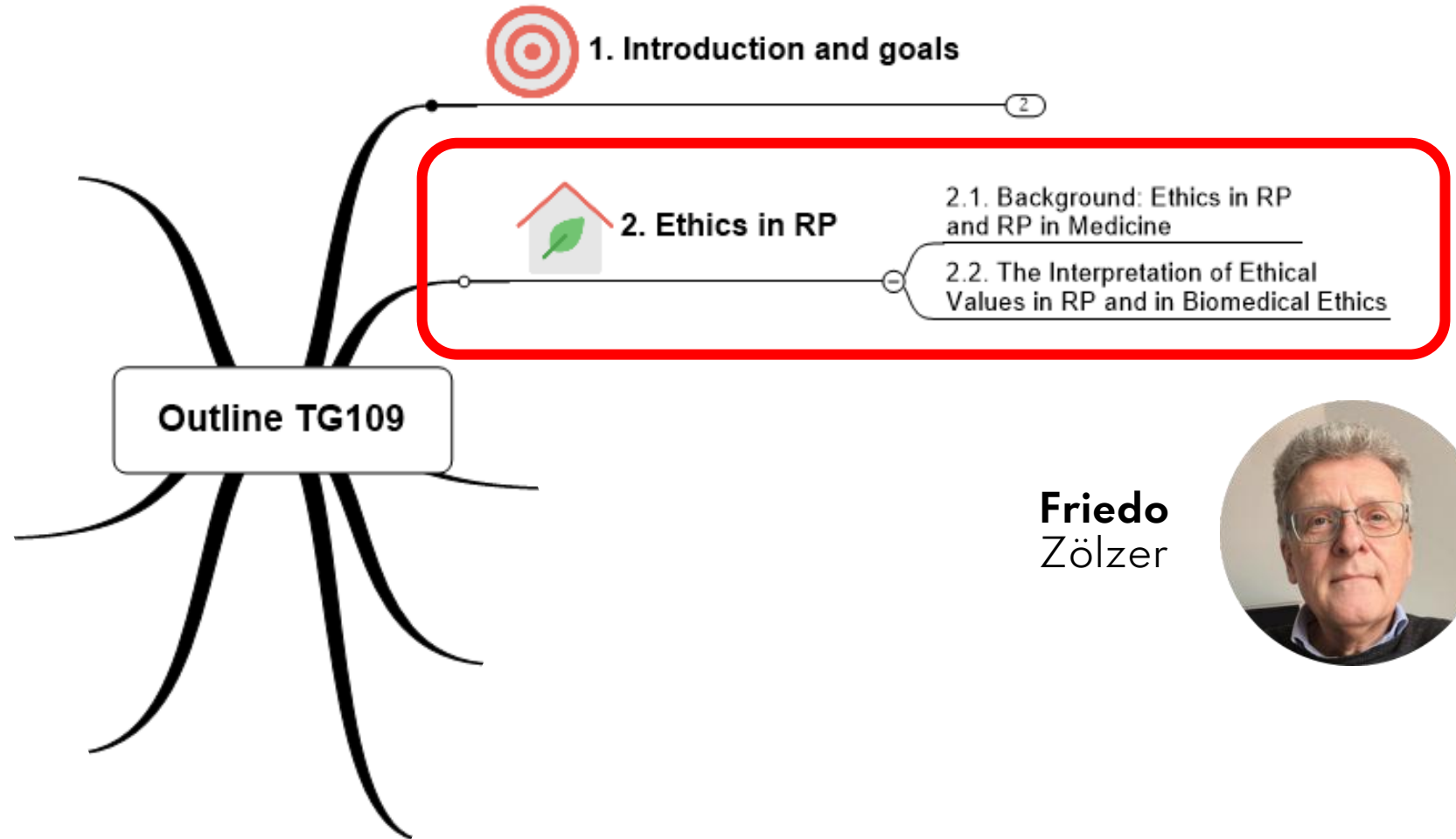
Knowledge	Skills (ability to apply knowledge)	Competencies (Attitudes/Behaviours)
Core and procedural values of ethics of radiological protection in medicine		
<ul style="list-style-type: none">• Identify the core components of dignity/autonomy• ...	<ul style="list-style-type: none">• Aware of fundamental human rights that dignity/autonomy and privacy must be respected• ...	

Elements of Ethical E&T in RP in Medicine

Knowledge	Skills (ability to apply knowledge)	Competencies (Attitudes/Behaviours)
Core and procedural values of ethics of radiological protection in medicine		
<ul style="list-style-type: none">• Identify the core components of dignity/autonomy• ...	<ul style="list-style-type: none">• Aware of fundamental human rights that dignity/autonomy and privacy must be respected• ...	<ul style="list-style-type: none">• Support the patient in making a decision• ...

Summary

- **This report should help medical & RP professional**
 - to interact with a common language
- **This report proposes a method to review the practices**
 - centered on the ethical values
 - helping to compare different approaches and to solve ethical dilemma
- **Ethics requires intellectual efforts** (and the report has a solid theoretical part)
 - it must be included in **E&T** of all RP pro that work in medicine
- **Key-messages**
 - have been dispatched across the whole report

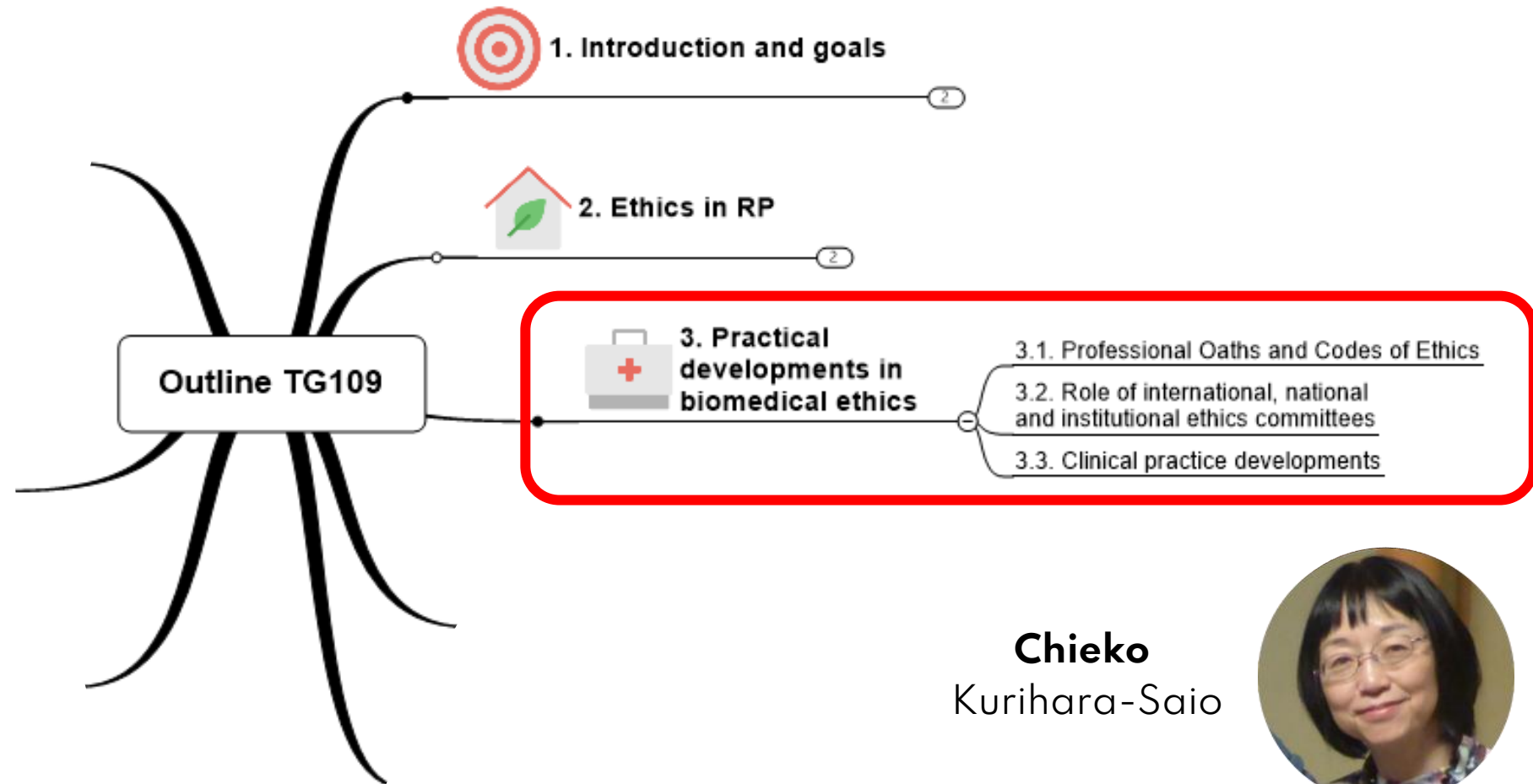


Friedo
Zölzer



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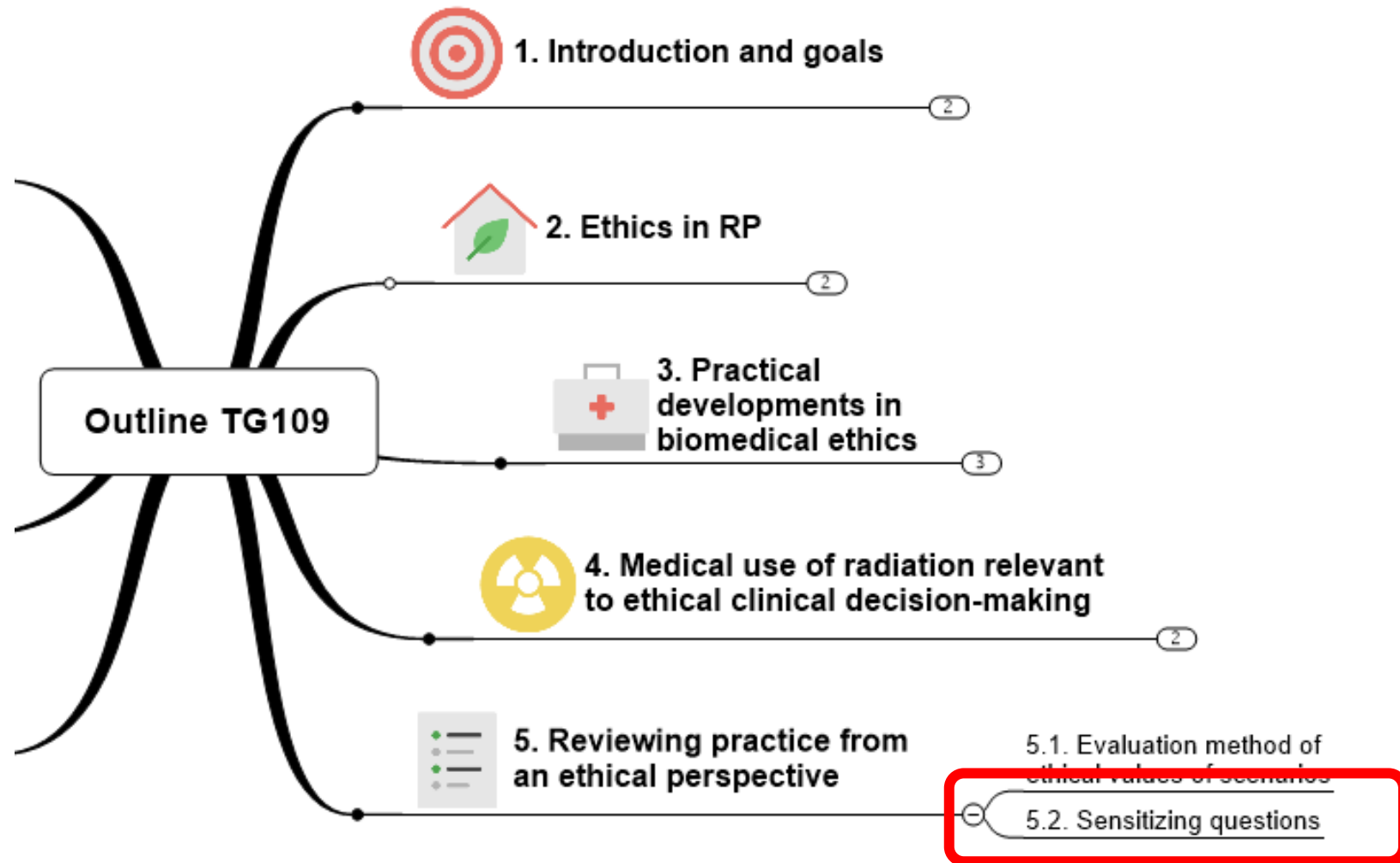


Chieko
Kurihara-Saio



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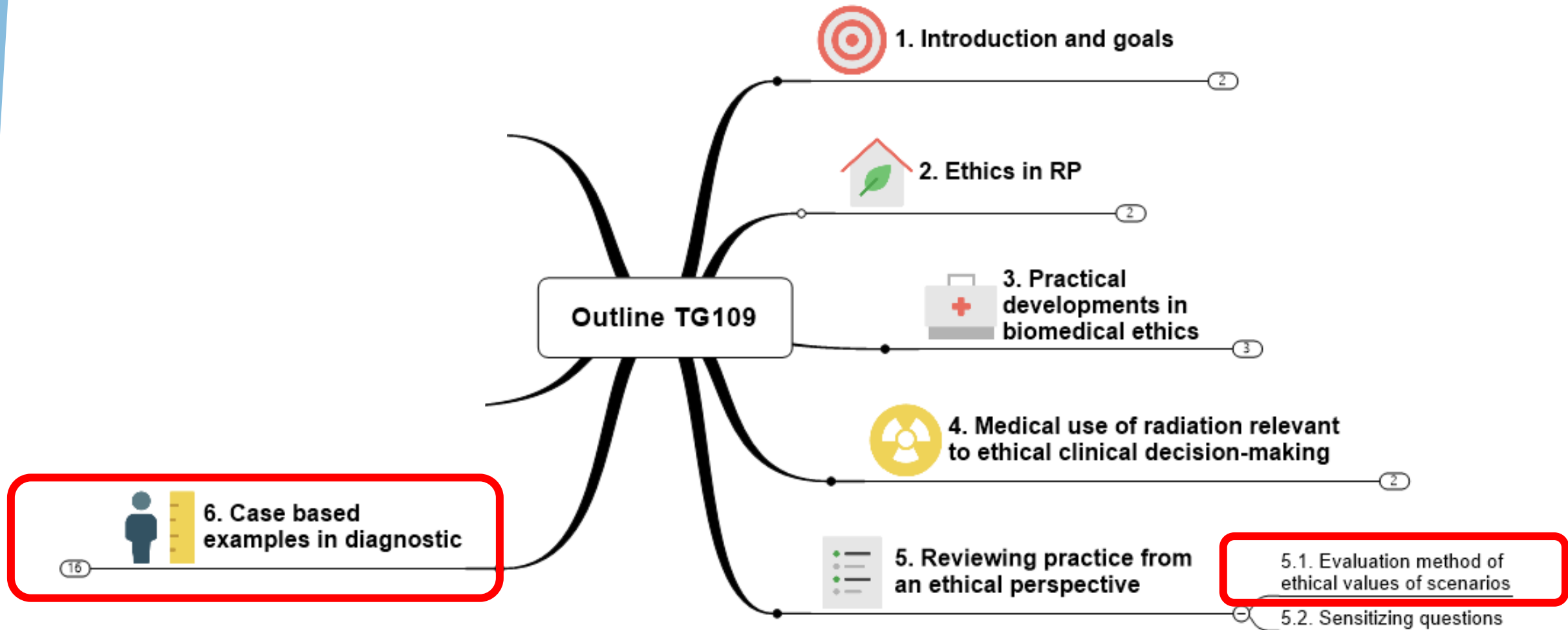


Lynette
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Malone



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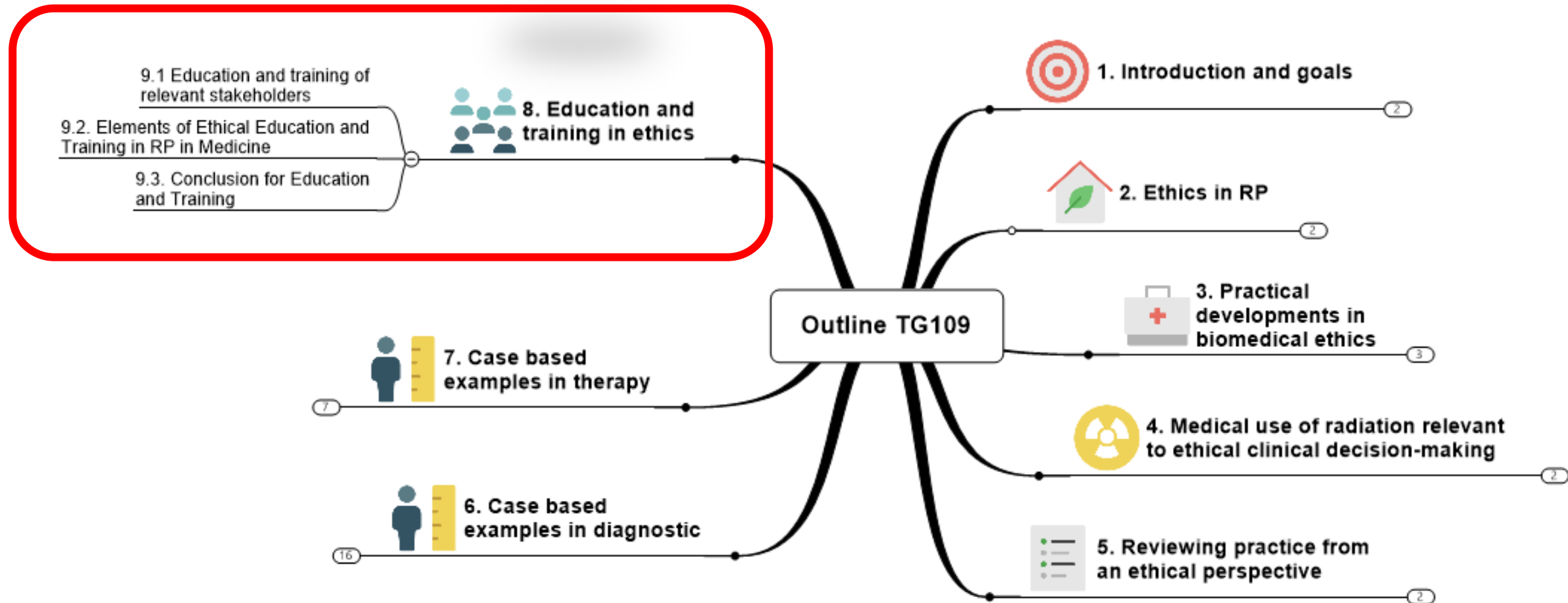
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