Co-funded by the Erasmus+ Programme of the European Union	**BeWell – Radiomics Matrix**		
EQF Level	**7**	**ESCO**	Medical imaging technology (knowledge)[1] Apply medical imaging techniques (skill)[2]
Aggregated Units of Learning Outcomes	**BeWell – NEOP 8**		**Radiomics**

Co-funded by the Erasmus+ Programme of the European Union	BeWell – NEOP Matrix	
Generic Title of the Training programme:	**NEOP 8 – Radiomics**	
Description:	This **Training programme** provides learners with foundational knowledge and practical skills in medical image processing and segmentation. It covers key tools and techniques used in Radiomics, including DICOM viewers, AI-assisted segmentation,	

[1] **Description:** Set of technologies used to creating visual representations of the body interior for the purposes of clinical analysis.

[2] **Description:** Use imaging techniques such as X-rays and ultrasound for looking at the designated body part of the patient. Use a wide range of technology and equipment for this purpose.

<table>
<tr><td colspan="2"></td><td colspan="2">and 3D model generation, enabling learners to process and analyse medical images for clinical applications.</td></tr>
<tr><td colspan="2">EQF Level:</td><td colspan="2">7</td></tr>
<tr><td colspan="4">Learning Outcomes</td></tr>
<tr><td rowspan="2">NEOP 8 – Radiomics</td><td rowspan="2">Training Module # in MOOC</td><td colspan="2">Competence (Autonomy and responsibility)</td></tr>
<tr><td>Knowledge</td><td>Skills</td></tr>
<tr><td rowspan="4">8.1 Harnessing Radiomics for Advanced Medical Imaging</td><td rowspan="4">Module 1</td><td colspan="2">Is able to navigate and utilise medical imaging tools for effective image processing and segmentation.</td></tr>
<tr><td rowspan="2">Knows the nature and file formats of medical images.</td><td>Identifies and manages DICOM medical image formats.</td></tr>
<tr><td>Utilises DICOM viewers for image analysis.</td></tr>
<tr><td>Understands the principles of image segmentation.</td><td>Applies segmentation techniques to extract relevant anatomical structures from medical images.</td></tr>
<tr><td rowspan="3">8.2 Applying Image Segmentation Techniques for Precision Medicine</td><td rowspan="3">Module 2</td><td colspan="2">Is able to apply digital image segmentation techniques to process and analyse medical images.</td></tr>
<tr><td rowspan="2">Knows how to use 3D Slicer for medical image visualisation and segmentation.</td><td>Utilises 3D Slicer tools for volume visualisation and segmentation.</td></tr>
<tr><td>Stores and manages segmented volumes derived from radiological image processing.</td></tr>
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8.3 Utilising AI for Automated Image Analysis in Health and Care	Module 3	Is able to implement AI-assisted segmentation techniques to improve clinical image analysis.	
		Knows the structure of AI-based segmentation tools, including U-net.	Applies AI algorithms for automatic segmentation using 3D Slicer.
			Visualises AI-derived volume segmentation for clinical assessment.
8.4 Creating 3D Digital Models from Medical Imaging Data	Module 4	Is able to generate, visualise, and analyse 3D models from medical imaging data.	
		Knows the procedures for generating 3D objects from medical images.	Uses SimVascular for image segmentation and surface model generation.
			Generates and visualises volume models using ParaView.
			Exports surface and volume model data for further analysis.