

Appendix 4 – Prompts and results of generating images

Process for generating images

For the initial testing we pre-selected the following tools based on an internet search:

- DALL·E
- This Person Does Not Exist
- Artbreeder
- Runway ML
- Stable Diffusion
- DeepAI
- Fotor
- Craiyon
- Dream by Wombo
- Pixray
- Adobe Firefly (finally selected for patient image creation)

We tested each tool in the list with a randomly selected patient description (47-year-old male, BMI 18.7 in a primary care setting) from the blueprint to create a patient image

Additionally, we prompted it to generate an image of a normal chest x-ray of a 47-year-old male and an image of a normal ECG

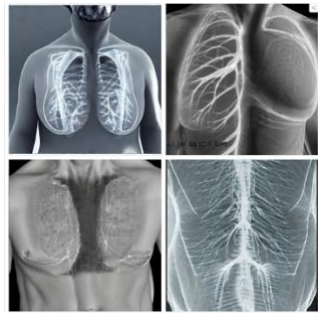
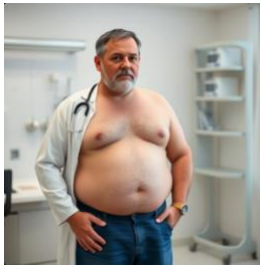
Our criteria for selecting tool(s):

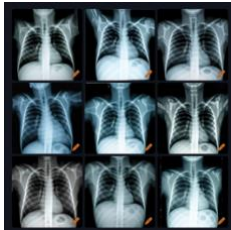
- Free to use (at least for a few prompts)
- Tool should be able to interpret prompts
- Patient images: Tool should be able to create persons in an environment (not only faces)
- Clinical images: Tool should be able to create anatomically and medically correct images showing normal findings
- Best results for the selected VP with no obvious errors (> 5 fingers or others strange objects / aspects)

Results of image generation

Table 1 Creation of patient images and clinical images in different generative AI tools.
Testing phase (11 tools)

Tool	Free to use?	Patient Image	Clinical image (normal chest x-ray of a 47-year-old male)
DALL·E by OpenAI	Yes (limited number)		
This Person Does Not Exist	Yes	Provides random realistic images of faces, but no prompting possible	-
Artbreeder	Yes (limited features)		
Runway ML	Yes (limited number)	Free version was not available at that time due to "heavy demand"	

Stable Diffusion	Yes		
DeepAI	Yes		
Fotor	Yes (limited number)		

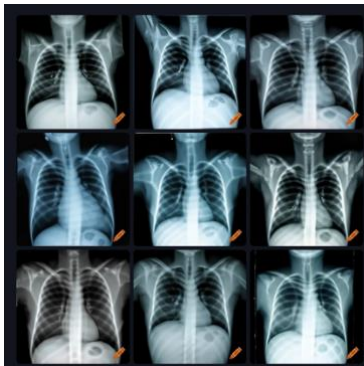
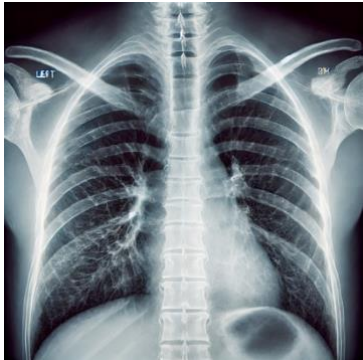
Craiyon	Yes		
Dream by Wombo	Yes		
Pixray	No	-	-

[Adobe Firefly](#)

Yes (limited number)



Table 2: Final round for creating clinical images (3 tools) with assessment by clinicians in our research team

	DALL·E by OpenAI	Craiyon	Adobe Firefly
Normal chest x-ray of a 47-year-old male			
	Anatomically incorrect - abnormal number of ribs (14 on the right side 9, on the left side).	Ribs are anatomically incorrect on each image	Anatomically incorrect ribs, asymmetrical placement and number of ribs
Chest X-ray of a 47-year-old male showing a consolidation in the right lower lobe, consistent with pneumonia			
	Anatomically incorrect - e.g. invalid number of ribs and multiple osteolytic	Anatomically incorrect shoulders, e.g. humerus missing bilaterally.	Anatomically incorrect - e.g. heart incorrectly displayed.

lesions not typically present in pneumonia

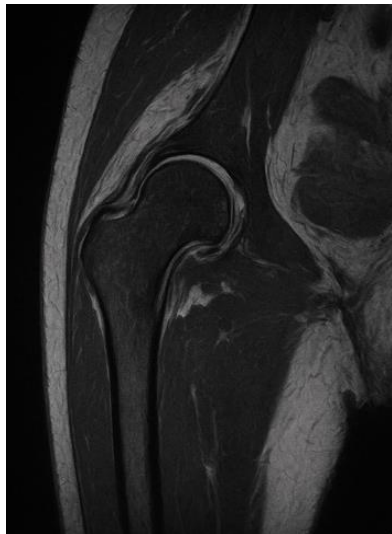
Normal ECG of a female teenager



ECG showing atrial fibrillation



Normal MRI of the hip of a 25-year-old male

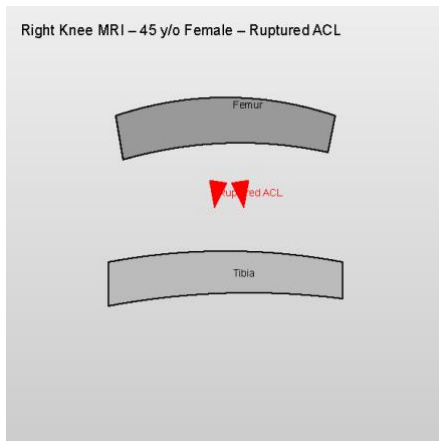


Anatomically incorrect - lacks pelvic bone.

Pelvic imaging, not hip imaging was generated.

Pelvic imaging, not hip imaging was generated. Resembles X-ray presentation, not MRI.

MRI of the right knee of a 45-year-old female with a ruptured anterior cruciate ligament



		Anatomically incorrect - no ligaments present, incorrect ectopic bone structure placed laterally	Resembles X-ray presentation, not MRI - no soft tissue visible.
Erythema migrans on the lower leg of an elderly white female	 Elderly White Female - Lower Leg		