

SMALL FIELD

POINT DOSE

MedPhys Journal, 2017, (Xue ... Grimm ... Das)

3817 Xue *et al.*: Small Field Dose in Heterogeneous Media

3817

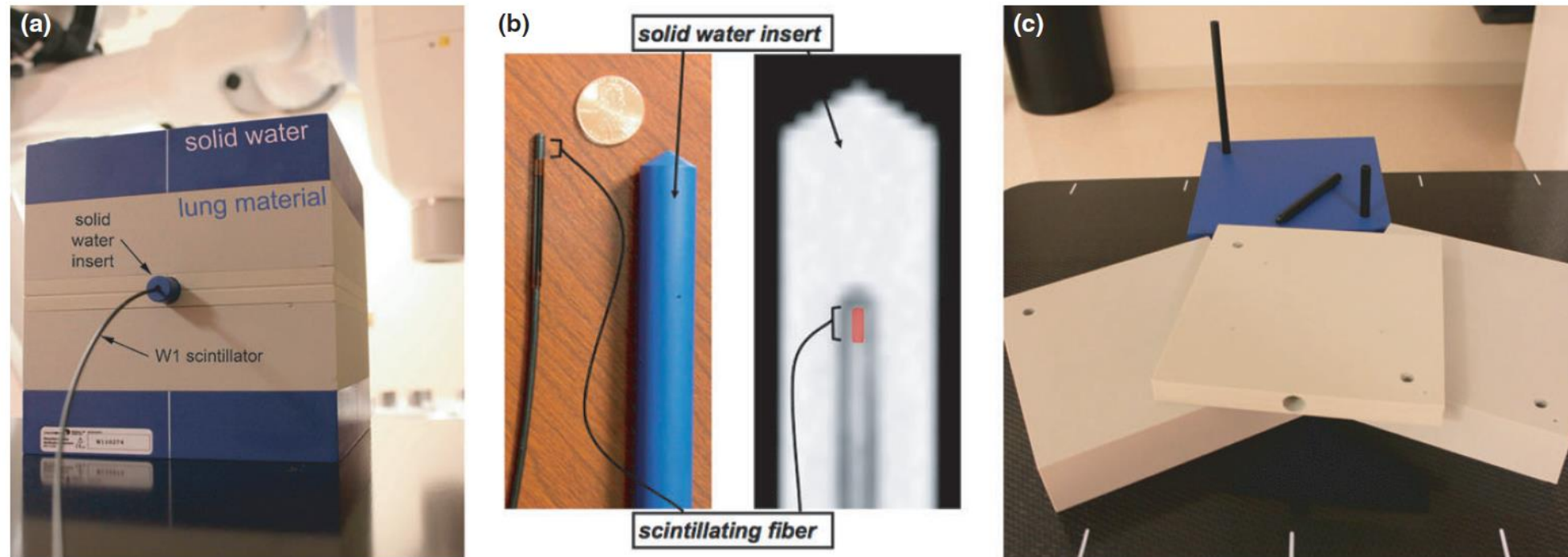
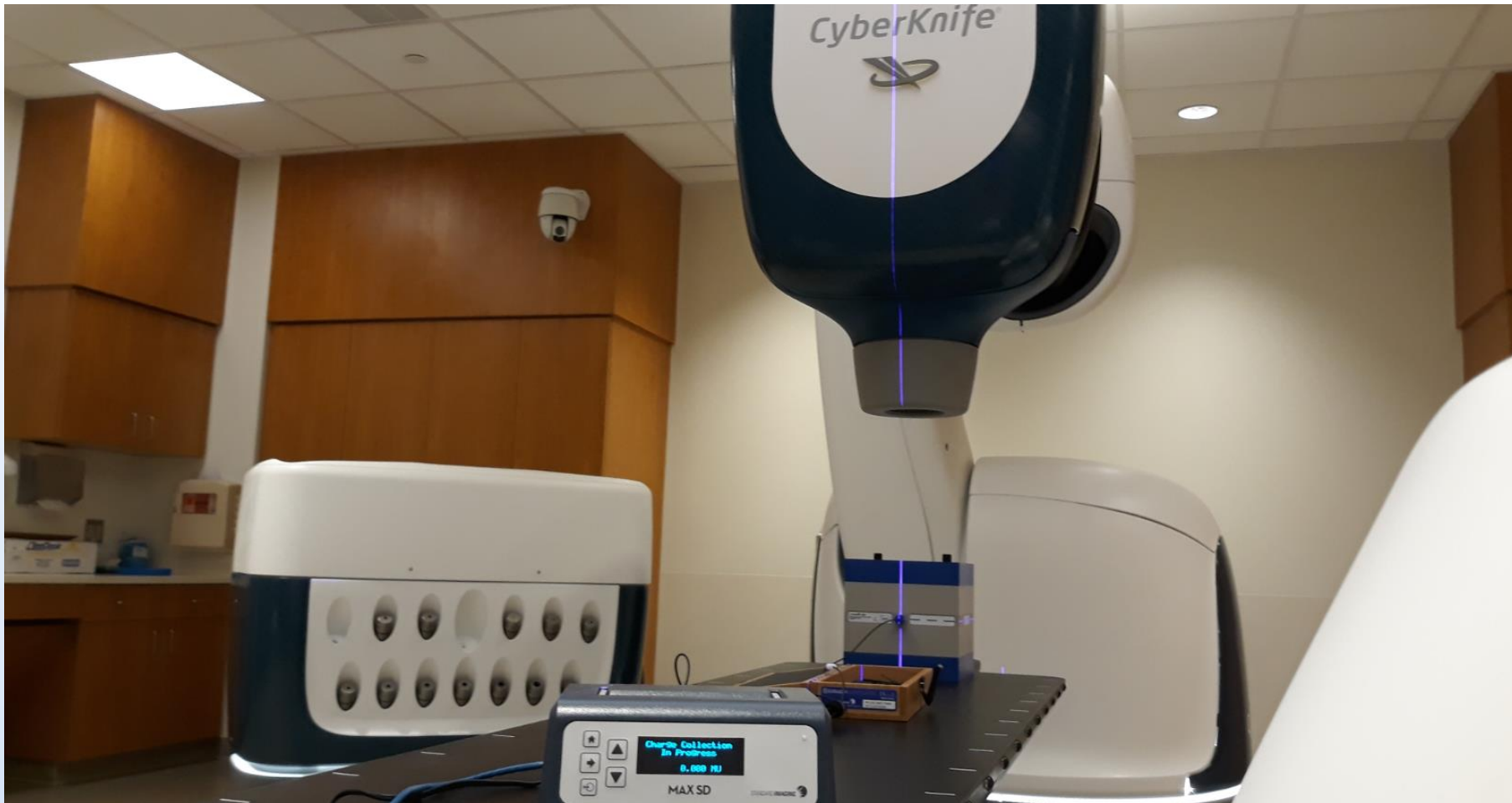


FIG. 1. Tools needed for Monte Carlo dose verification. (a) Components of lung material phantom. (b) Physical scintillator (left) and imaged scintillator within solid water insert (right) showing contoured sensitive volume. (c) “Baby blue” lung phantom. [Color figure can be viewed at wileyonlinelibrary.com]

Geisinger CyberKnife S7



Lung Phantom Point Dose

Published data and Geisinger data, both within 3%

Erlanger CyberKnife M6			
Fixed	Meas	Calc	
Cone	W1	MC	Difference
5	0.5929	0.6070	-2.33%
7.5	0.7536	0.7719	-2.37%
10	0.8083	0.8311	-2.74%
12.5	0.8500	0.8660	-1.85%
15	0.8786	0.8784	0.02%
20	0.9119	0.9130	-0.12%
30	0.9500	0.9324	1.89%
60	1	1	0.00%

Geisinger CyberKnife S7			
Fixed	Meas	Calc	
Cone	W2	MC	Difference
5	0.5337	0.5484	-2.68%
7.5	0.7294	0.7308	-0.19%
10	0.7878	0.7933	-0.69%
12.5	0.8339	0.8401	-0.73%
15	0.8650	0.8738	-1.01%
20	0.9036	0.9092	-0.61%
30	0.9434	0.9532	-1.02%
60	1	1	0.00%