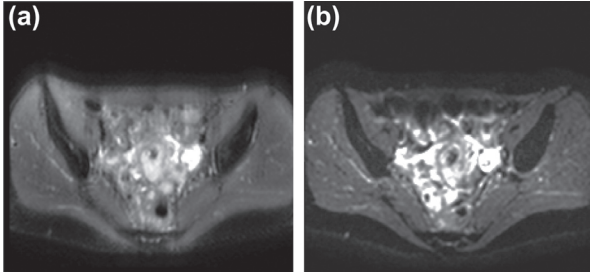
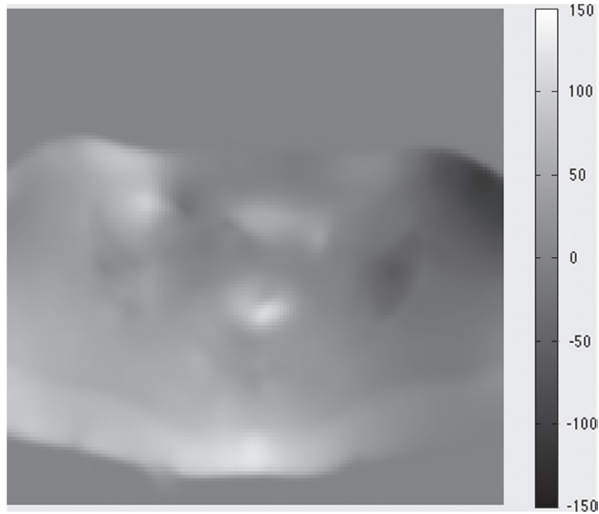


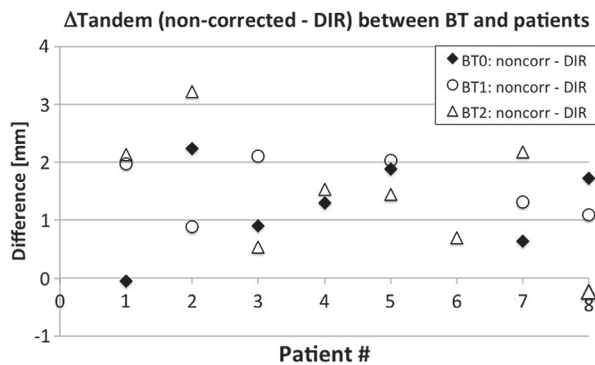
Supplementary material for Haack S, et al. Correction of diffusion-weighted magnetic resonance imaging for brachytherapy of locally advanced cervical cancer. Acta Oncol 2014;53:1073–8.



Supplementary Figure 1. T2 weighted image (a) used as reference image for the image registration and the corresponding DW-MRI, $b = 0 \text{ s/mm}^2$ (b) used as source image.



Supplementary Figure 2. Resulting B_0 field map image in Hz.



Supplementary Figure 3. Example of parameter, ΔTandem , for (DIR – non-corrected) as a function of patient number (#) and BT fraction. It is seen that there is no systematic dependence on neither patient number nor BT fraction indicating that measurements can be considered as independent.

Supplementary Equation 1.

$$Jaccard \text{ Similarity Coefficient} = \frac{|A \cap B|}{|A \cup B|}$$

Supplementary Table I. MRI parameters.

	DW-MRI	Dual GRE	T2-weighted
In-plane resolution (mm)	2.5×2.5	2.0×2.0	2.0×2.0
Slice thickness (mm)	4.0	4.0	4.0
TR (ms)	1550	500	2000
TE (ms)	75	4.6/6.9	80
b-values (s/mm^2)	0, 150, 600, 1000	–	–
BW/pixel in phase direction (Hz)	37	–	–
BW/pixel in frequency direction (Hz)	3030	408	
Parallel imaging	SENSE = 2	No	SENSE = 2
Fat saturation	Yes	No	Yes
Acquisition time (m:ss)	3:10	2:10	1:00

Supplementary Table II. Resulting ADC values for the GTV for all correction methods and the non-corrected DW-MRI. ADC was calculated using non-linear estimation and $b = 150, 600$ and 1000 s/mm^2 .

	Non-corrected	B_0M	DIR
ADC value ($10^{-3} \text{ mm}^2/\text{s}$)	0.87 ± 0.4	0.95 ± 0.3	1.00 ± 0.3