

### Additional file 3

#### Suspicious pathological lymph nodes, stents, and fiducials

**Table e2.** Number of observers who included the suspicious pathological lymph nodes in the (i)GTV according the diagnostic CT report.

Patient	Location suspicious pathological lymph node	GTV	iGTV
2	Portocaval	5	4
2	Along common hepatic artery	3	2
4	Along tumor, not characterized	2	2

**Table e3.** Number of observers who included the biliary stent or percutaneous biliary drainage in the (i)GTV at least 50% of the stent in at least three slices

Patient	GTV-CT	iGTV-CT
1	3	5
2	2	1
3	6	4
4	8	7

**Table e4.** The number of (i)GTV including the fiducial over the number of fiducials multiplied by number of observers ( $3 \times 8 = 24$ ). Partly included fiducials were counted as delineated.

Patient	GTV-CT	iGTV-CT
1	24/24 (100 %)	23/24 (100 %)
2*	5/24 (21 %)	4/24 (17 %)
3	22/24 (92 %)	16/24 (67 %)
4	24/24 (100 %)	21/24 (88 %)

\* In patient 2, the fiducials were mistakenly not implanted in the tumor