Supplementary data

The following tables report the mean dose [Gy] per volume of interest (healthy liver or tumour) over time (injection number), per patient.

Table S1: Dosimetry corresponding to patient 1, who was first treated via the superior mesenteric artery (SMA), then via the right hepatic artery (RHA) and last via the left hepatic artery (LHA). After injection number 6, the patient was exhausted and the remaining two injections were performed at the cone-beam CT (see section results, feasibility). A final MRI was made after the procedure was terminated for the final dosimetry time point. Tumour 2 was vascularized through the SMA and RHA. Tumour 3 was vascularized through the RHA and LHA. Tumour 4 was the tumour in which dosimetry was unreliable, as it was located very close to the lungs (see section results, MRI-based dosimetry).

| Injection # | SMA | RHA | LHA |
|-------------|-----|-----|-----|
| **Healthy liver** | 4   | 7   | 9   |
| **Tumour 1** | 6   | 9   | 10  |
| **Tumour 2** | 3   | 6   | 7   |
| **Tumour 3** | 5   | 5   | 5   |
| **Tumour 4** | 22  | 20  | 19  |

Table S2: Dosimetry corresponding to patient 2, who was first treated via the right hepatic artery (RHA) and last via the left hepatic artery (LHA). Tumour 1 was vascularized through both the RHA and LHA.

| Injection # | RHA | LHA |
|-------------|-----|-----|
| **Healthy liver right** | 10  | 22  |
| **Healthy liver left** | 6   | 8   |
| **Tumour 1** | 10  | 29  |
| **Tumour 2** | 14  | 49  |
| **Tumour 3** | 12  | 32  |
| **Tumour 4** | 14  | 36  |
| **Tumour 5** | 10  | 7   |

Table S3: Dosimetry corresponding to patient 3, who was first treated via the right hepatic artery (RHA) and last via the left hepatic artery (LHA). Tumour 1 was vascularized through both the RHA and LHA (to a much smaller extent).

| Injection # | RHA | LHA |
|-------------|-----|-----|
| **Healthy liver** | 3   | 4   |
| **Tumour 1** | 5   | 21  |
| **Tumour 2** | 4   | 4   |
| **Tumour 3** | 2   | 2   |
Table S4: Dosimetry corresponding to patient 4, who was only treated via the right hepatic artery (RHA).

| Injection # | 1 | 2 | 3 | 4 |
|-------------|---|---|---|---|
| Healthy liver right | 5 | 9 | 13 | 20 |
| Healthy liver left | 4 | 5 | 6 | 6 |
| Tumour 1 | 10 | 43 | 74 | 113 |
| Tumour 2 | 11 | 58 | 109 | 163 |

Table S5: Dosimetry corresponding to patient 5, who was first treated via the left hepatic artery (LHA) at the cone-beam CT because of an unstable catheter position (see results, feasibility section) and last via the right hepatic artery (LHA). Tumour 3 was vascularized through both the RHA and LHA, and tumours 4 and 5 only through the LHA.

| Injection # | 5 | 6 | 7 | 8 |
|-------------|---|---|---|---|
| Healthy liver left | 33 | 34 | 35 | 37 |
| Healthy liver right | 10 | 17 | 24 | 32 |
| Tumour 1 | 24 | 54 | 96 | 114 |
| Tumour 2 | 16 | 44 | 77 | 94 |
| Tumour 3 | 29 | 41 | 52 | 57 |
| Tumour 4 | 66 | 60 | 57 | 59 |
| Tumour 5 | 57 | 50 | 54 | 57 |

Table S6: Dosimetry corresponding to patient 6, who was only treated via the right hepatic artery (RHA).

| Injection # | 1 | 2 | 3 | 4 |
|-------------|---|---|---|---|
| Healthy liver right | 10 | 16 | 28 | 38 |
| Healthy liver left | 6 | 8 | 10 | 7 |
| Tumour 1 | 20 | 46 | 81 | 104 |
| Tumour 2 | 15 | 56 | 97 | 122 |
| Tumour 3 | 18 | 63 | 88 | 149 |