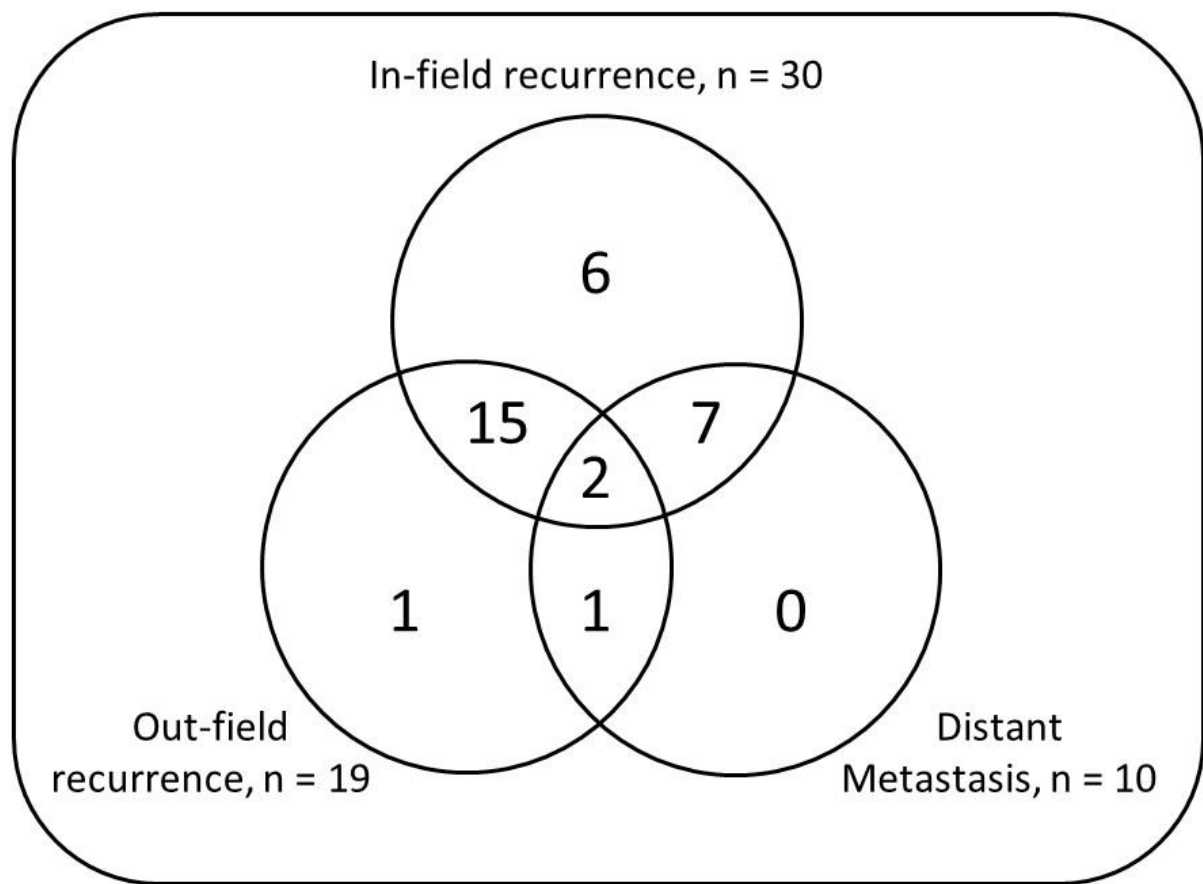
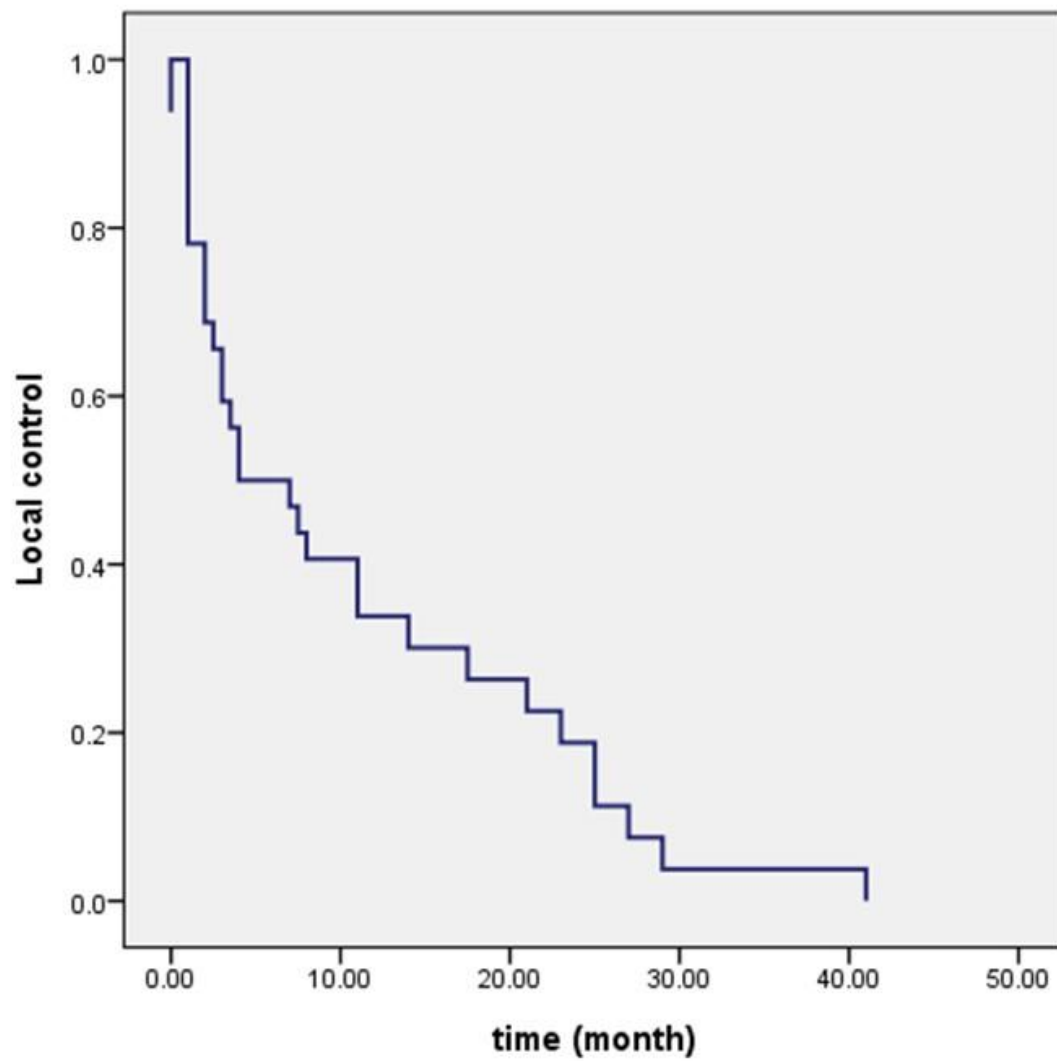




Supplement Figure 1. Pattern of disease progression

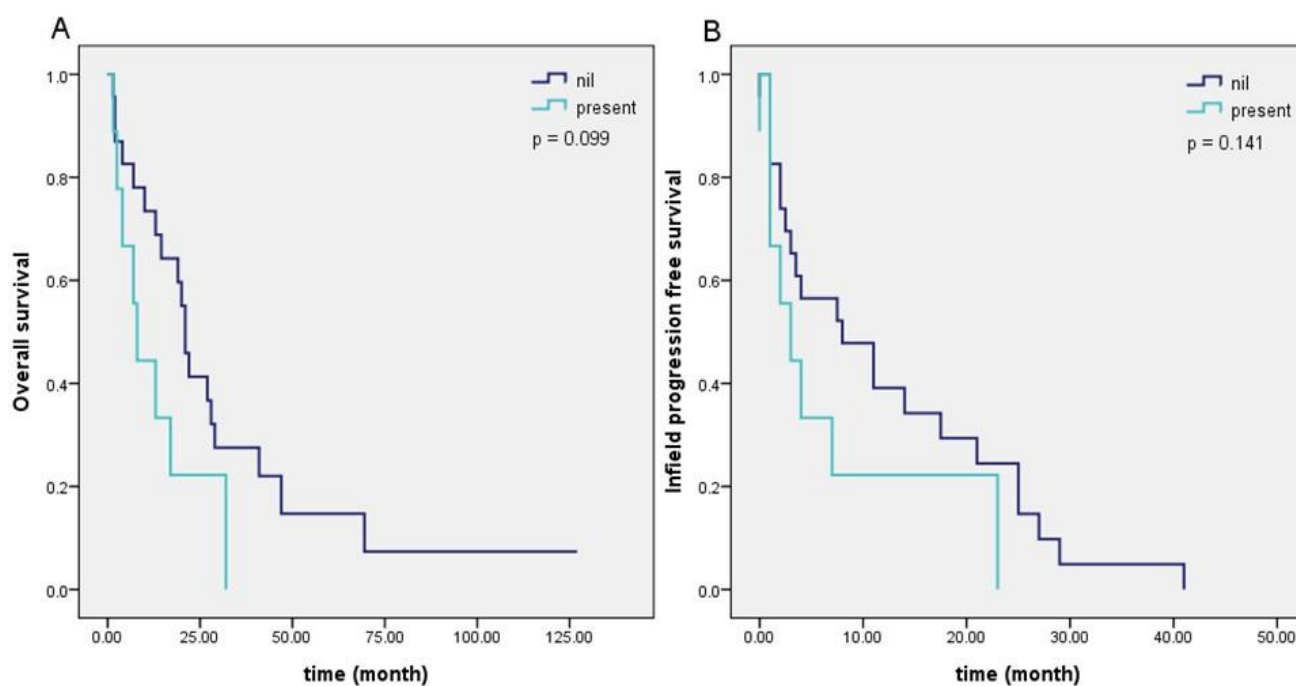


Supplement Figure 2. Local control of all patients

Supplement Table 3. Correlation between risk factors and local control

independent variable	P value
Child-Pugh score	0.589
BED ¹	0.902
Tumor volume	0.217
PVTT ²	1.000
Use of Systemic therapy	1.000
Hepatitis B	0.626
Hepatitis C	1.000
BCLC ³ stage	0.096

Abbreviation: ¹BED: biologically equivalent dose. ²PVTT: portal vein tumor thrombosis. ³BCLC: Barcelona Clinic Liver Cancer stage.



Supplement Figure 4. (A). Overall survival for the patients with and without portal vein tumor thrombosis (B). In-field progression-free survival for the patients with and without portal vein tumor thrombosis

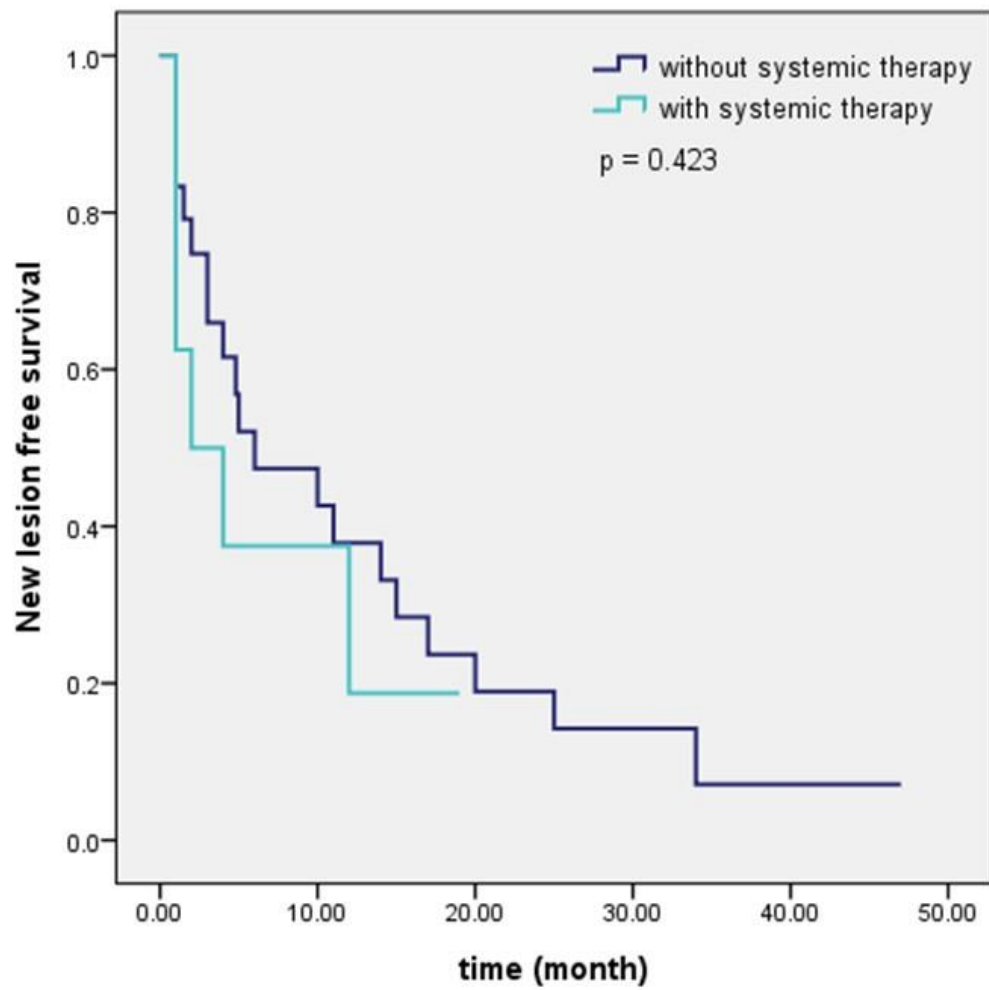
Supplement Table 5. Systemic therapy after re-irradiation

Patient number	Systemic therapy	Duration (months)	Date	Systemic therapy	Duration (months)	Date
3	Interferon A (TIW) + Sorafenib + TPFL ¹ * 1	1.3	2010/03/09 - 2010/04/19			
15	Thalidomide	2.6	2007/11/11 - 2008/01/29			
17	Sorafenib + TEPFL ² * 1	2.7	2011/09/13 - 2011/12/06			
24	Thalidomide	0.5	2013/01/23 - 2013/02/03			
26	Sorafenib	0.7	2016/01/13 - 2016/02/03			
27	Sorafenib	4.1	2016/10/24 - 2017/02/27			
28	Regorafenib	1.6	2017/03/03 - 2017/04/21			
29	Sorafenib	0.5	2017/04/10 - 2017/04/25			
30	Regorafenib	23.3	2017/10/11 - 2019/09/19	Lenvatinib	4.6	2019/09/24 - 2020/02/14

Abbreviation: ¹TPFL: Taxane + Cisplatin + Fluorouracil + Lecovorin, ²TEPFL: Taxane + Epirubicin + Cisplatin + Fluorouracil + Doxorubicin.

Supplement Table 6. Relationship between in-field progression-free survival and systemic therapy

Mean in-field progression-free survival (months)			
	without systemic therapy (n = 24)	with systemic therapy (n = 8)	P value
6 months	4.29	3.00	0.232
12 months	7.05	4.74	0.281
24 months	10.52	7.75	0.475



Supplement Figure 7. Out-filed recurrence and/or distant metastasis free survival for subgroup with and without systemic therapy