Healthcare resource use among patients with advanced hepatocellular carcinoma (aHCC) in the UK

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BACKGROUND

- Hepatocellular carcinoma (HCC) is the most common type of liver cancer in the UK, accounting for nine out of ten cases.[1]
- In the UK, liver cancer accounts for only 2% of all cancers; however, the incidence has increased by 162% since the early 1990s, with 5,906 new cases every year.[2]
- With a high mortality of 5,416 liver cancer deaths every year[3] and a projected 38% increase in incidence between 2014 and 2035,[2] it is important to understand the healthcare needs of patients with advanced HCC (aHCC).
- Currently, data are limited on the healthcare resources used to treat patients with aHCC.

OBJECTIVE

- To understand healthcare resource use involved in treating patients with aHCC in the UK, based on a clinician survey.

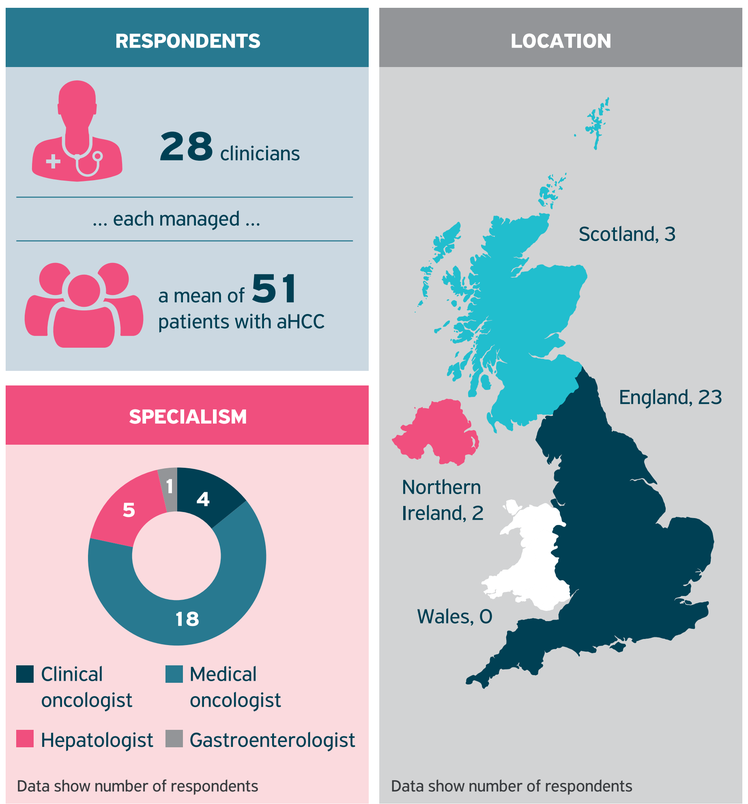
METHODS

- UK-based clinicians were recruited with expertise in treating patients with aHCC and who had treated 10 or more such patients in the past 12 months.
- The online survey was conducted between September and November 2018, and included questions on clinician demographics, along with questions related to healthcare resource use in secondary care by patients with aHCC, including medical visits, hospitalizations and laboratory/radiological tests.
  - Here, we focus on healthcare resource use in patients with aHCC for whom first-line sorafenib treatment had been unsuccessful.
  - Clinicians were asked to base their responses on a typical patient.
- Healthcare resource use was reported for patients with stable disease (SD) and those with progressive disease (PD).
  - SD was defined as no further progression of aHCC while receiving best supportive care.
  - PD was defined as disease progression, based on RECIST criteria, for example.

RESULTS

- In total, 28 clinicians completed the survey, who had managed on average 51 patients with aHCC in the past 12 months (**Figure 1**).
- Most respondents were medical oncologists and most were based in England (**Figure 1**).

Figure 1. Data show respondent demographics



aHCC, advanced hepatocellular carcinoma.

Table 1. Medical visits per month for patients with SD or PD

Medical visit	Patients with SD		Patients with PD	
	Proportion of patients attending a visit per month, mean (min–max)	Number of visits per patient per month, mean (min–max)	Proportion of patients attending a visit per month, mean (min–max)	Number of visits per patient per month, mean (min–max)
Specialist visit – oncologist	56.61% (1–100%)	1.14 (0–2)	62.68% (0–100%)	0.96 (0–2)
Specialist visit – gastroenterologist	21.89% (0–100%)	0.44 (0–1)	19.14% (0–80%)	0.33 (0–1)
Nurse visit – clinical nurse specialist	40.82% (0–100%)	1.10 (0–2)	41.89% (0–100%)	1.00 (0–2)
Nurse visit – palliative care nurse	37.14% (0–100%)	0.95 (0–2)	41.89% (0–100%)	1.22 (0–4)
GP visit	38.39% (0–100%)	1.00 (0–2)	42.32% (0–100%)	0.96 (0–2)
Other visit (please specify): palliative care doctor[a]	30.00%	0.333	80.00%	2
Other visit (please specify): hepatologist[a]	5.00%	0.3	–	–
Other visit (please specify): dietician[a]	–	–	50.00%	1

[a]Based on input from individual clinicians (one clinician answered palliative care doctor [SD and PD] and dietician; a second clinician answered hepatologist).
GP, general practitioner; max, maximum; min, minimum; PD, progressive disease; SD, stable disease.

Table 2. Hospitalizations per month for patients with SD or PD

Hospital department		Proportion of patients requiring attendance per month, mean[a]		Length of stay, days, mean (min–max)
General ward	SD	17.12% (1% – 75%)	SD	4.89 (0–14)
	PD	26.79% (0% – 100%)	PD	5.36 (0–15)
ICU	SD	3.14% (1% – 15%)	SD	3.50 (0–15)
	PD	5.04% (0% – 40%)	PD	3.57 (0–30)
A&E	SD	19.61% (1% – 65%)	SD	–
	PD	26.18% (0% – 80%)	PD	–

[a]Bars show the minimum and maximum reported proportions of patients requiring attendance per month.
A&E, accident and emergency; ICU, intensive care unit; max, maximum; min, minimum; PD, progressive disease; SD, stable disease.

Table 3. Laboratory tests and radiological tests/therapy in patients with SD or PD

	Patients with SD		Patients with PD	
	Proportion of patients tested, mean (min–max)	Number of tests per patient per month, mean (min–max)	Proportion of patients tested, mean (min–max)	Number of tests per patient per month, mean (min–max)
Laboratory test				
α-fetoprotein	69.50% (0–100%)	0.95 (0–2)	65.71% (0–100%)	0.91 (0–3)
Liver function tests	78.21% (0–100%)	1.09 (1–2)	69.89% (0–100%)	0.96 (0–2)
International normalized ratio	63.57% (0–100%)	1.14 (1–2)	62.14% (0–100%)	1.05 (0–3)
Full blood count	78.57% (0–100%)	1.13 (1–2)	71.79% (0–100%)	0.96 (0–2)
Biochemistry	80.00% (0–100%)	1.13 (1–2)	71.43% (0–100%)	1.00 (0–3)
Other (please specify)	–	–	–	–
Radiological tests/therapy				
Abdominal CT	51.07% (0–100%)	0.88 (1–4)	42.61% (0–100%)	0.46 (0–3)
Abdominal MRI	17.93% (0–100%)	0.33 (1–2)	12.07% (0–100%)	0.06 (0–1)
Radiotherapy fraction	4.64% (0–20%)	0.26 (1–2)	4.75% (0–30%)	0.11 (0–1)
Other (please specify)	–	–	–	–

CT, computed tomography; max, maximum; min, minimum; MRI, magnetic resonance imaging; PD, progressive disease; SD, stable disease.

- Across a range of healthcare providers, substantial proportions of patients attended medical visits each month (**Table 1**).
  - For patients with SD or PD, more than half of patients attended a specialist visit with an oncologist each month.
  - Based on a small number of clinician responses, larger proportions of patients with PD than those with SD required palliative care visits (for both nurse and doctor care).
- Substantial proportions of patients required hospital treatment each month, including admissions to intensive care units and general wards (**Table 2**).
  - In general, the proportion of hospitalized patients was greater for those with PD than for those with SD.
- Most patients (62–80%) required laboratory tests; fewer patients required radiological tests/therapy (5–51%) (**Table 3**).
  - In general, higher proportions of patients with SD required laboratory and radiological tests than did those with PD.

CONCLUSIONS

- Based on this online survey of UK-based clinicians, patients with aHCC have considerable monthly healthcare needs.
- In general, the number of monthly medical visits and hospitalizations was greater for patients with PD than for those with SD.
- Thus, treatments that prolong SD may have a positive impact on real-world clinical practice.
- This is the first comprehensive study to examine healthcare resource use in patients with aHCC in the UK and may, therefore, be useful to inform future economic models.

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