

CONDENSED STUDY SUMMARY

“Real-world survey” of hydrogen-controlled cancer

A follow-up report involving 82 patients with advanced cancer

STUDY TYPE	SETTING	PERIOD
Prospective observational follow-up	Fuda Cancer Hospital of Jinan University	2014-2018

Study design

- The study followed 82 patients with stage III or IV cancer using a real-world evidence approach.
- Patients inhaled a mixture of 66.7% hydrogen and 33.3% oxygen through a nasal tube or mask.
- Reported flow rate: 3,000 mL/min, for more than 3 hours per day, for at least 3 consecutive months.

82	III-IV	3,000	3+
patients	cancer stage	mL/min gas flow	hours daily

Important context

This was not a randomised controlled trial. There was no placebo group, and many patients received other treatments at the same time. The study therefore cannot establish that hydrogen caused the reported outcomes.

REPORTED OUTCOMES

Quality of life and clinical observations

The following points summarise outcomes reported by the study authors. They should be interpreted as observational findings, not proof of treatment efficacy.

Quality of life

- After 2 weeks, patients reported reductions in dyspnoea and improvements in appetite, fatigue, nausea, vomiting and insomnia, together with better physical, role and emotional function.
- After 4 weeks, further significant improvements were reported in cognitive function, pain, constipation and diarrhoea.

Physical condition after 3 months

42%	34%	24%
improved	remained stable	deteriorated

- Lung cancer patients showed the greatest reported physical improvement (68%). No improvement was reported for pancreatic cancer patients (0%); the figure for gynaecological cancers was 12%.

Tumour markers

- Among 58 patients with elevated tumour markers before treatment, levels decreased in 36% after 3 months. The first decline appeared between 13 and 45 days (median 23 days).
- The largest reported reduction was in lung cancer patients (75%). No decrease was observed in pancreatic or liver cancer patients.

Disease control on imaging

- Among 80 patients with visible tumours, the reported disease-control rate was 57.5%. Complete or partial remission appeared between 21 and 80 days (median 55 days) after hydrogen inhalation began.
- Reported disease control was higher in stage III patients (83%) than stage IV patients (48%). Pancreatic cancer had the lowest rate; lung cancer had the highest (79%).

57.5%	83%	48%	79%
overall disease control	stage III	stage IV	lung cancer

INTERPRETATION

Survival, safety and conclusions

Survival

- During follow-up of 3 to 46 months, 12 patients died. All were stage IV. Reported causes included tumour progression, liver failure, infection and treatment complications.

Safety observations

- No haematological toxicity was observed among the 29 patients treated with hydrogen inhalation alone.
- Five of 82 patients experienced mild effects: stomach discomfort, dizziness, headache, minor nosebleed or nasal dryness. These resolved spontaneously within hours to days.

5 of 82	29	3-46
reported mild effects	hydrogen-only patients	months of follow-up

Authors' conclusion

The authors concluded that hydrogen inhalation was a simple, low-cost supportive approach with few adverse reactions, reported improvements in quality of life and possible control of cancer progression, and warranted further formal investigation.

What this study does - and does not - show

- It provides preliminary, real-world observations from a small group of patients with advanced cancer.
- It does not prove that hydrogen treats cancer, improves survival or caused the observed changes.
- The absence of randomisation, a placebo control and isolation from other treatments creates a high risk of confounding.
- Hydrogen should not replace oncology care. Anyone considering it alongside cancer treatment should discuss it with their oncology team.

[READ THE ORIGINAL STUDY](#)
[Open the PubMed record >](#)

Source: Chen JB et al. 'Real world survey' of hydrogen-controlled cancer: a follow-up report of 82 advanced cancer patients. Medical Gas Research. PubMed PMID: 31552873.