Background Cancer is the major cause of illness and mortality in Taiwan. It is noteworthy that the psychosocial and spiritual needs of patients with terminal cancer patients often are neglected by families and healthcare providers in Taiwan.

Aim The purpose of this study was to apply the Comfort Theory to explore the experience on comfort care of a patient with terminal HCC near the end of life in hospice ward.

Methods Data were collected and evaluated based on Kolcaba’s theory of comfort. It directs nurses to assess physical, psycho-spiritual, sociocultural and environmental comfort needs of the patient; design holistic interventions to meet those needs; and measure the effectiveness of interventions to enhance the patient’s comfort.

Results Four contexts of a terminal hepatocellular carcinoma patient experience are as follows: (a) Physical: abdominal distention resulted from ascites deterioration. (b) Psycho-spiritual: Fear of death anxiety resulted from the uncertainty of life-threatening. (c) Sociocultural: Altered family process resulted from family worry and conceals the patient’s condition. (d) Environmental: Un-homelike setting related to the limitation of hospital hardware.

Discuss The caring experience of this study provide important information to health professionals while caring terminal cancer patients based on their comfort needs. Health professionals could design an individualised care plan, establish a trusting relationship, control symptoms, provide complementary medicine, reconnect family relationship and create a homelike atmosphere to meet patients’ needs.

Conclusion The study will help health professionals to perceive psychosocial and spiritual needs and properly provide support for terminal cancer patients.