

# What caused implantable venous access device failure in cancer patients?

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It is common practice to insert totally implantable venous access devices (TIVADs) in cancer patients beginning a course of chemotherapy to eliminate potential peripheral venous access problems; however, risk factors impacting the survival of TIVADs remain unclear. Further studies are needed to analyze the risk factors for failure of the TIVADs and correlate adverse events with risk factors.

A research article published on October 7, 2009 in the *World Journal of Gastroenterology* addresses this question. The research group led by Dr. Hsieh from Department of Surgery, Chang Gung Memorial Hospital-Chiayi, used the Cox proportional hazard model to analyze risk factors for failure of TIVAD and log-rank test to compare actuarial survival rates. Infection, [thrombosis](#), and surgical complication rates (chi-square test or Fisher's exact test) are compared among the risk factors. A total of 1348 totally implantable venous access devices (TIVADs) were implanted into the 1280 cancer patients in this cohort study.

In this study, the researchers find that increasing age, male gender, open-ended catheter and hematogenous [malignancy](#) were significant risk factors reducing survival of TIVADs by multivariate analysis. Close-ended catheters (Groshong) have a lower thrombosis rate than open-ended catheters; hematogenous malignancies have higher infection rates than solid malignancies.

Based on their results, the authors suggest that keeping aseptic precautions when implanting and accessing port systems; infections must

be treated with adequate antimicrobial therapy.

More information: Hsieh CC, Weng HH, Huang WS, Wang WK, Kao CL, Lu MS, Wang CS. Analysis of risk factors for central venous port failure in cancer patients. *World J Gastroenterol* 2009; 15(37): 4709-4714, [www.wjgnet.com/1007-9327/15/4709.asp](http://www.wjgnet.com/1007-9327/15/4709.asp)

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