

4<sup>th</sup> World Congress on

# Cancer Science & Therapy

October 20-22, 2014 DoubleTree by Hilton Hotel Chicago-North Shore Conference Center, USA

## Heart transplantation in patients with prior malignancy: A systematic review from a cardiologic viewpoint

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A history of malignancy can be considered as a contraindication for heart transplantation in patients with end-stage heart failure. A systematic search of the available literature about this theme resulted in some older case reports (n=3) and small series. More recent series are larger (n=10), have a specific design or rely on nationwide databases (n=2). All reports are retrospective in nature. Entirely pediatric series are excluded. The preoperative profile of the patients include demographics, time interval between malignancy and transplantation (if available), indication of transplantation and co-morbid conditions. Postoperative results include hospital mortality, long-term survival, recurrence of malignancy, infection and rejection rate. Findings: 1) 10 to 27% of cancer survivors suffer from chemotherapy-related cardiomyopathy. Moreover, two series show that the number of surviving cancer patients, needing transplantation is increasing; chemotherapy related end-stage heart failure almost doubled as indication for transplantation between the periods 2000-2004 and 2004-2008. 2) Hospital mortality varied between 0-10% in small series and seems comparable to patients without malignancy. 3) The same is true for 5-year survival, being 55-75%. The disease free interval between malignancy and transplantation has an important effect on postoperative survival and on recurrence rate of cancer: 5-year survival decreases from 80% to 55% if the interval decreases from 5 to 1 year. Recurrence rate of cancer increases from 6% to 63%. Although the published series are not comparable, it can be concluded that transplantation in patients with prior malignancy can be justified when the interval between malignancy and transplantation exceeds 5 years.

### Biography

Wilhelm P Mistiaen graduated as MD at the University of Antwerp in 1984. In 1994, he completed a surgical training and registered as surgeon. He completed his first PhD in 1999 and a second one in 2009 at the same university. Currently, he is Lecturer and Associate Professor of Anatomy and of Pathology at the University of Antwerp/Artesis-Plantijn University College. The focus of interest is complications after aortic valve replacement. Another focus is heart disease in patients with (prior) malignancy. Several manuscripts appeared on these topics. He is a regular reviewer for the *European Journal of Cancer Prevention*.