



SIGNIFICANT REDUCTION OF DEEP STERNAL WOUND INFECTIONS POST CARDIAC SURGERY BY THE POSTHORAX® VEST

A SINGLE CENTER OBSERVATIONAL COHORT STUDY IN 2200 PATIENTS

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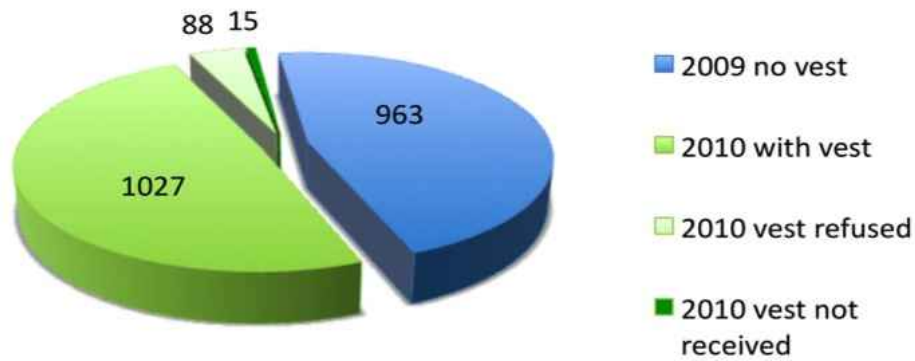


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The Posthorax® Experience

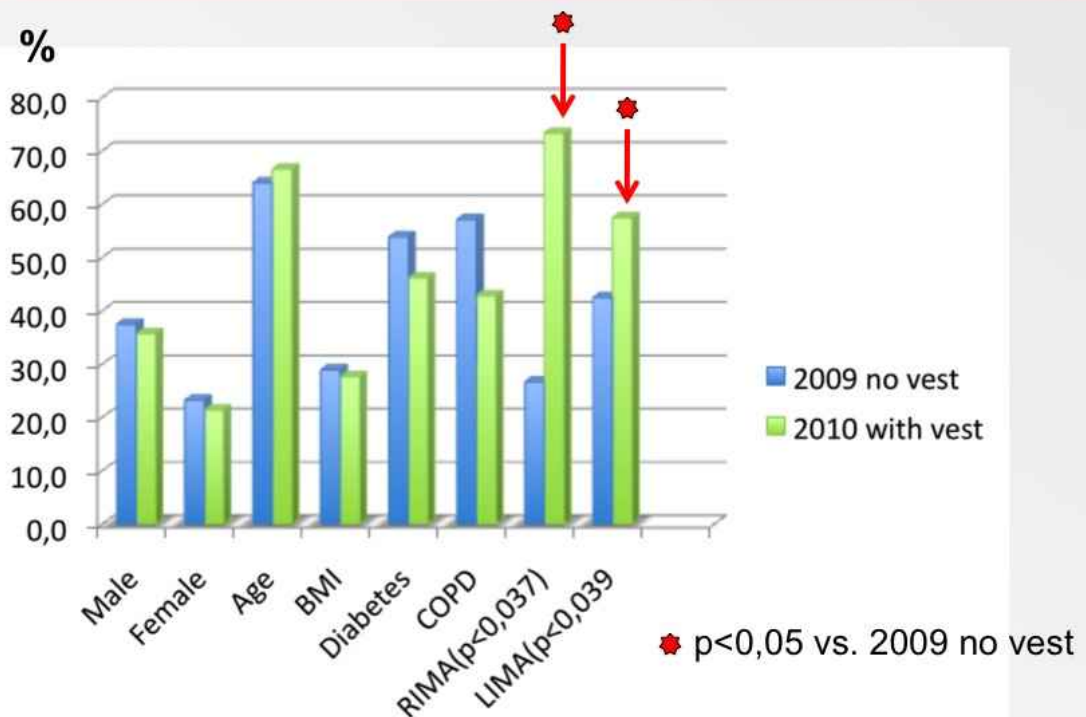
- **Sept. 2008 – Feb.2010:**
Participation in Posthorax® multicenter trial
- **March 2010:**
**Introduction of obligatory vest for all patients
undergoing cardiac surgery via median sternotomy**
- **Analysis of single center Posthorax® efficacy comparing:** -
“vest cohort” (03-12/2010) with “no vest cohort” (03-12/2009)

Study Groups



„Vest not received“: medical contra-indication to vest

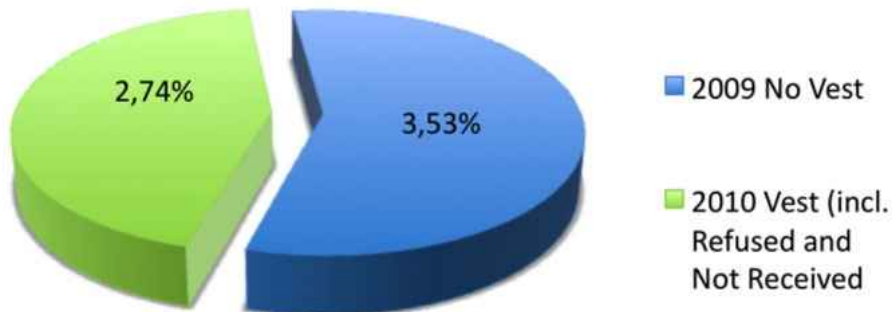
UHZ Hamburg: Cohort Risk Profile





UHZ Hamburg: Overall Incidence of WHC

Overall Incidence of WHC Superficial (SWI) & Deep Sternal Wound Infections (DSWI)

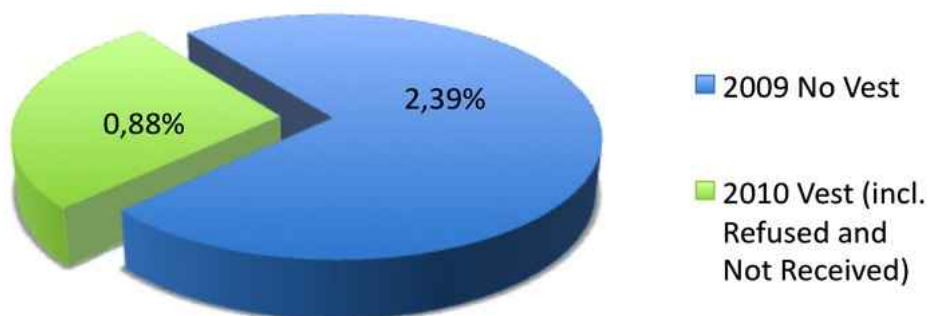


$p = n.s.$



UHZ Hamburg: Incidence of DSWI & Mediastinitis

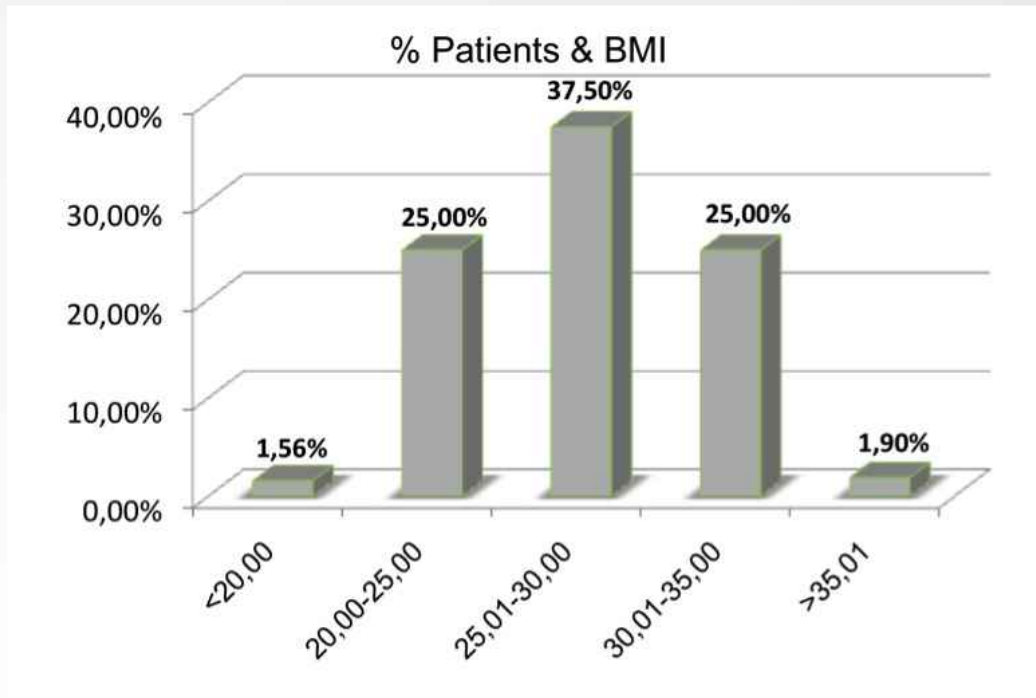
DSWI & Mediastinitis



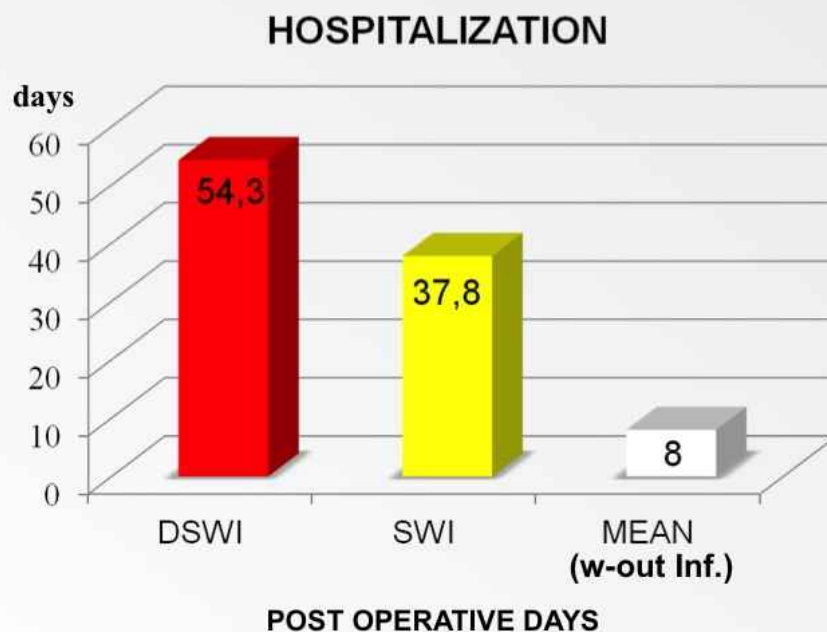
$p < 0,00438$



UHZ Hamburg: Relationship WHC to BMI

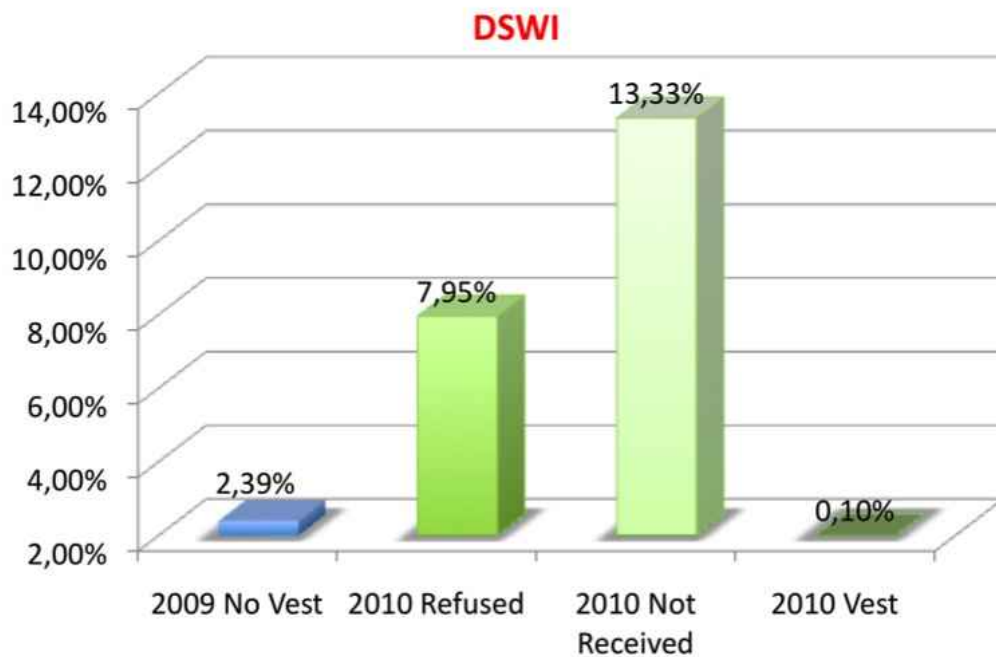


UHZ Hamburg: Postoperative Hospital Stay

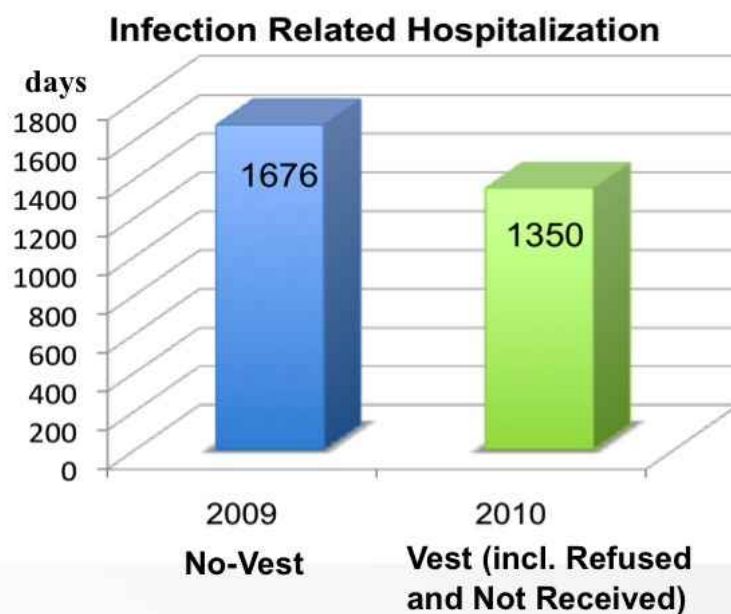




UHZ Hamburg: DSWI Subgroup Analysis



UHZ Hamburg: Cumulative Cohort Comparison



Savings: 326 days



Summary

- **The Hamburg Experience with the Posthorax® vest reproduces results of multicenter trial**
- **Use of the Posthorax® vest**
 - **led to a significant reduction, if worn according to protocol even eliminated sternal dehiscence and mediastinitis**
 - **led to a significant reduction of infection related hospital stay**
- **Patients refusing the vest had identical preop. and surgical risk profile – key issue seems non-compliance**
- **Preoperative factors seem less important for the development of WHC**
- **Key risk factors rather related to prolonged surgery and postop. complications**



Conclusion

Sternal instability seems to be the single most important factor for deep wound healing infections and mediastinitis post cardiac surgery