

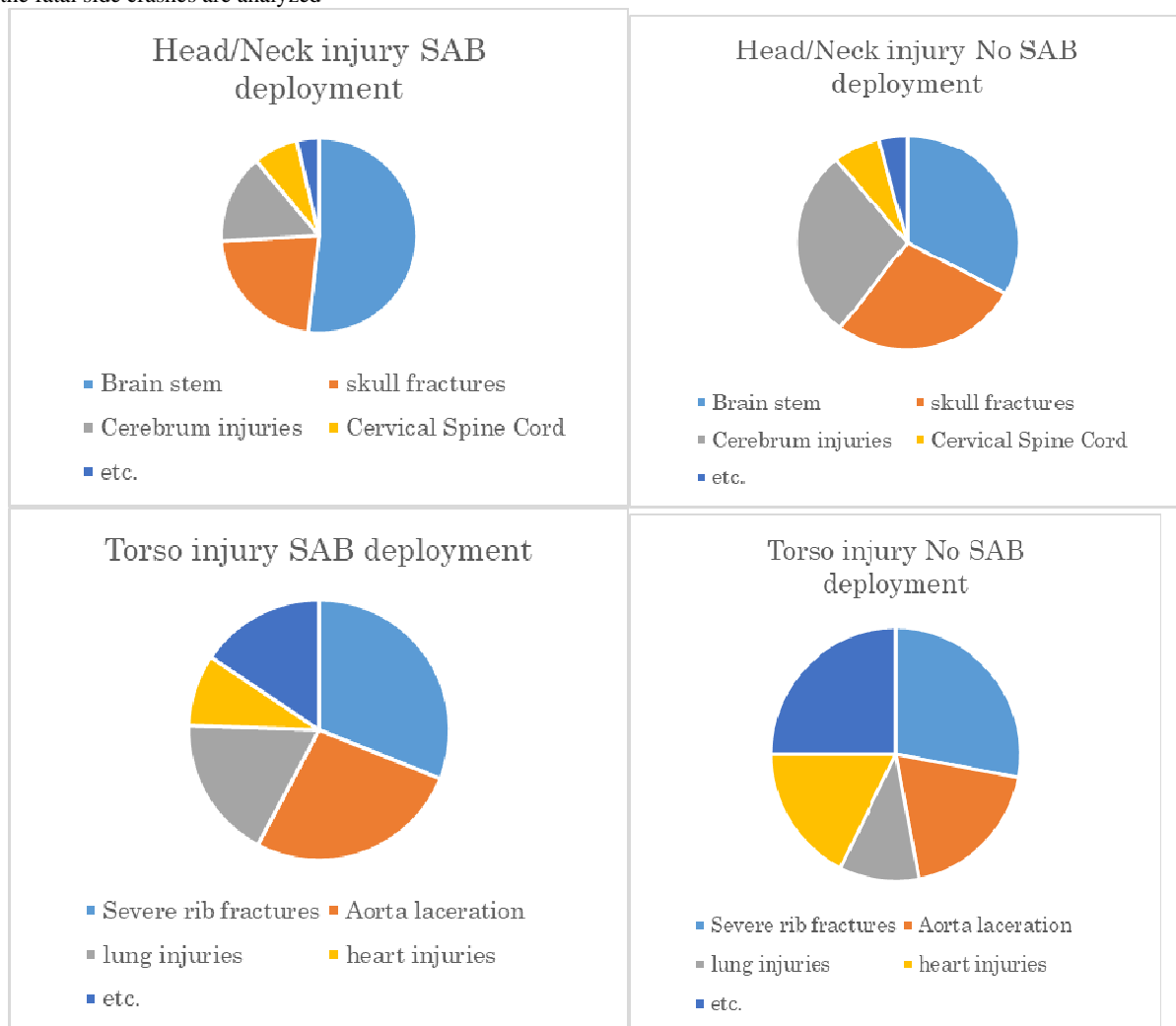
# Analysis of Side Impact Airbag Performance in NASS CDS III

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Near side crashes make up a large component of fatal crashes. Side airbags protect vehicle occupant in near side crashes. In previous reports, the author analyzed the effect of side airbag and found that the effect of the torso protection side air bag is less than the roll over curtain air bag, and most injured location was the torso, but the actual injury was not analyzed. In this report, the actual injuries in the fatal side crashes are analyzed



The 165cases of actual injuries of fatal accident data was collected .

Torso injuries are most frequent injury and head/neck injuries followed with small difference.

Brain stem injury is most frequent injury among head/neck injuries.

The deployment of curtain air bag reduced skull fracture and cerebrum injuries, but brain stem injury is not reduced and cervical spine cord injury reduction is not much.

Among torso injuries, severe rib fracture is the most frequent injuries and aorta laceration followed with small difference.

Organ ruptures are reduced with SAB deployment.

Many consumer information is conducted in the world, but none of them evaluated neck injury for side impact.

They should use neck injury criteria to improve the performance of rollover air curtain to reduce brain stem injury.

Also most of consumer information do not use Viscous Criterion, which affect lot to aorta injury criteria.

All consumer information should use V\*C to improve the performance of torso protection SAB for the reduction of aorta laceration also.