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# Abdominal Injuries in Car Crashes

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GIDAS Data Analysis

14.04.2026 | Britta Schnottale | BAST

# Abdomen Injuries in Car Accidents

## Case Selection Criteria

- Database from 07/2025
- Passenger car, registered > 2004
- Occupant age > 11 Years (no CRS usage)
- One major impact
- Belted
- At least AIS 1 in AIS15REG5 ( maximum injury level for the abdomen, excluding lumbar spine, AIS Revision 2015, localization covers AIS body region 5)



# Abdomen Injuries in Car Accidents

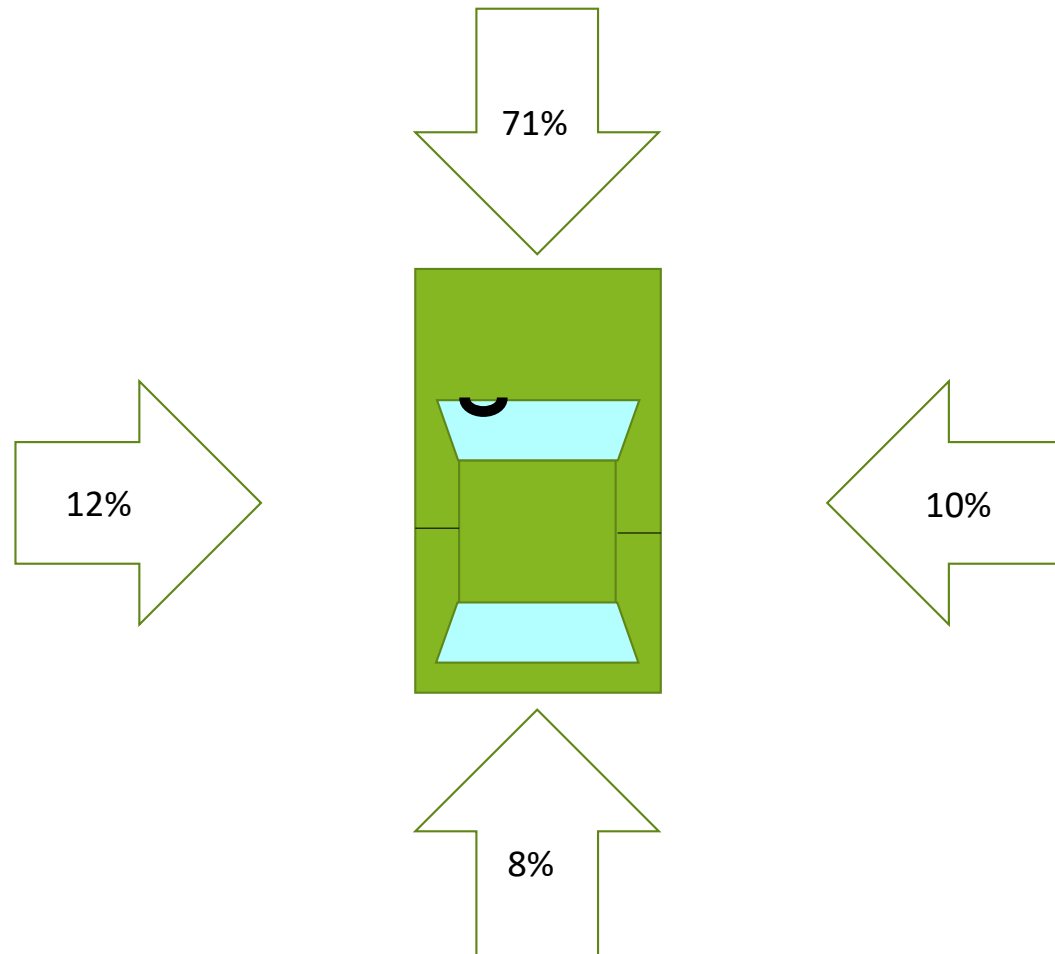
**Case Selection Criteria**

- Accident in 2005 – 2025
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Number of cars	Number of occupants with abdominal injuries
234 (234 cases)	248
<b>Of these in</b>	
Frontal impact	
165 (71%)	176 (71%)
Rear Impact	
27 (12%)	27 (11%)
Left Side Impact	
24 (10%)	26 (10%)
Right Side Impact	
18 (8 %)	19 (8%)

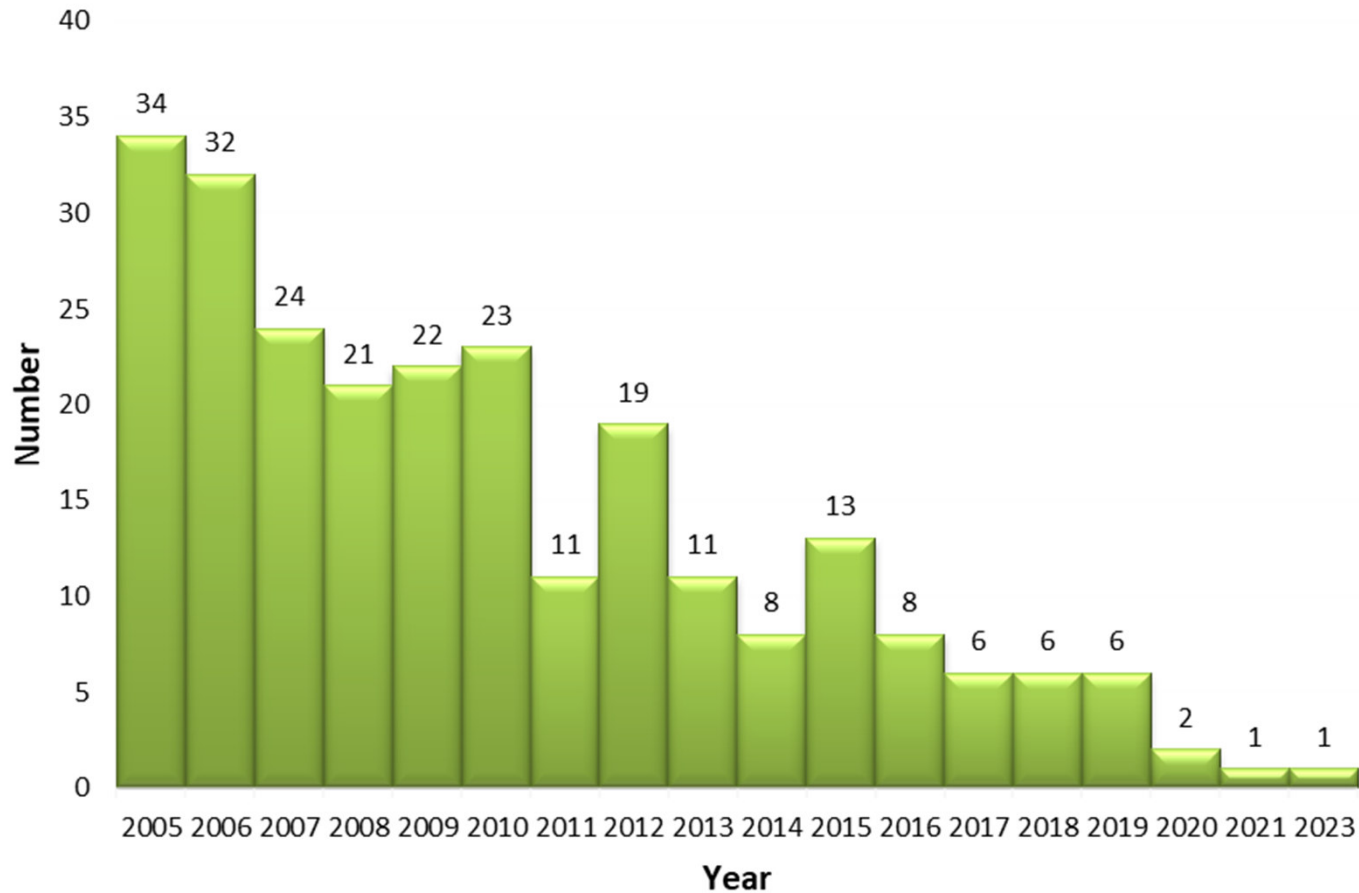
# Direction of impact

- Case Selection Criteria**
- Accident in 2005 – 2025
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# Year of first registration

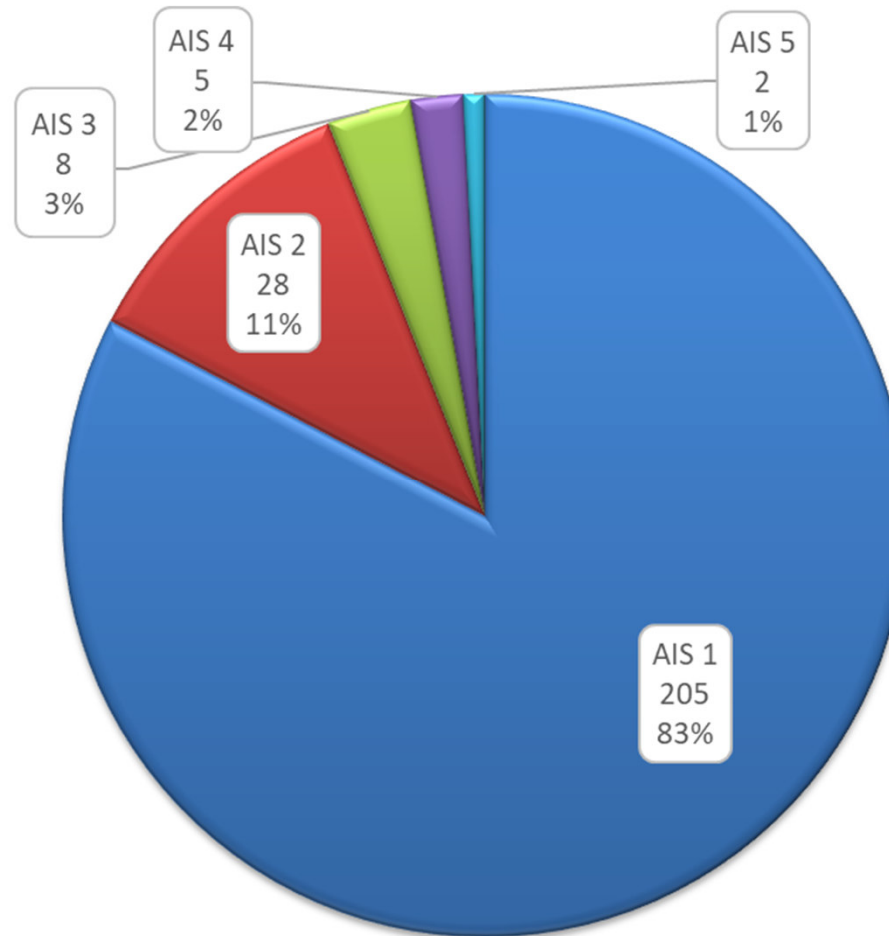
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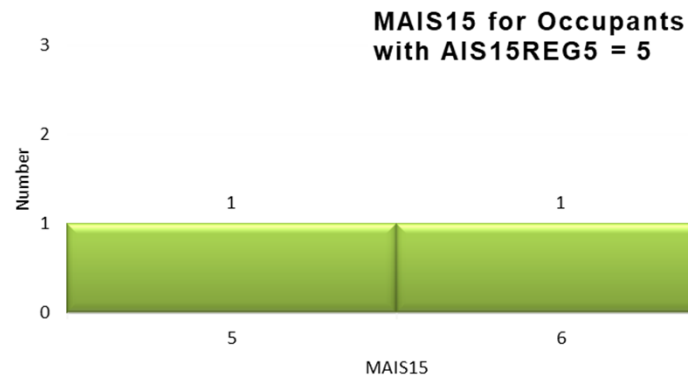
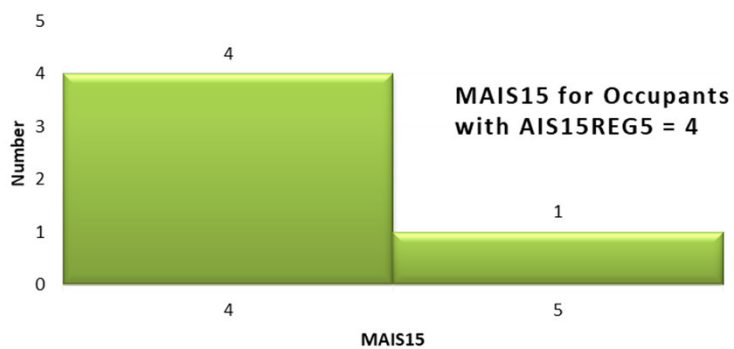
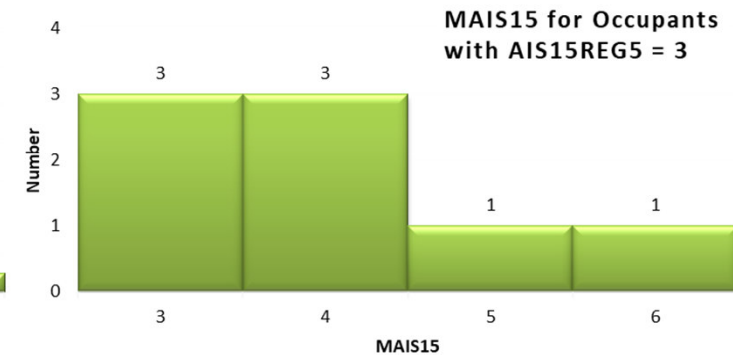
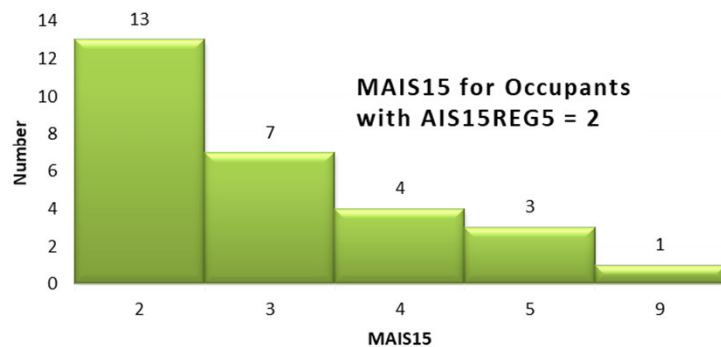
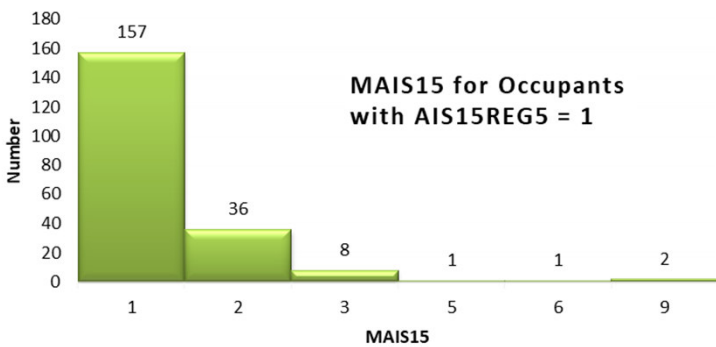
# AIS distribution in AIS15REG5 (n=248)

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# AIS15REG15 vs MAIS



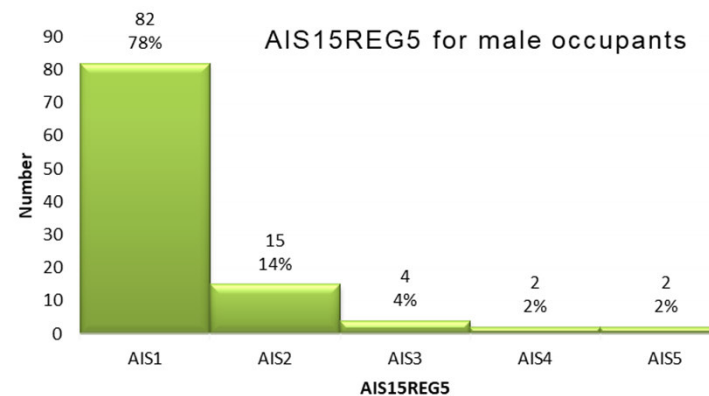
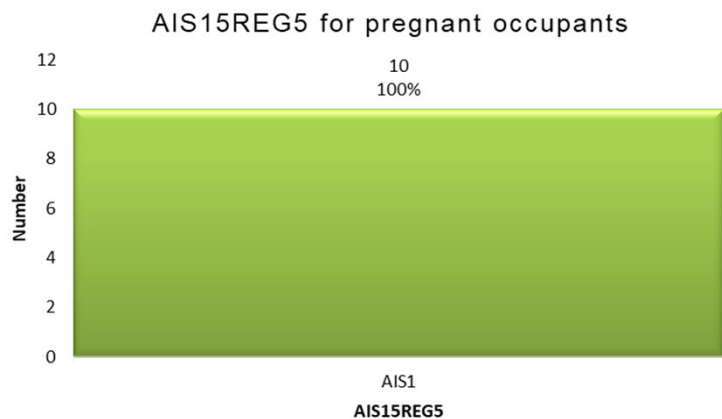
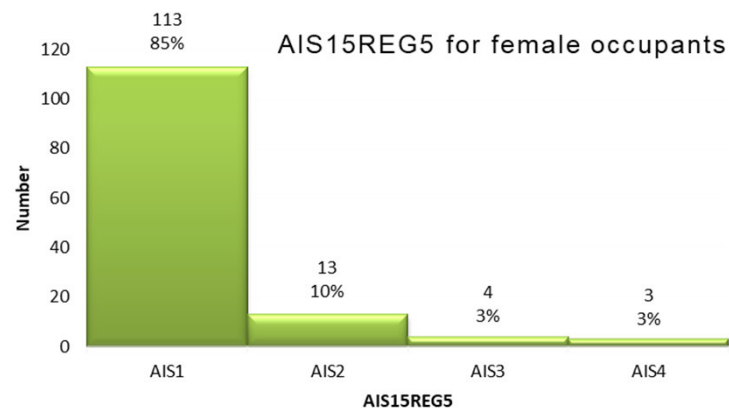
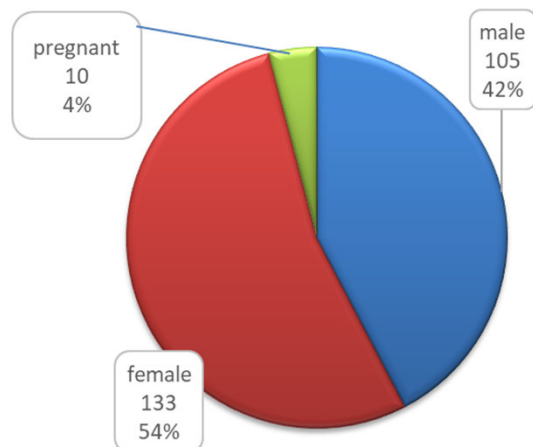
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# AIS15REG15 vs gender

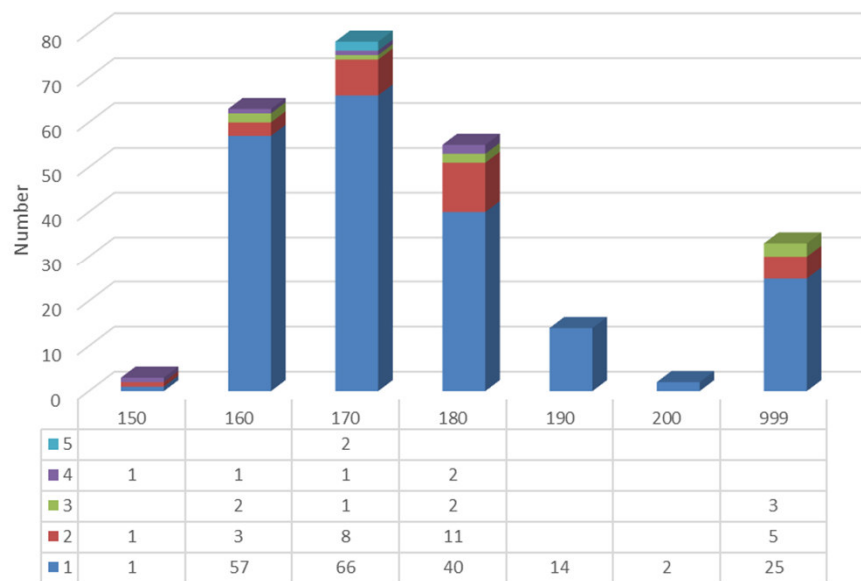
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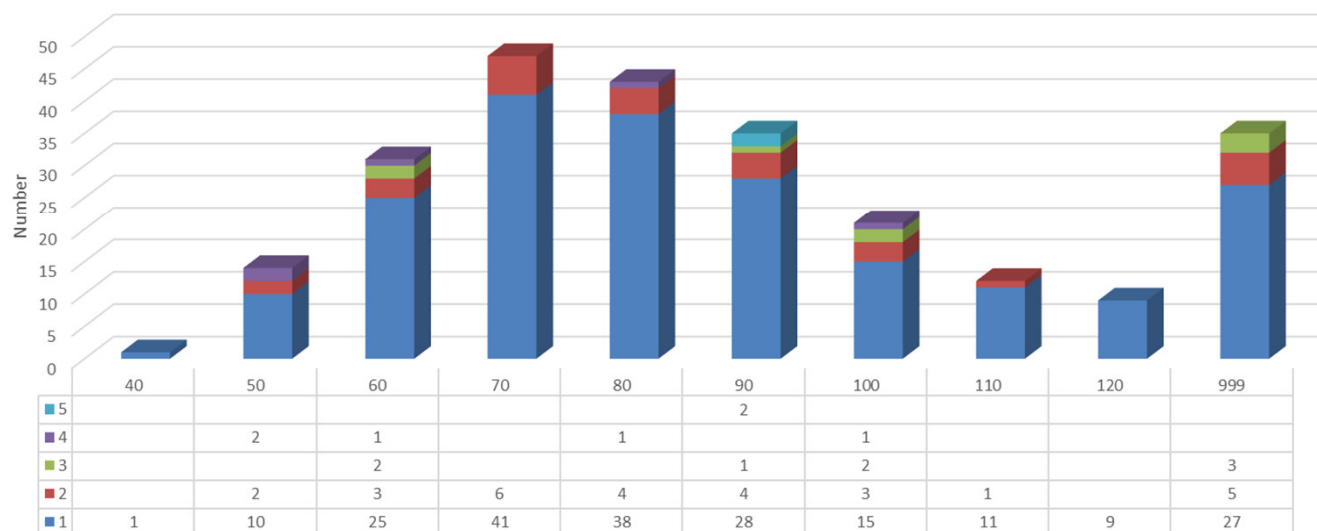


# AIS15REG15 vs height, weight

AIS15REG5 vs Occupant Height Group [cm]



AIS15REG5 vs Occupant Weight Group [kg]

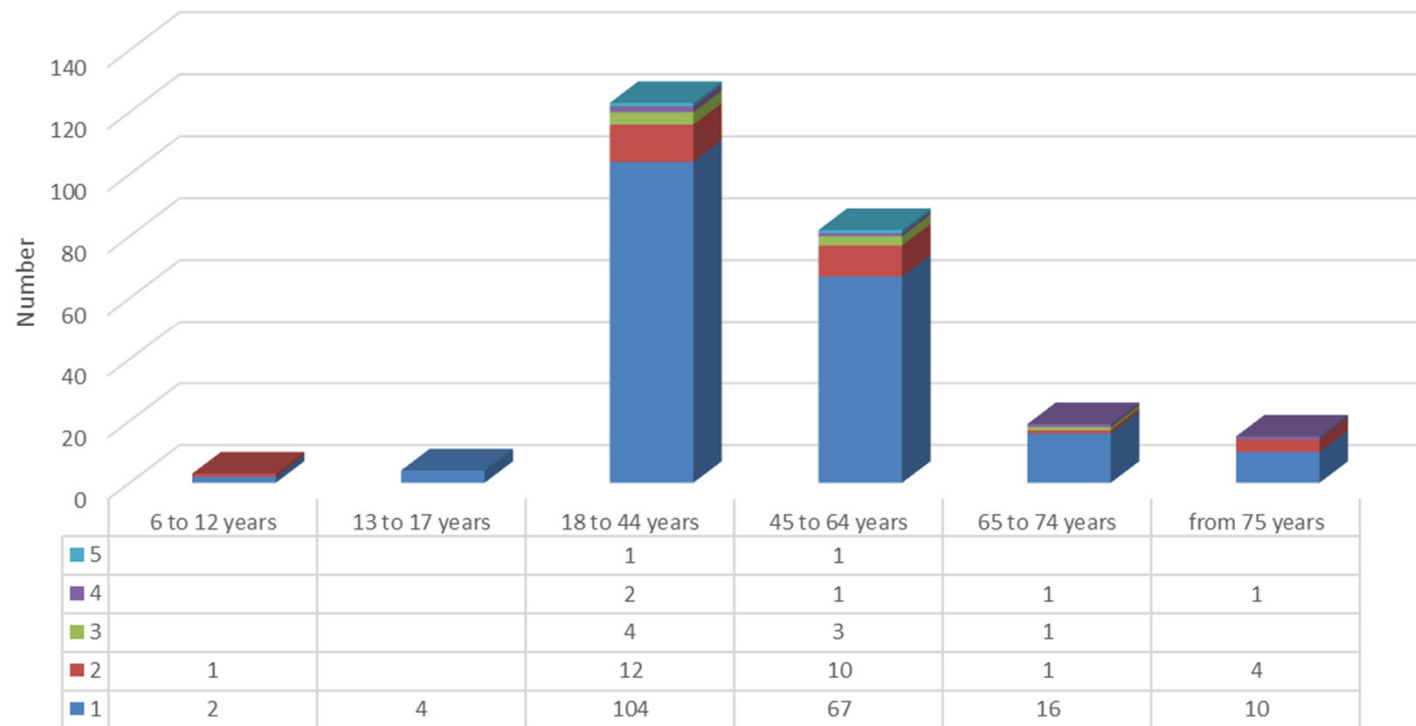


### Case Selection Criteria

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# AIS15REG15 vs age

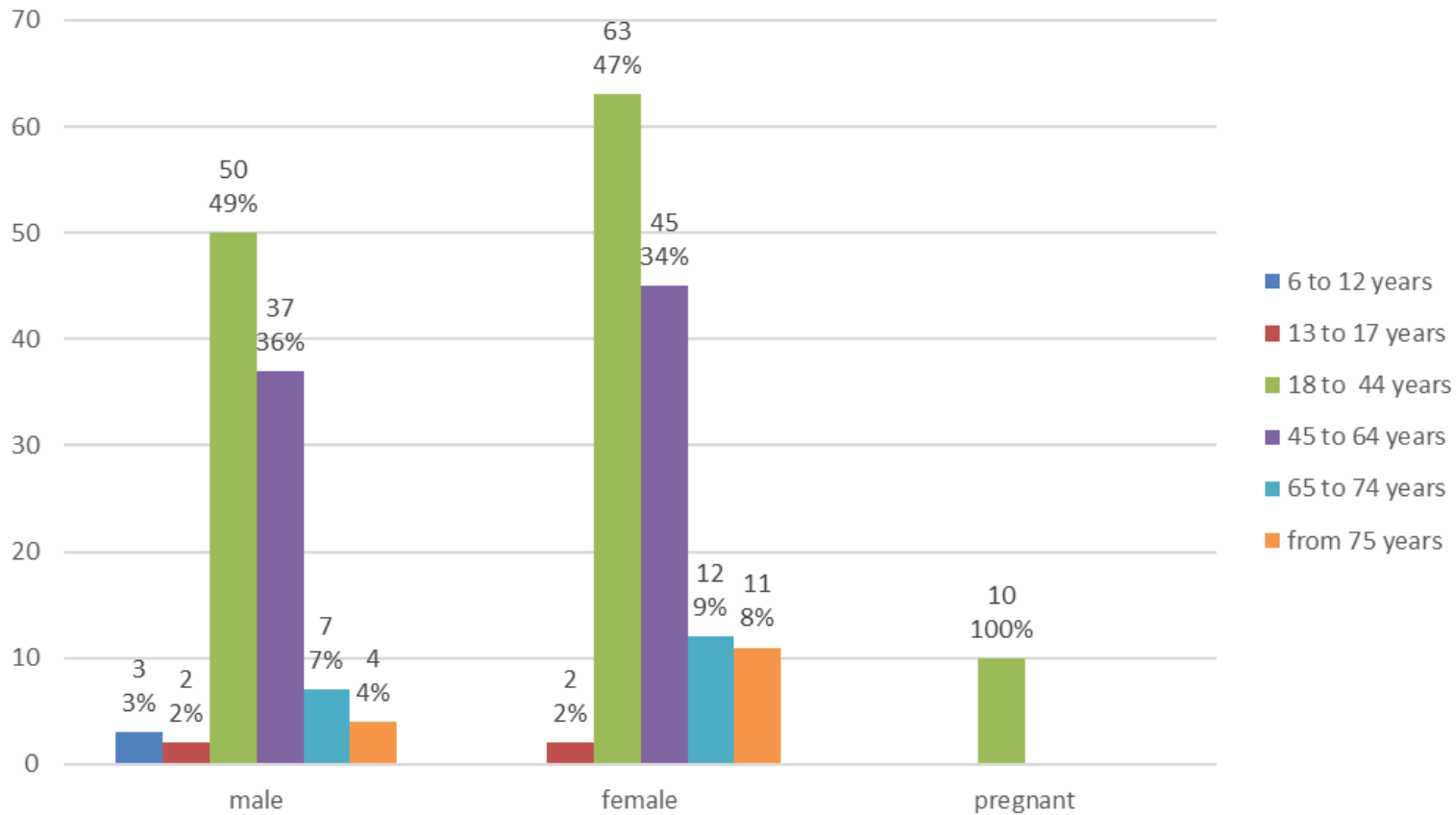
AIS15REG5 vs Occupant Age Group [kg]



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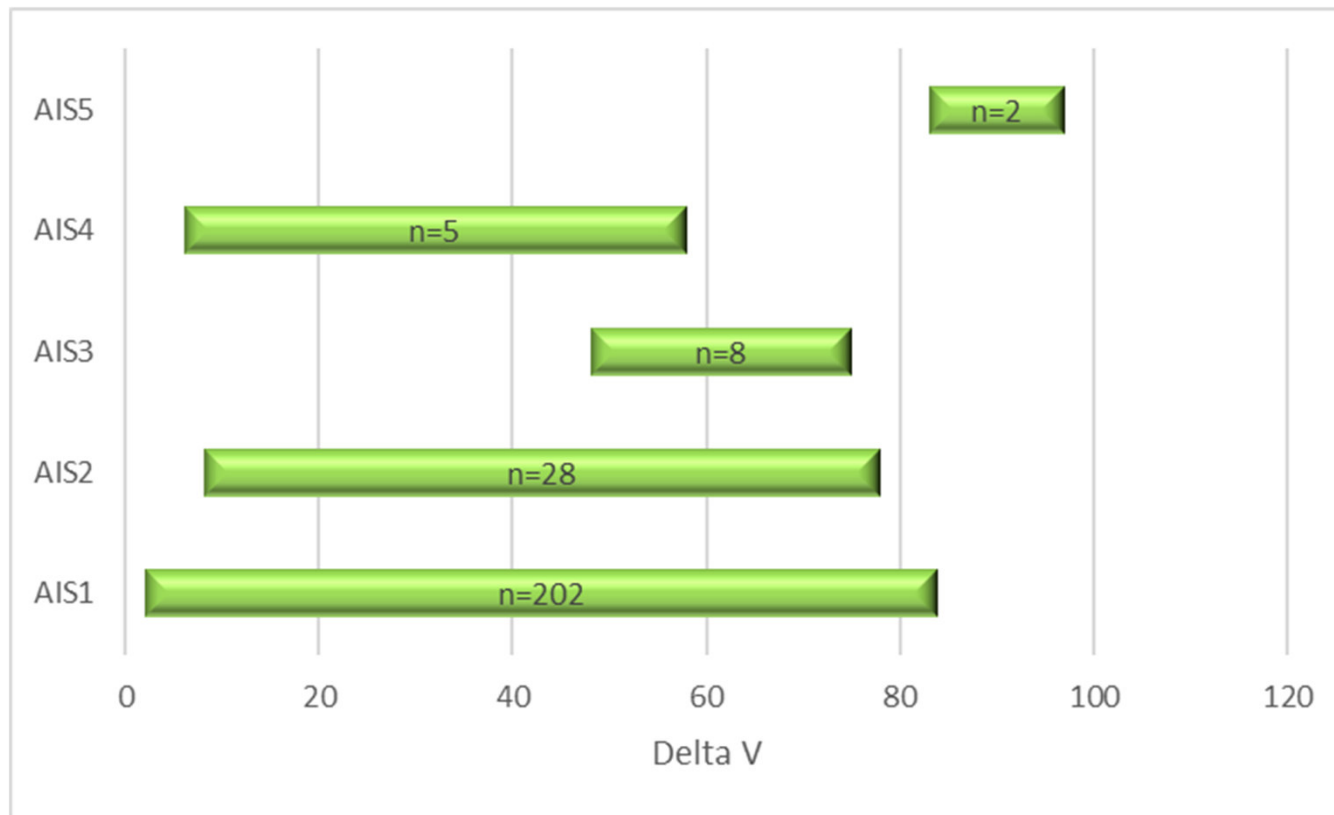
# Gender vs Age



**Case Selection Criteria**

- Accident in 2005 – 2025
- Passenger car, registered 2005 – 2025
- Occupant age > 11 Years (no CRS usage)
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# AIS15REG15 vs delta V (n=245)



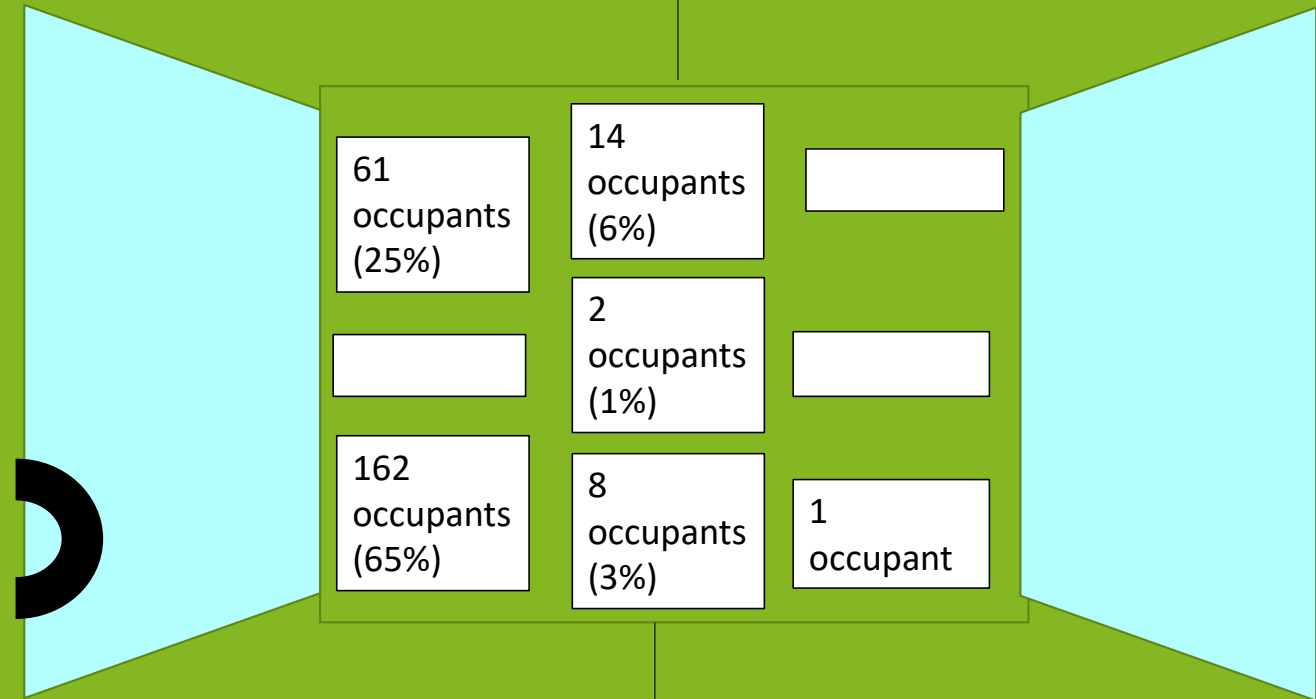
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- Accident in 2005 – 2025
- Passenger car, registered 2005 – 2025
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- Belted
- At least AIS 1 in AIS15REG5 (maximum injury level for the abdomen, excluding lumbar spine, AIS Revision 2015, localization covers AIS body region 5)

# AIS15REG15 vs seating position

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- Belted
- At least AIS 1 in AIS15REG5 (maximum injury level for the abdomen, excluding lumbar spine, AIS Revision 2015, localization covers AIS body region 5)

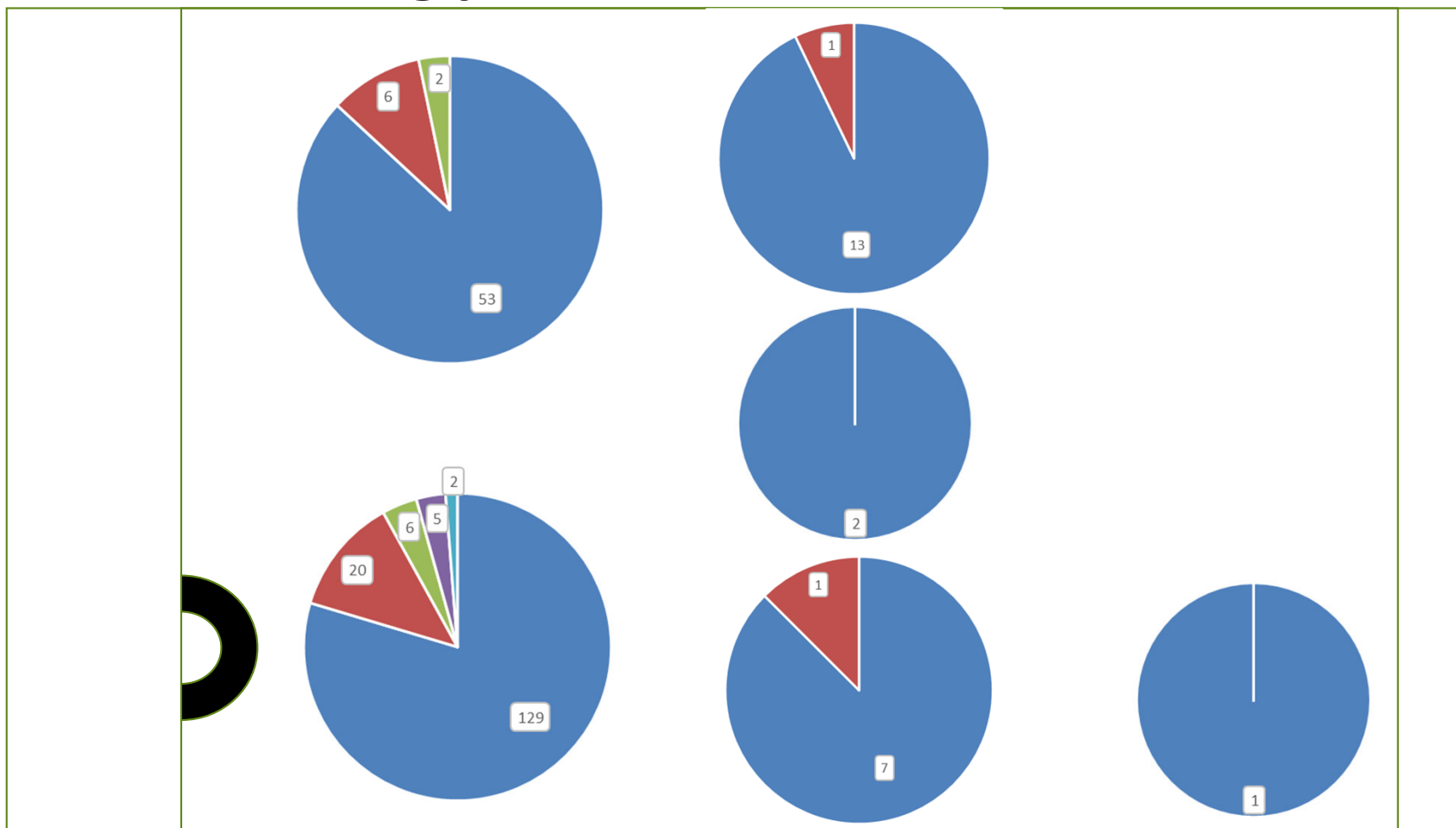


# AIS15REG15 vs seating position

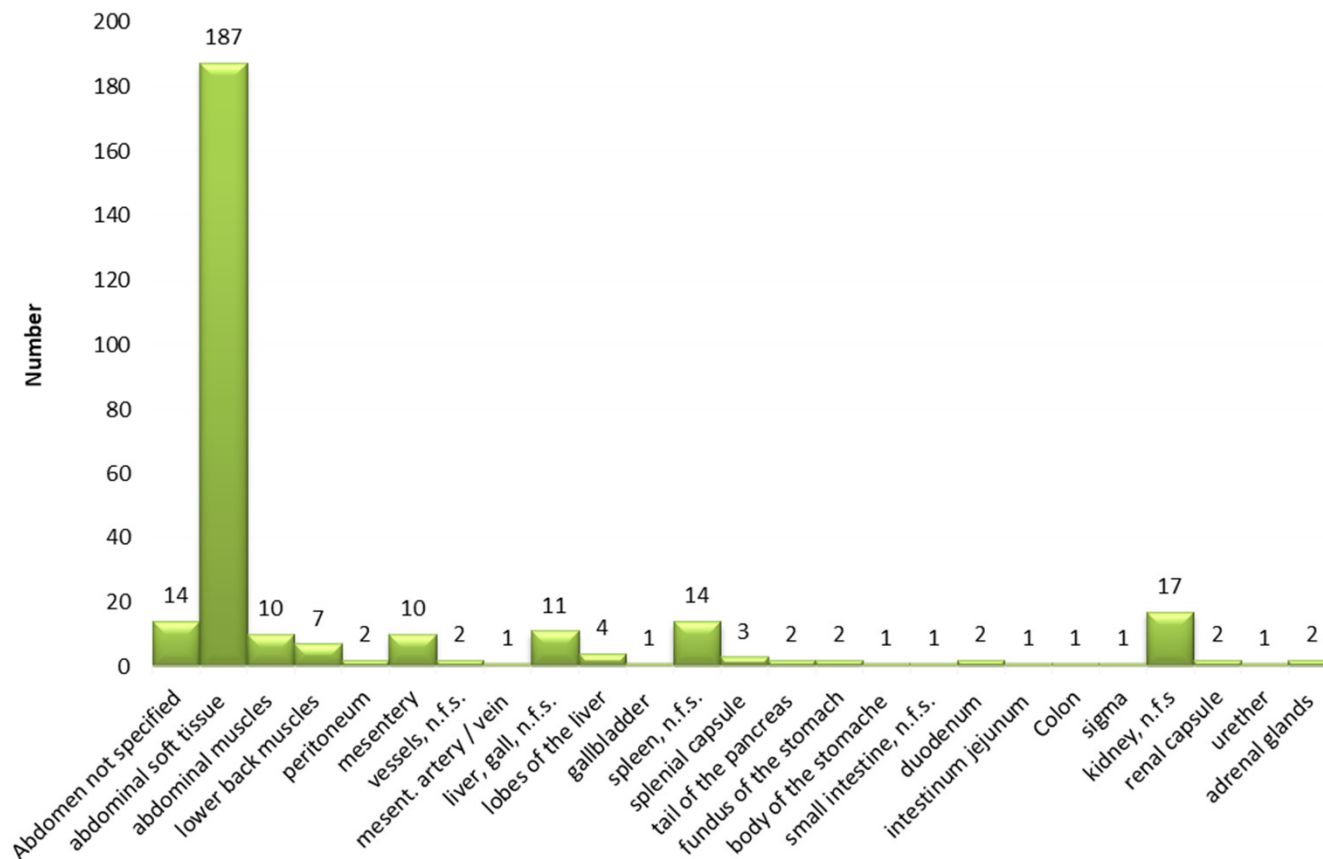
- AIS 1
- AIS 2
- AIS 3
- AIS 4
- AIS 5

**Case Selection Criteria**

- Accident in 2005 – 2025
- Passenger car, registered 2005 – 2025
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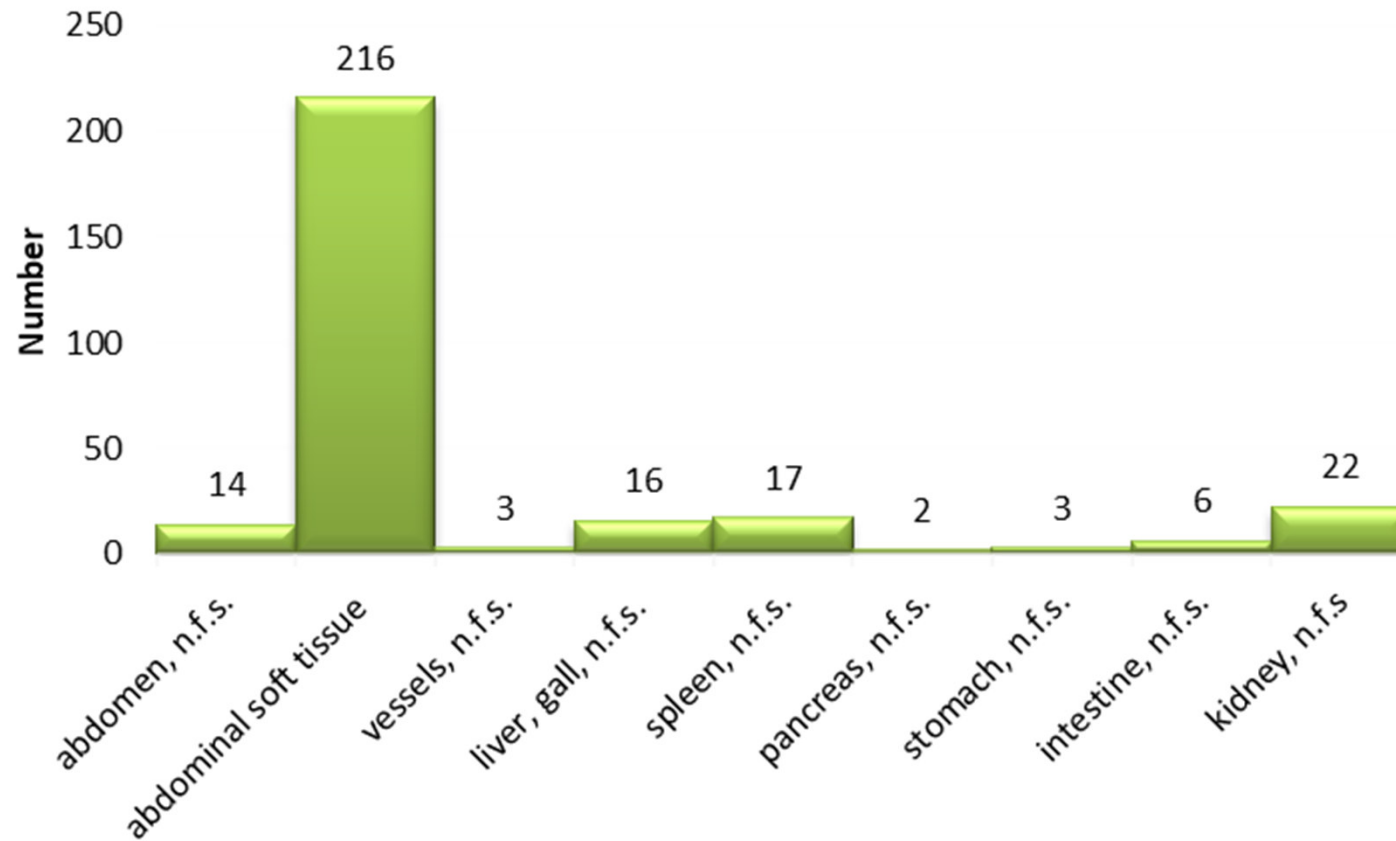
# Abdominal Injuries (n=299)



**Case Selection Criteria**

- Accident in 2005 – 2025
- Passenger car, registered 2005 – 2025
- Occupant age > 11 Years (no CRS usage)
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- Belted
- At least AIS 1 in AIS15REG5 (maximum injury level for the abdomen, excluding lumbar spine, AIS Revision 2015, localization covers AIS body region 5)

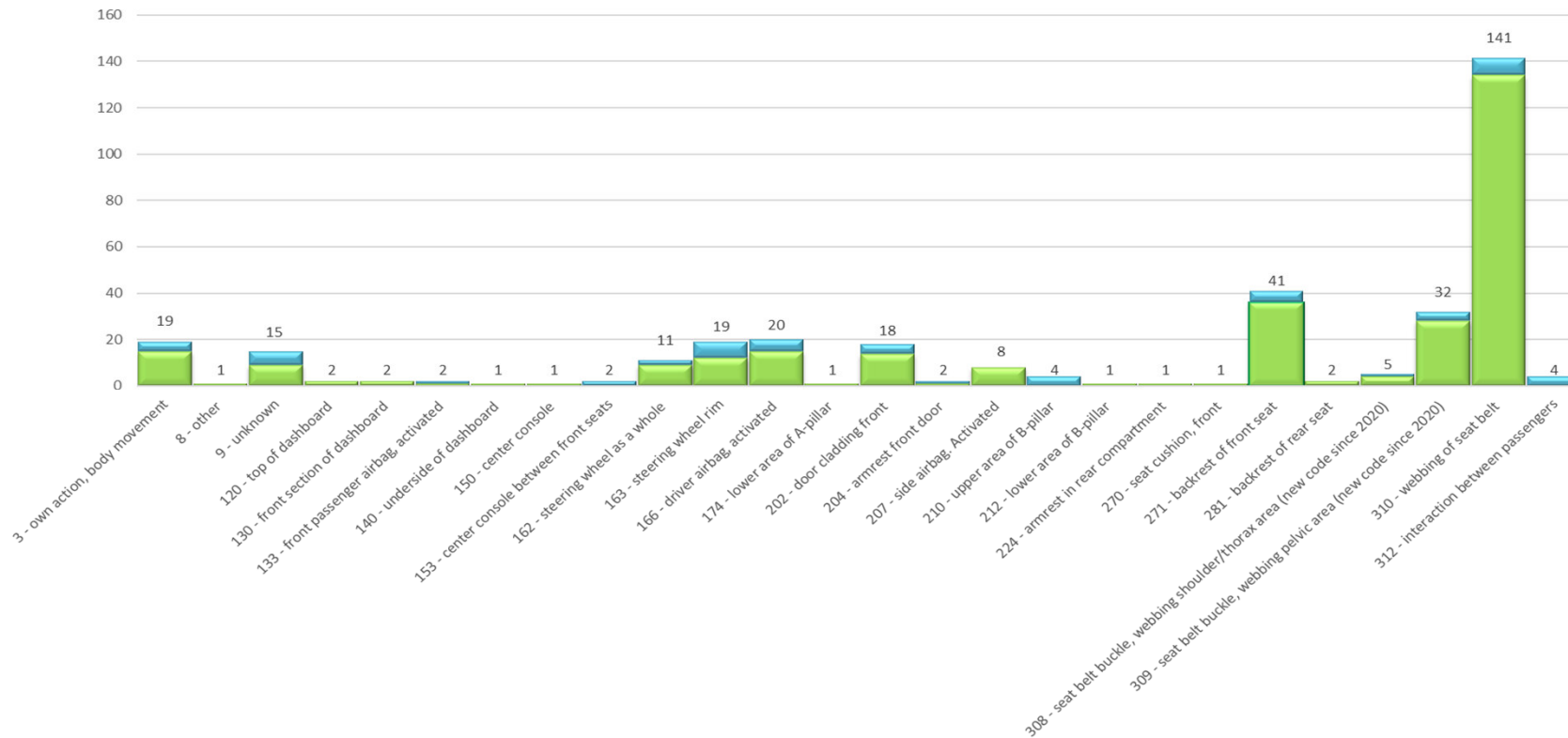
# Abdominal Injuries – Grouped (n=299)



**Case Selection Criteria**

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- One major impact
- Belted
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# Abdominal Injuries – Injury-causing Part (VTEIL1 and VTEIL2: n=356)



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- Belted
- At least AIS 1 in AIS15REG5 (maximum injury level for the abdomen, excluding lumbar spine, AIS Revision 2015, localization covers AIS body region 5)

**Vielen Dank!**

**Ich freue mich auf die  
gemeinsame Diskussion.**

