

14のリスク推定モデルと25のパラメータ (説明変数)

説明変数

モデルYear:	MODEL_YR	<カテゴリ>	モデルイヤー								
車の損傷度:	Damage_Level	<連続>	1:軽衝突	2:中程度	3:大破						
衝突の種類:	Collision_Type	<カテゴリ>	1:単独	2:同一方向	3:反対方向	4:車線変更、方向転換	5:交差点	6:その他			
イベントタイプ:	Event_Type	<カテゴリ>	1=シングル衝突 2=多重衝突								
衝突の方向:	Direction_1st	<カテゴリ>	0=水平以外	1=1時方向 ~ 12=12時方向							
年齢:	Age	<連続>									
身長:	Height	<連続>									
体重:	Weight	<連続>									
BMI:	BMI	<連続>									
性別:	Gender	<カテゴリ>	1=男性	2=女性	3=妊婦						
シートベルト:	SB	<カテゴリ>	0=着用	1=非着用							
エアバッグ:	AB	<カテゴリ>	0=展開	1=非展開							
デバイス:	Device	<カテゴリ>	1=SB(0),AB(0)		2=SB(0),AB(1)		3=SB(1),AB(0)		4=SB(1),AB(1)		
座席:	Seat	<カテゴリ>	11=前席左	12=前席中央	13=前席右	21=2列目左	22=2列目中央	23=2列目右	31=3列目左	32=3列目中央	33=3列目
右											
シートスライド:	Seat_Slide	<カテゴリ>	2=最前列	3=前から2番目	4=中央	5=後ろから2番目	6=最後列				
既往歴の数:	Number_of_Medical_History	<連続>									
既往歴の有無:	Medical_History	<カテゴリ>	0=なし	1=あり							
血液凝固障害:	MH_IMPAIREDCOAG	<カテゴリ>	0=なし	1=あり							
妊娠:	MH_PREGNANT	<カテゴリ>	0=なし	1=あり							
筋骨格:	MH_IMPLANTFUS	<カテゴリ>	0=なし	1=あり							
心臓血管:	MH_CARDIOCOND	<カテゴリ>	0=なし	1=あり							
骨粗鬆症:	MH_OSTEOCOND	<カテゴリ>	0=なし	1=あり							
変性脊椎:	MH_SPINEDEGEN	<カテゴリ>	0=なし	1=あり							
肥満:	MH_OBESITY	<カテゴリ>	0=なし	1=あり							
その他:	MH_COMORBOTH	<カテゴリ>	0=なし	1=あり	目的関数						

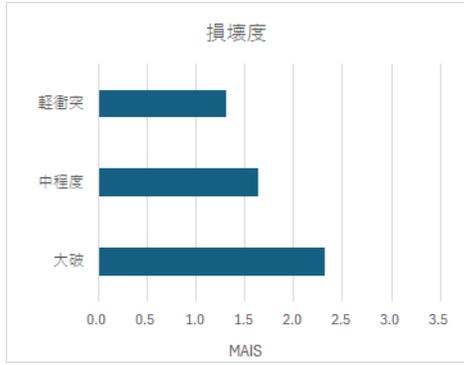
目的変数:リスク推定モデル

MAIS:	MAIS	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
ISS:	ISS	<連続>	0~14=MinorInjury		15~24=SeriousInjury		25~34=Fataality30%		35~75=Fatality50%	
負傷死亡:	death	<連続>	0=負傷	1=死亡						
傷害の数:	Number_of_MAIS	<連続>								
Head:	AIS_Head	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
Face:	AIS_Face	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
Neck:	AIS_Neck	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
Thorax:	AIS_Thorax	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
Abdomen:	AIS_Abdomen	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
Spine:	AIS_Spine	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
UpperEX:	AIS_UpperExtremity	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
LowerEX:	AIS_LowerExtremity	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
Unspecified:	AIS_Unspecified	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	
Other:	AIS_Other	<連続>	0=無傷	1=軽傷	2=中傷	3=重傷	4=重傷	5=深刻な障害(瀕死)	6=治療不能な傷害(即死)	

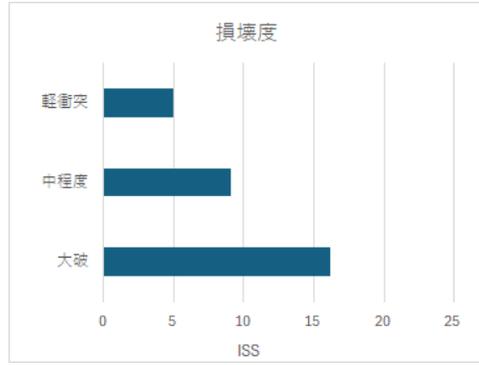
損壊度

損壊度=3では、Head、Thorax、Abdomen、LowerExのAIS>=2発生率が顕著に高い。

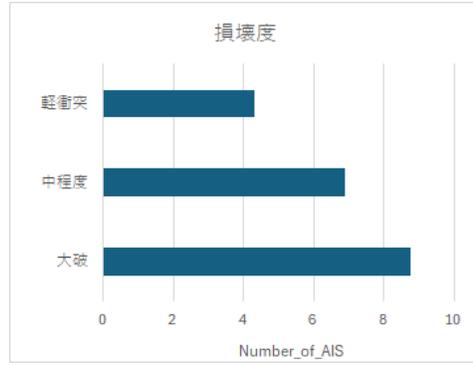
※「この条件で想定されるリスクの中心値」であり、偏りを排除した「本来のリスク」を示しています。



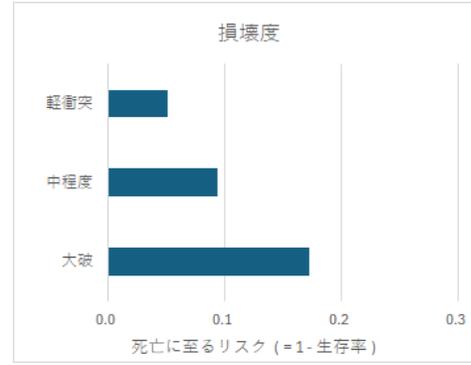
MAIS



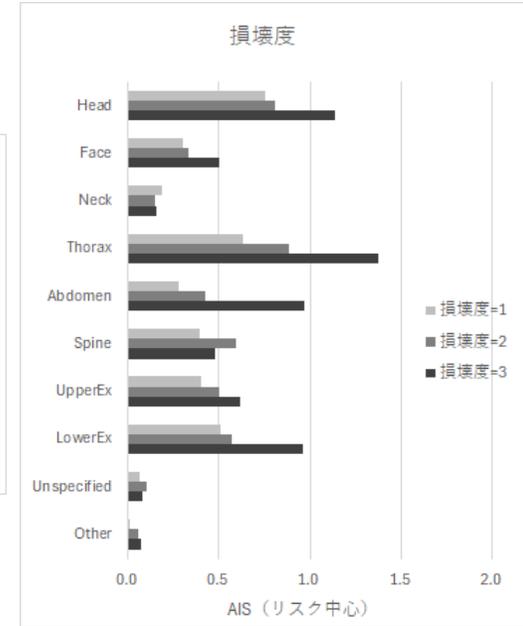
ISS



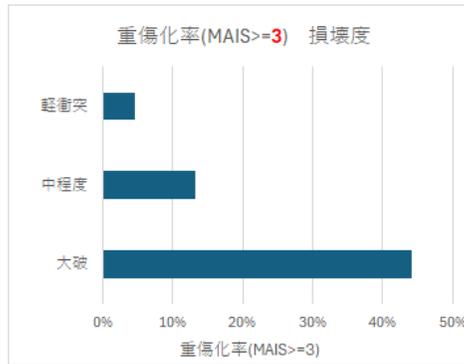
外傷の数



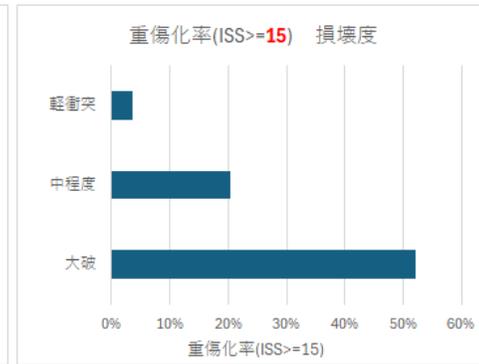
死亡に至る確率



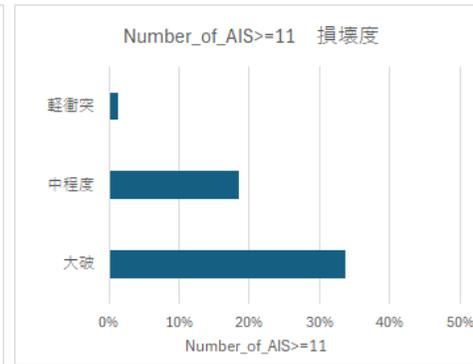
※「重傷以上になるリスク (確率)」を示しており、「その重傷レベルに達する可能性」を表しています。



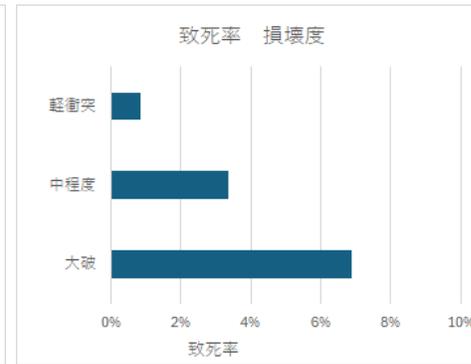
MAIS>=3の発生率



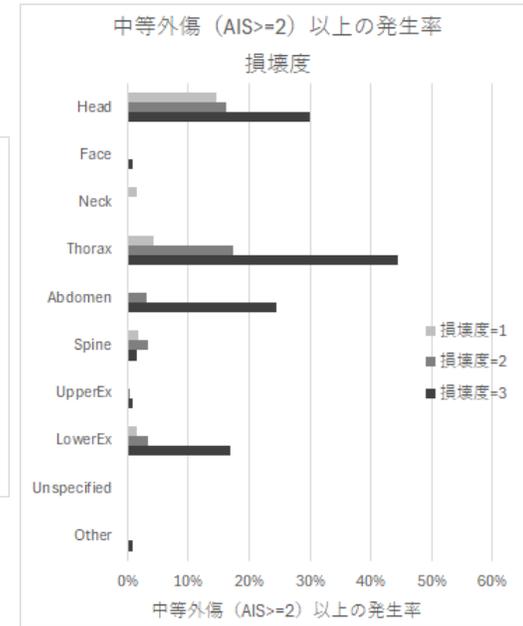
ISS>=15の発生率



外傷の数>=11の発生率

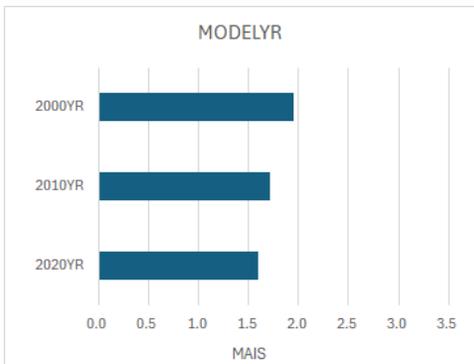


致死率
死亡に至る確率>=0.5の発生確率

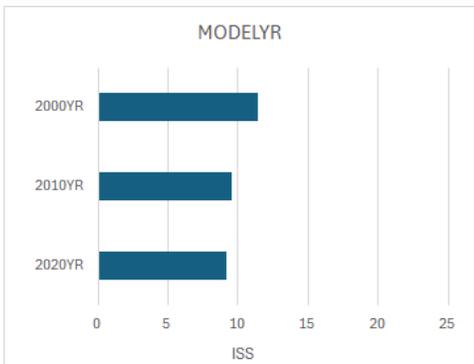


モデルイヤー

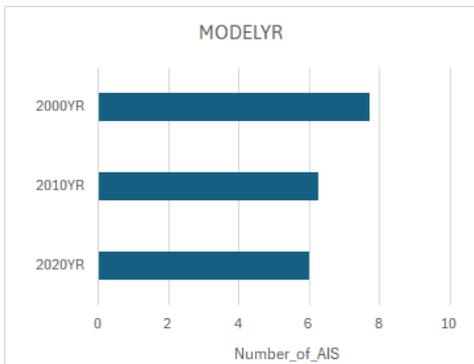
年式が新しいほど外傷レベルが低い。特に重傷化の率が低くなる。



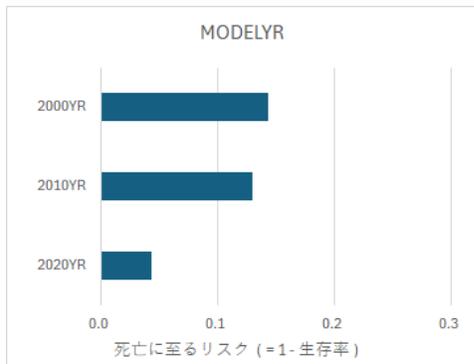
MAIS



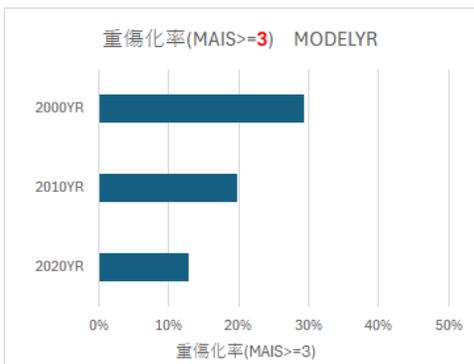
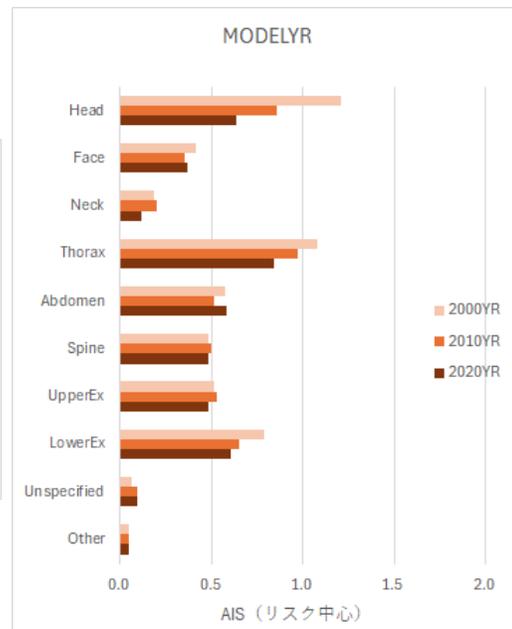
ISS



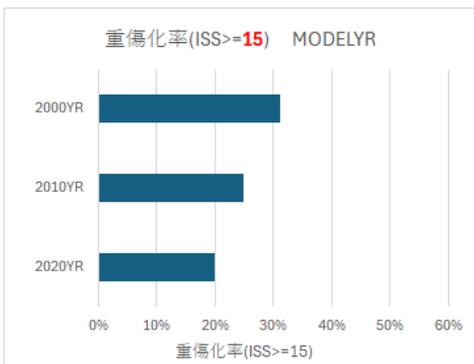
外傷の数



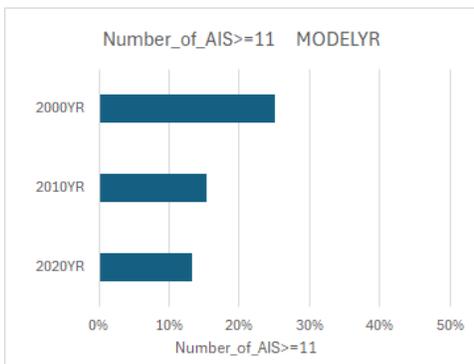
死亡に至る確率



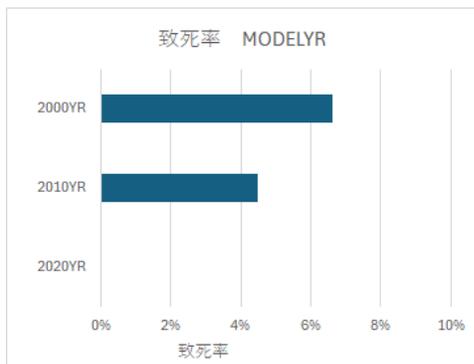
MAIS>=3の発生率



ISS>=15の発生率



外傷の数>=11の発生率

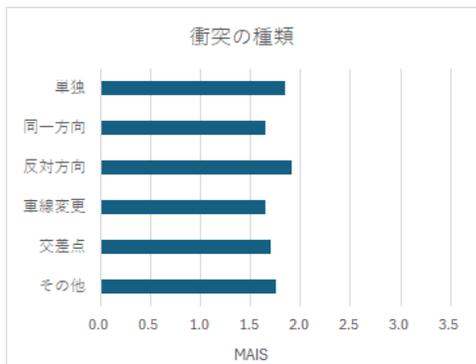


致死率

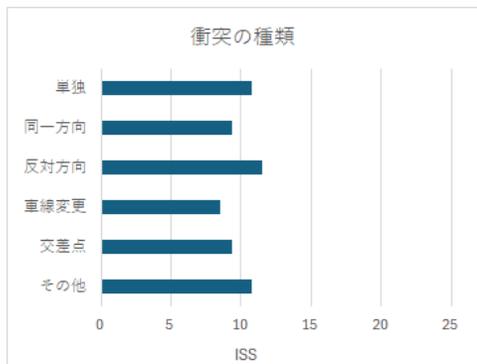


衝突の種類

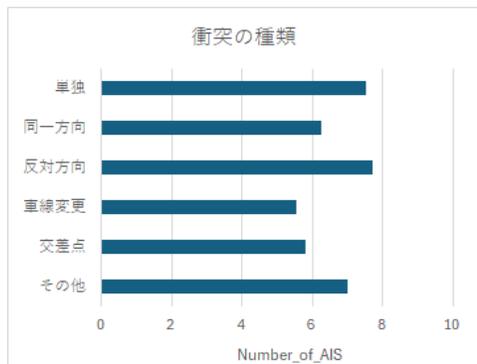
単独事故や反対方向は、重傷化の率が高くなる。



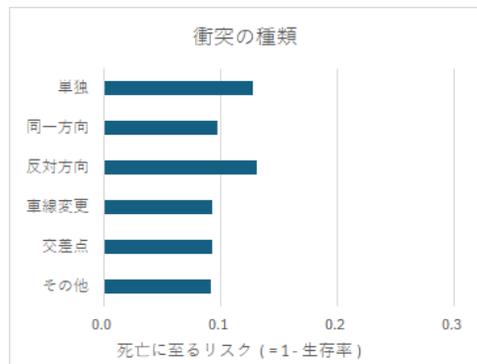
MAIS



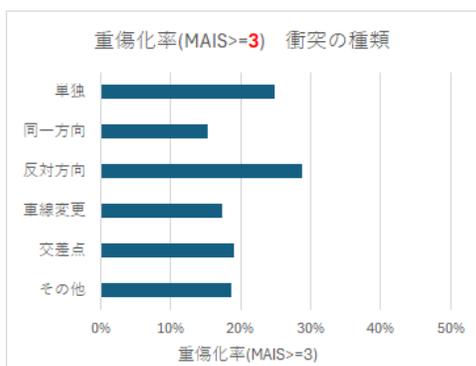
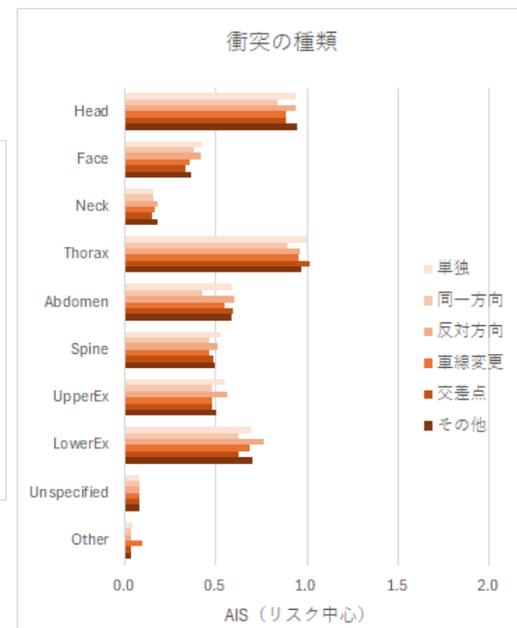
ISS



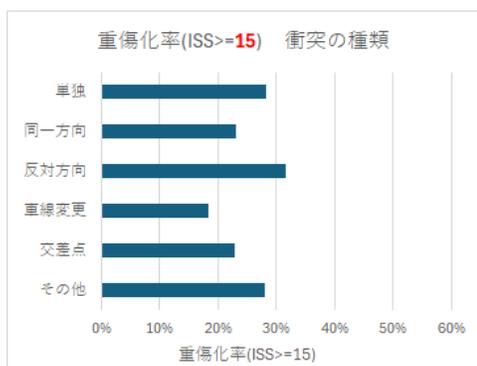
外傷の数



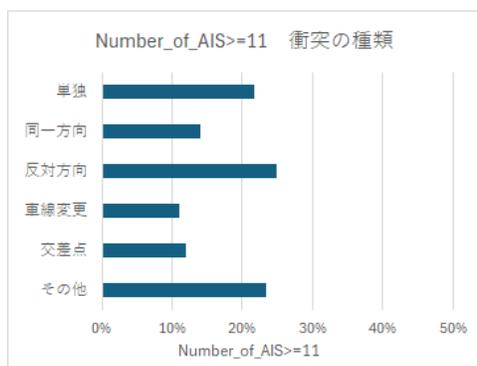
死亡に至る確率



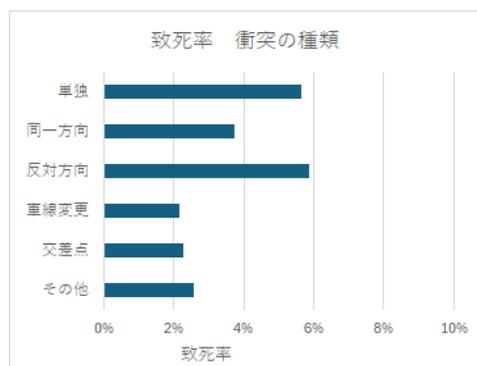
MAIS>=3の発生率



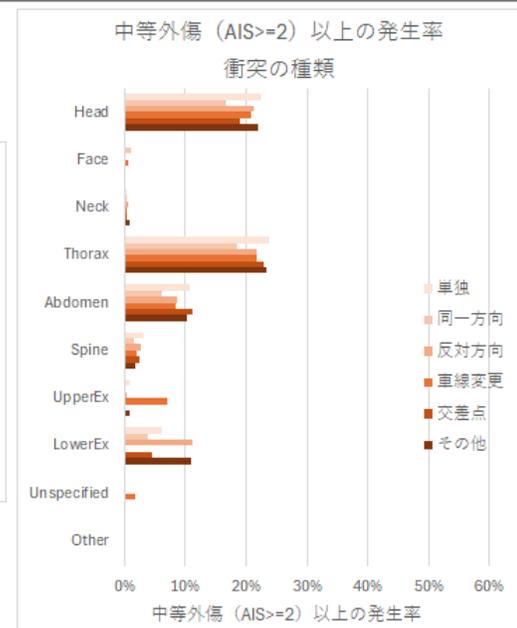
ISS>=15の発生率



外傷の数>=11の発生率



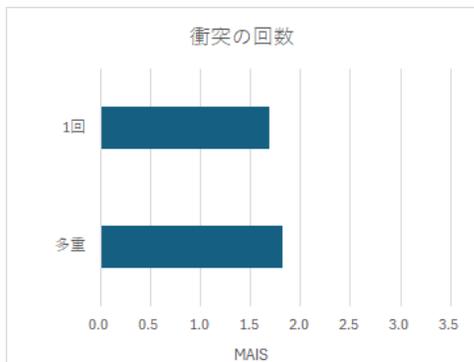
致死率



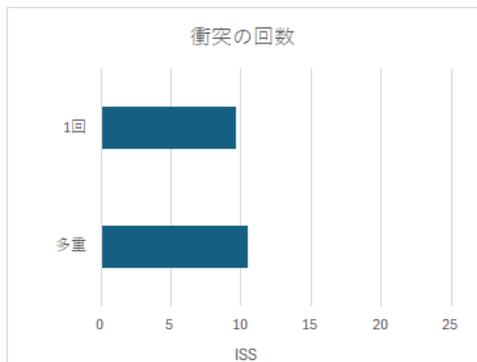
中等外傷 (AIS>=2) 以上の発生率

衝突回数

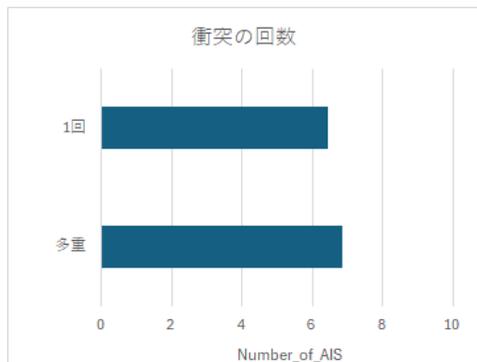
多重衝突は、わずかに外傷が悪化する



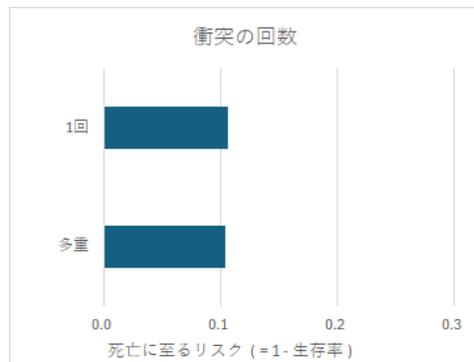
MAIS



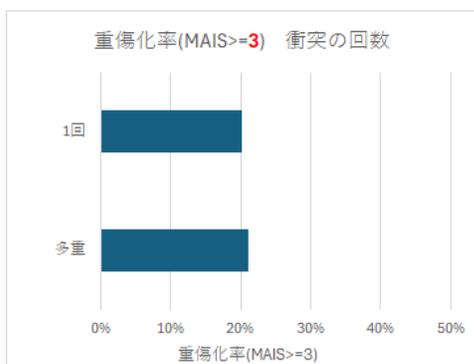
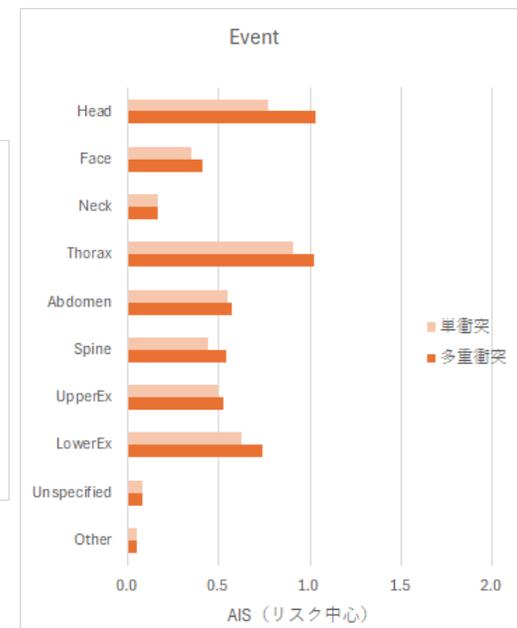
ISS



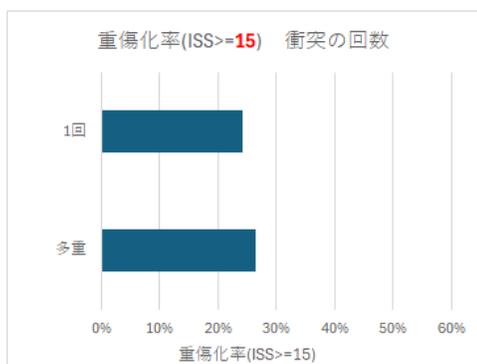
外傷の数



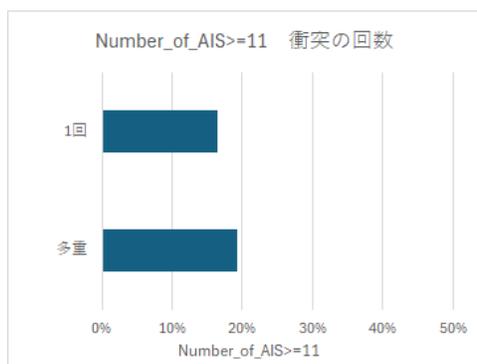
死亡に至る確率



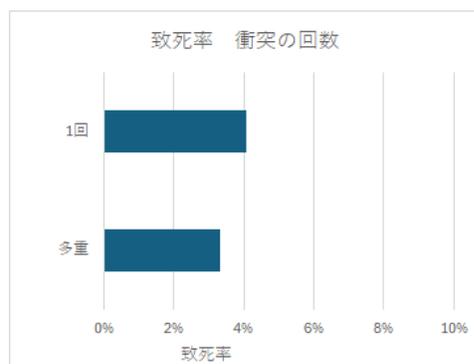
MAIS>=3の発生率



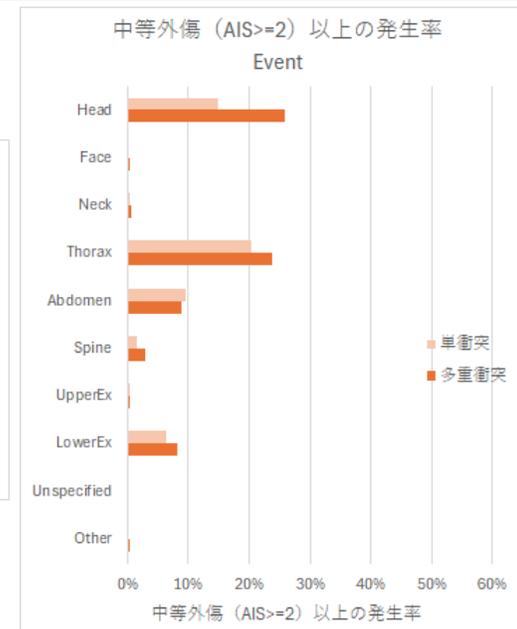
ISS>=15の発生率



外傷の数>=11の発生率

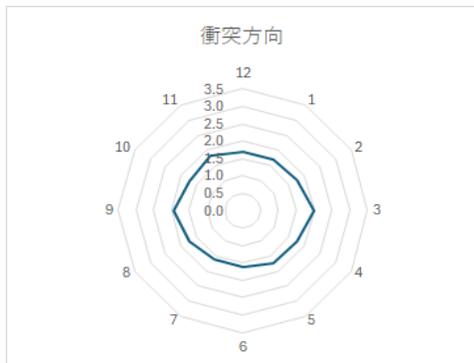


致死率

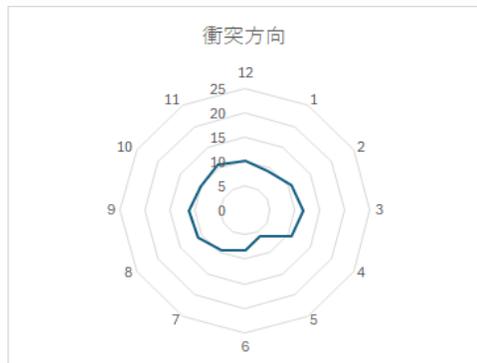


衝突の方向

重傷化の率は両サイドの衝突の方が高く、致死率は斜め方向（2, 5, 8, 10時）が高い。



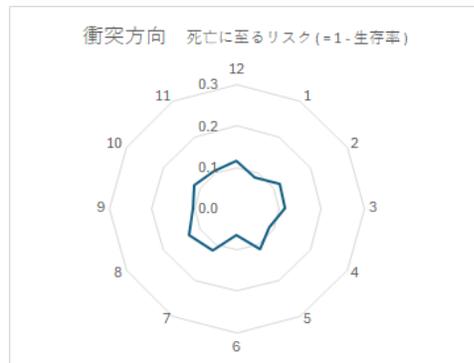
MAIS



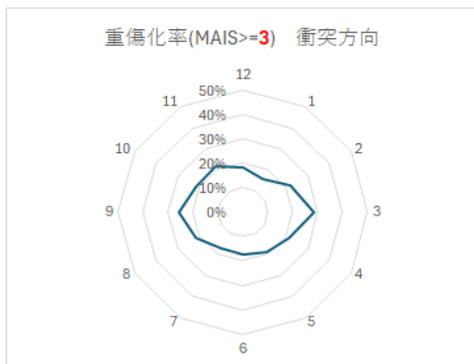
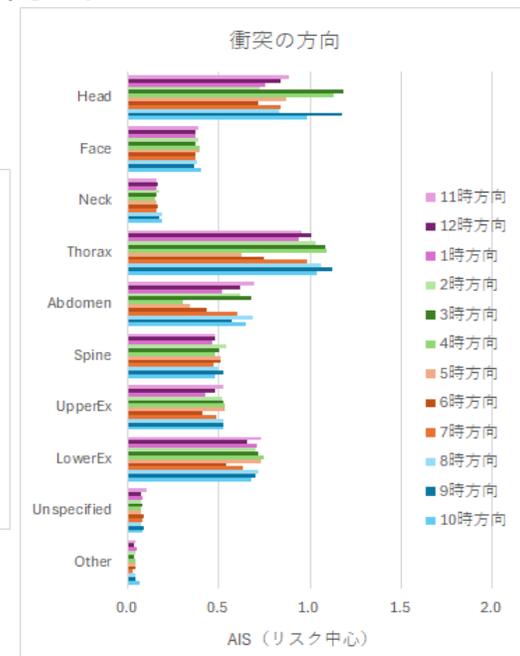
ISS



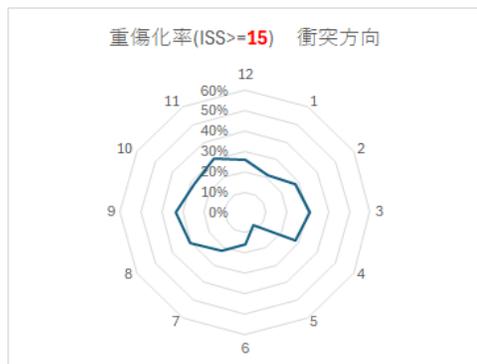
外傷の数



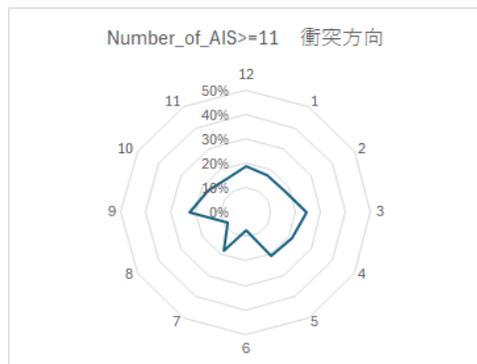
死亡に至る確率



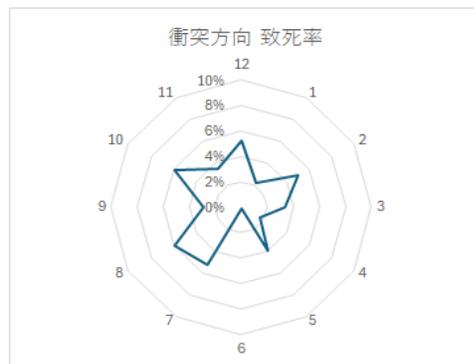
MAIS>=3の発生率



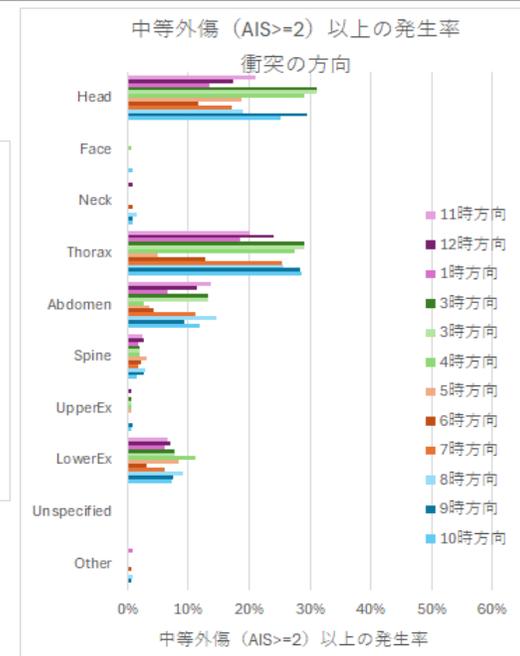
ISS>=15の発生率



外傷の数>=11の発生率

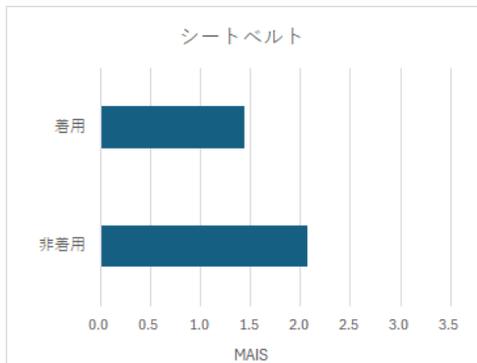


致死率

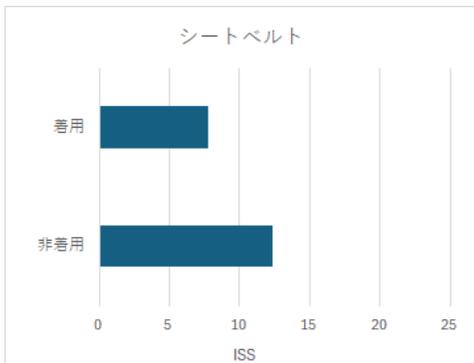


シートベルト

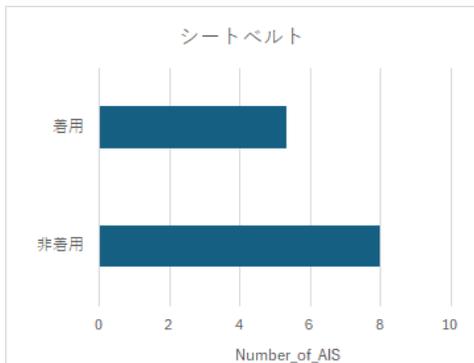
シートベルトの着用は全ての外傷リスクに対して明らかに効果的。



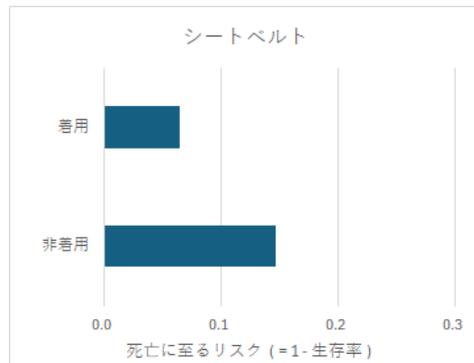
MAIS



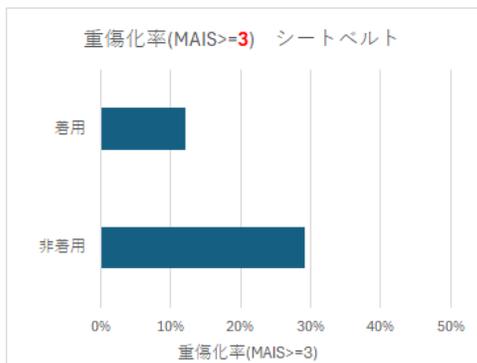
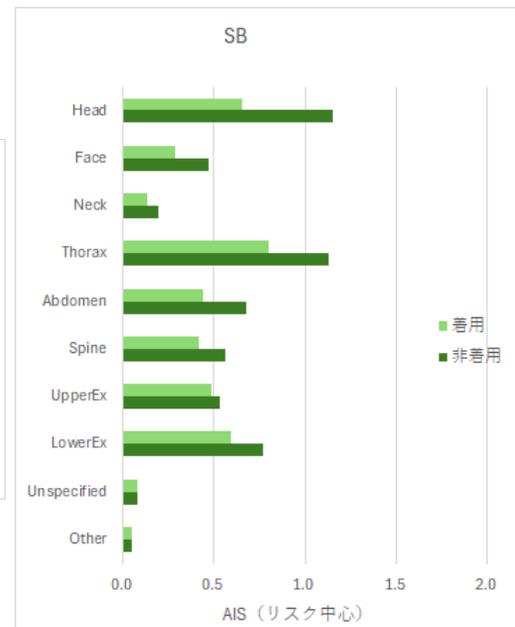
ISS



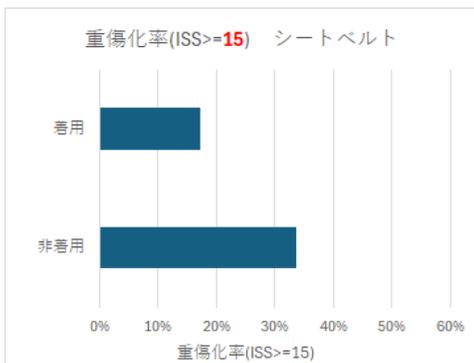
外傷の数



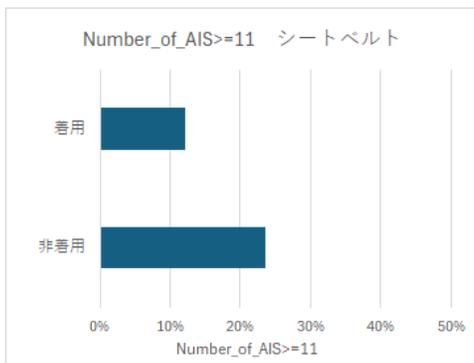
死亡に至る確率



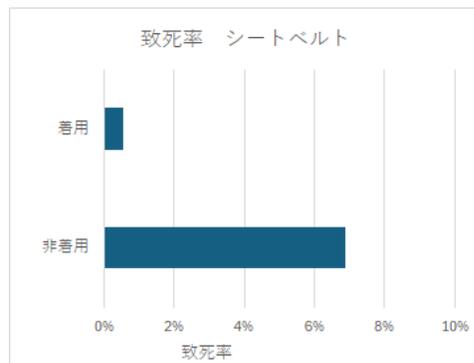
MAIS>=3の発生率



ISS>=15の発生率



外傷の数>=11の発生率

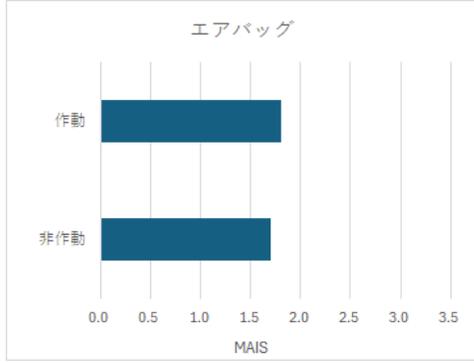


致死率

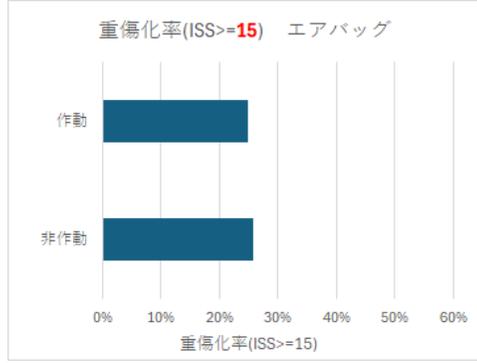


エアバッグ

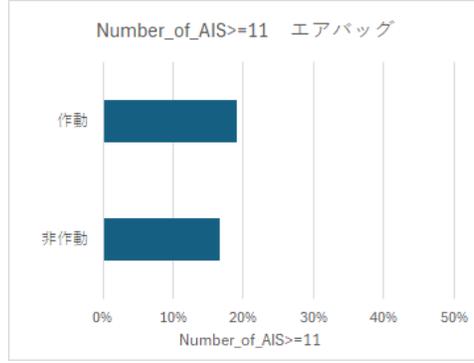
エアバッグの作動は、限定的シーンに対して有効である可能性が高い。



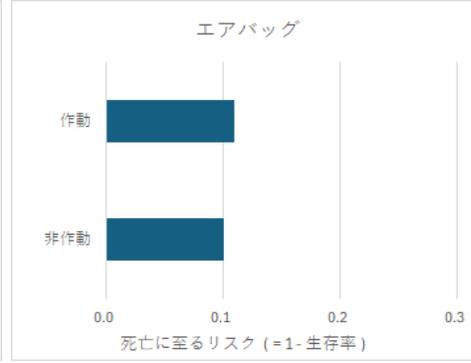
MAIS



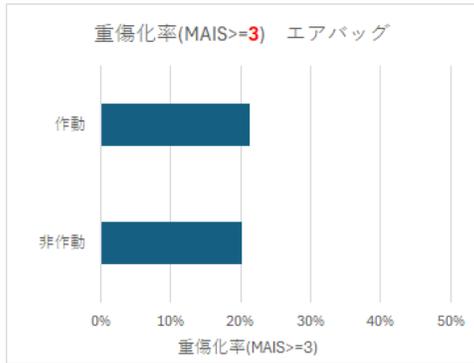
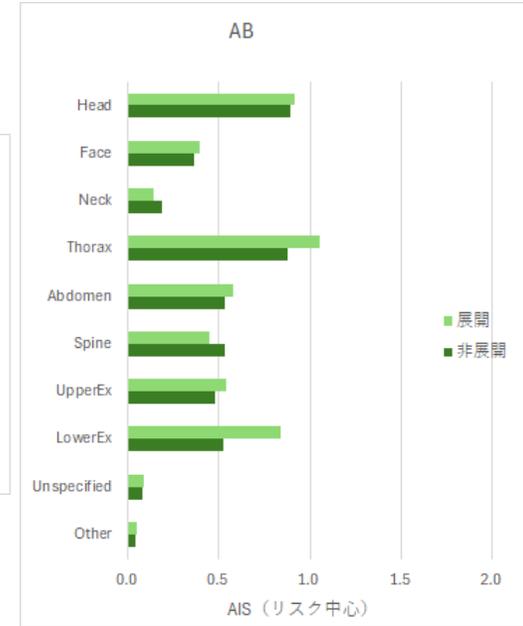
ISS



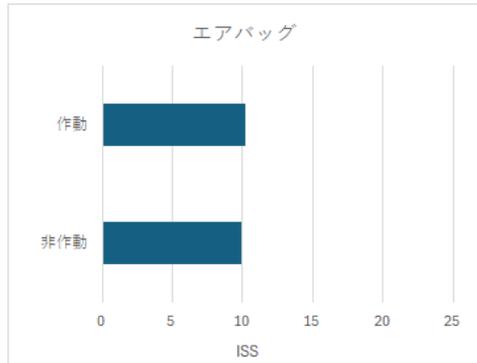
外傷の数



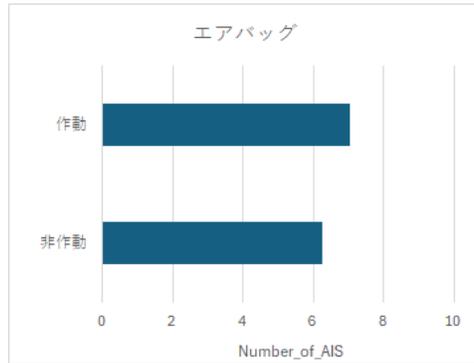
死亡に至る確率



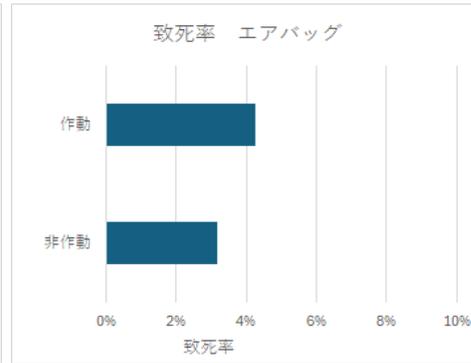
MAIS>=3の発生率



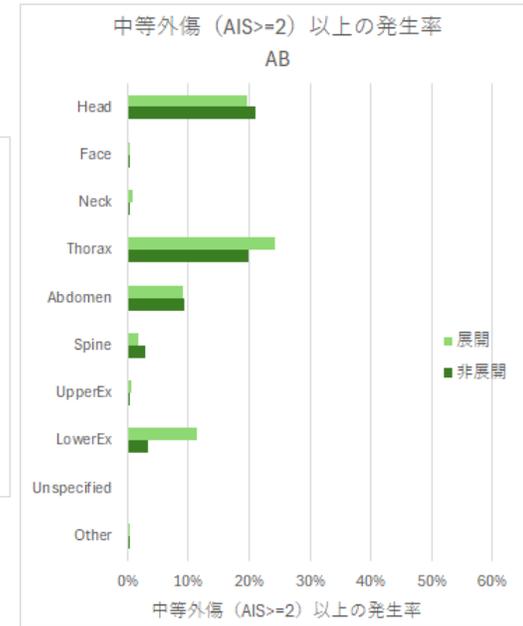
ISS>=15の発生率



外傷の数>=11の発生率

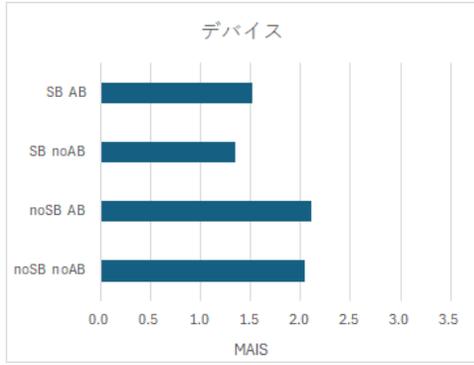


致死率

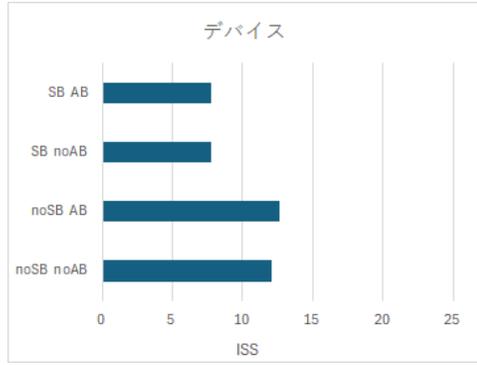


デバイス

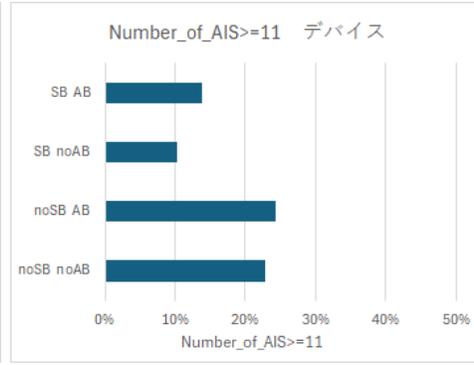
シートベルトの着用は全ての外傷リスクに対して明らかに効果的。



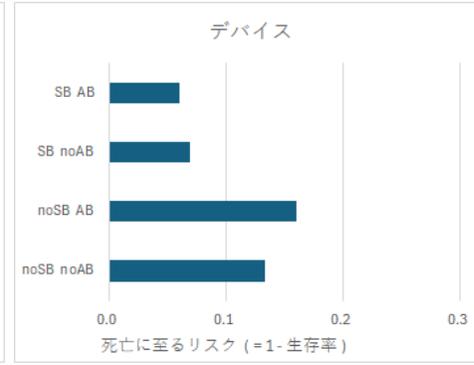
MAIS



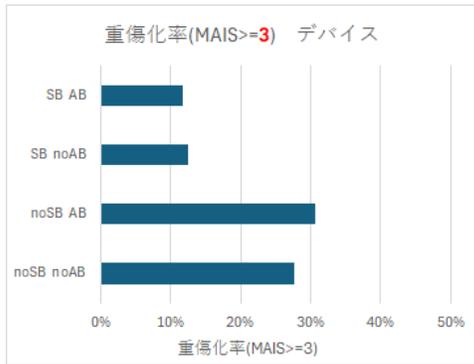
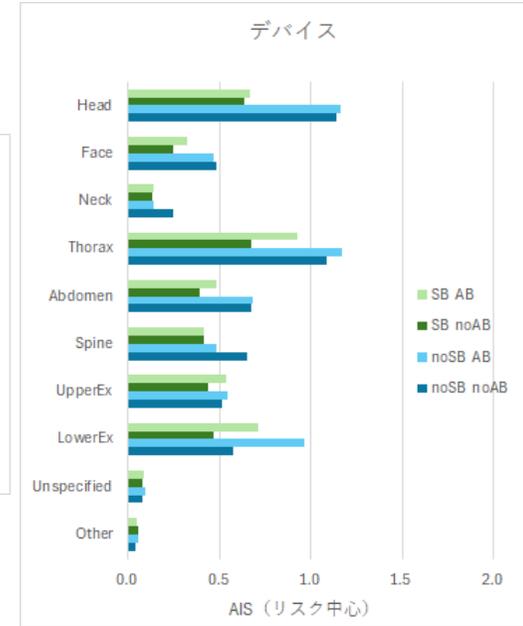
ISS



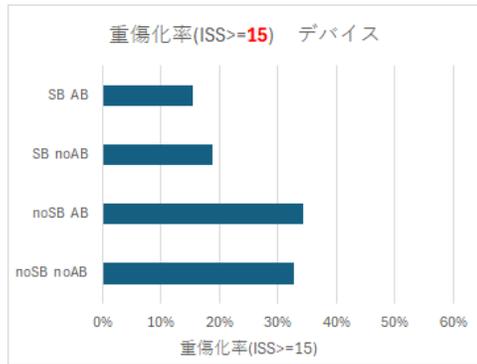
外傷の数



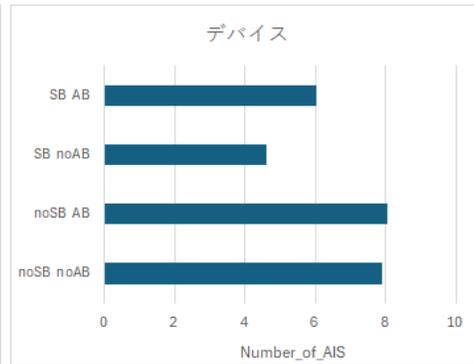
死亡に至る確率



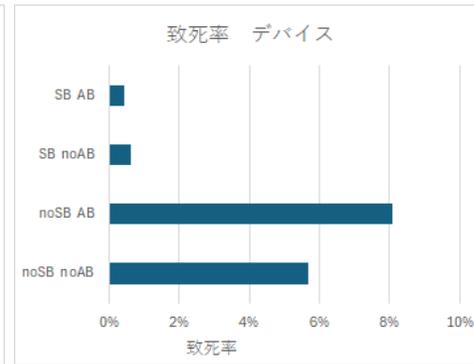
MAIS>=3の発生率



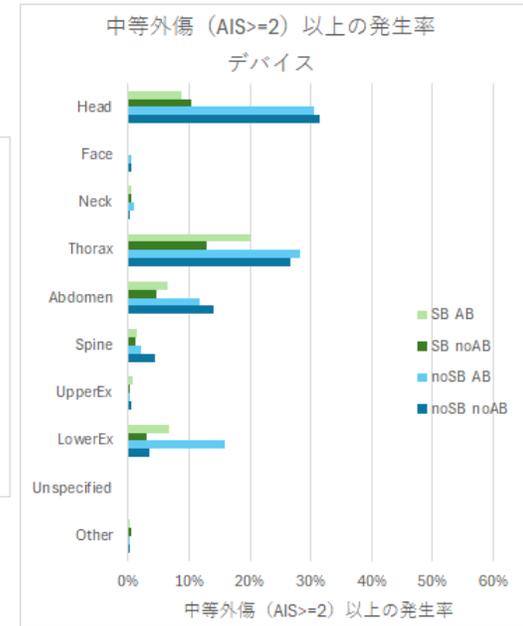
ISS>=15の発生率



外傷の数>=11の発生率

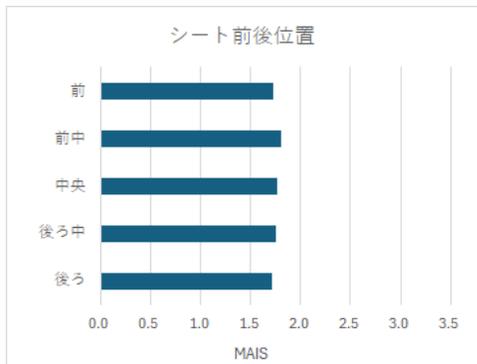


致死率

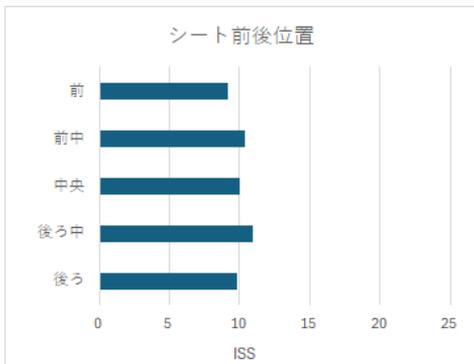


中等外傷 (AIS>=2) 以上の発生率

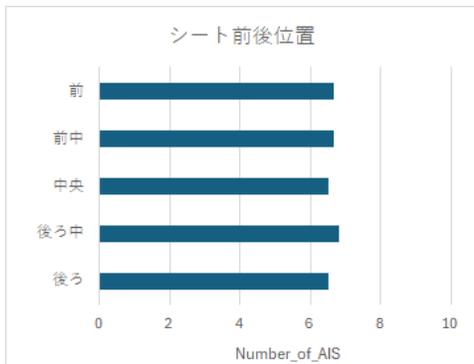
シート前後位置 外傷に対して、シートの前後位置は大きな影響はない。 致死率のみ中央が低い。



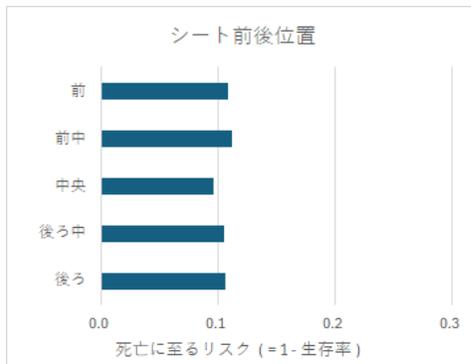
MAIS



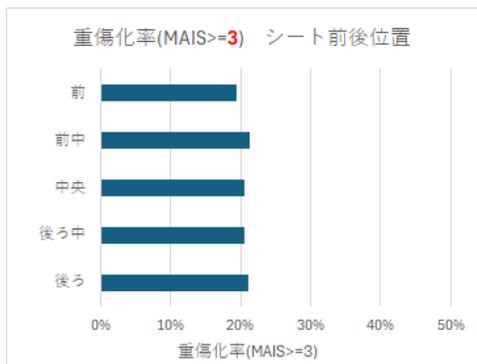
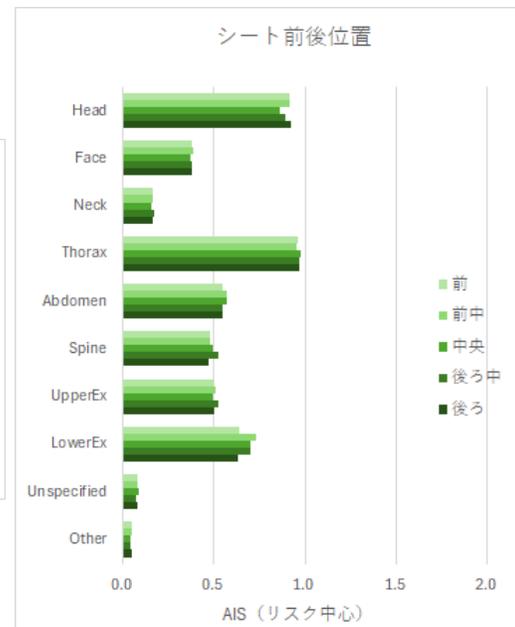
ISS



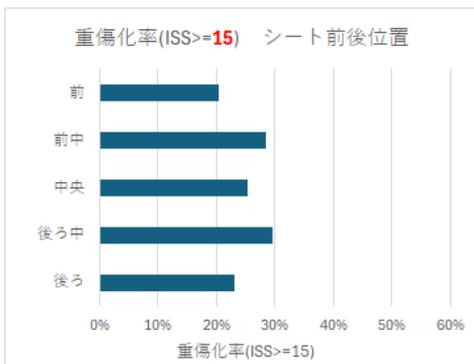
外傷の数



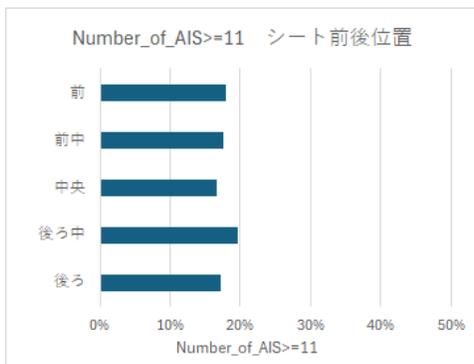
死亡に至る確率



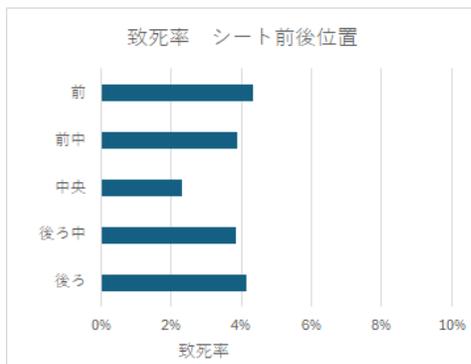
MAIS>=3の発生率



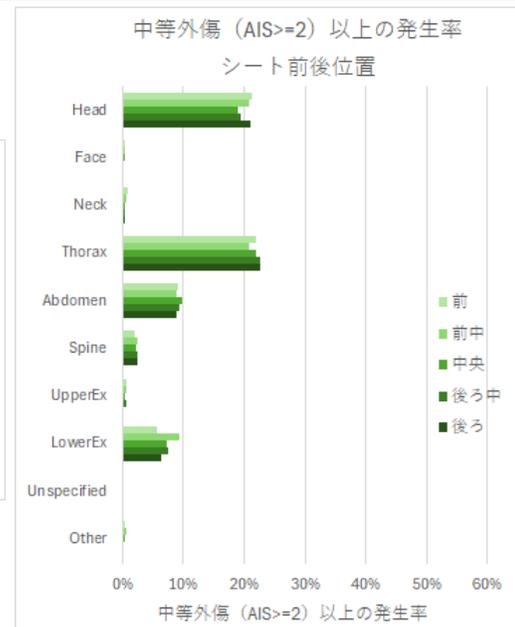
ISS>=15の発生率



外傷の数>=11の発生率



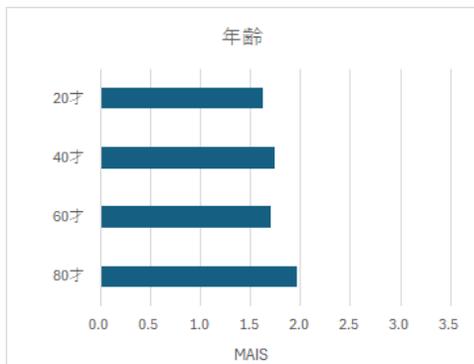
致死率



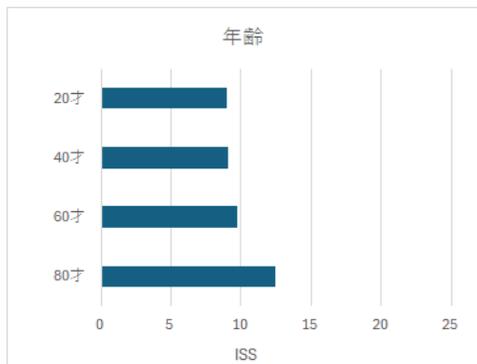
中等外傷 (AIS>=2) 以上の発生率

年齢

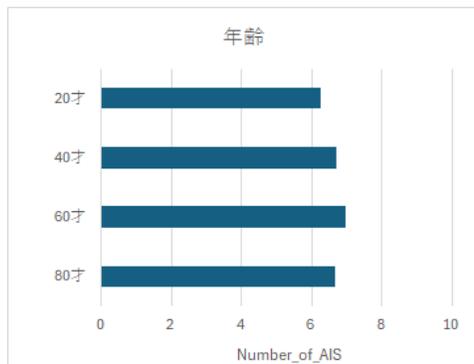
年齢の影響はThoraxに出やすい。 致死率の悪化も顕著。



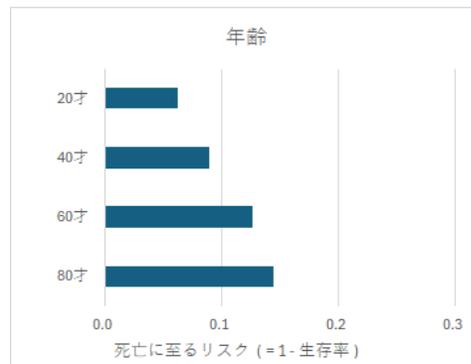
MAIS



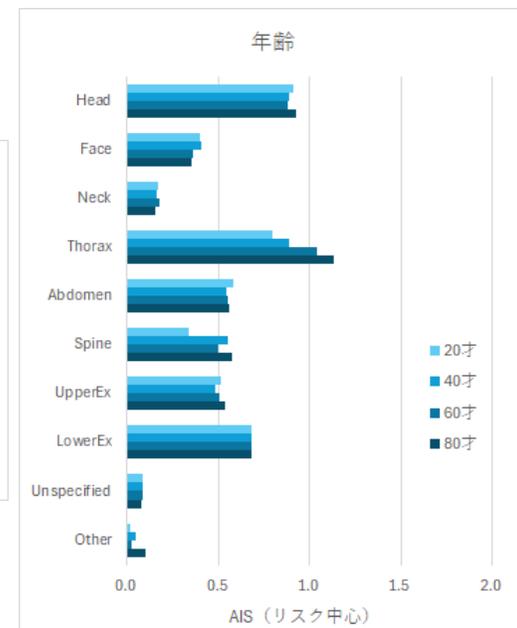
ISS



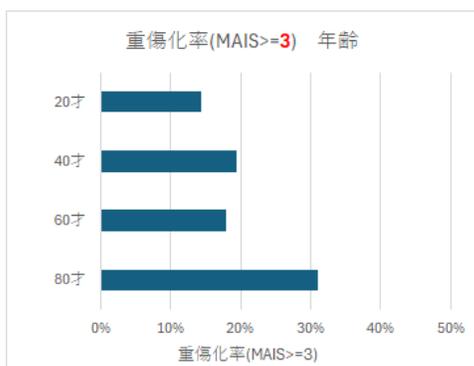
外傷の数



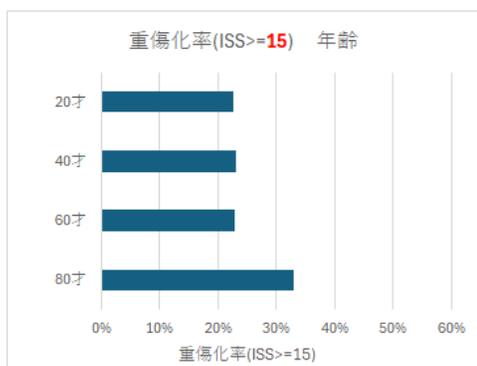
死亡に至る確率



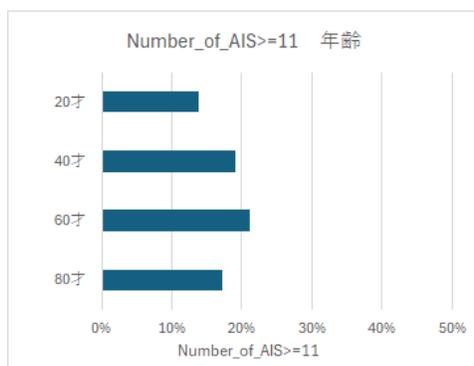
AIS (リスク中心)



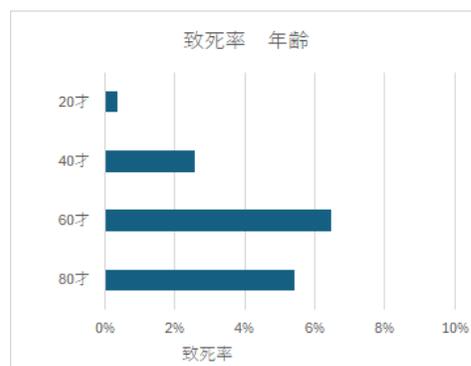
MAIS>=3の発生率



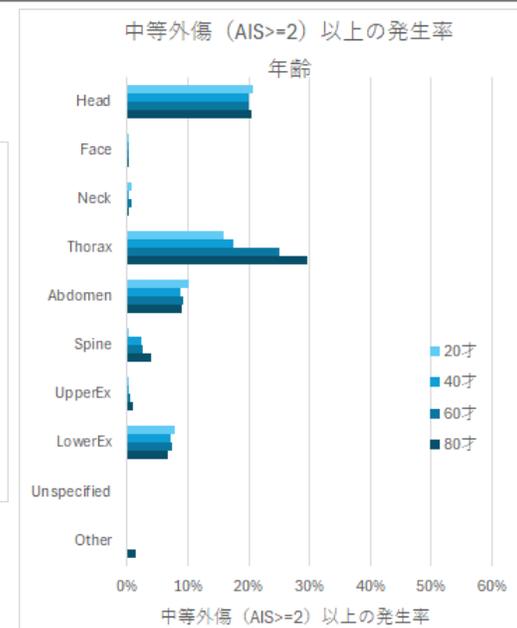
ISS>=15の発生率



外傷の数>=11の発生率



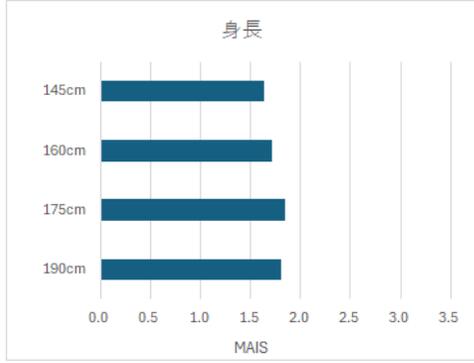
致死率



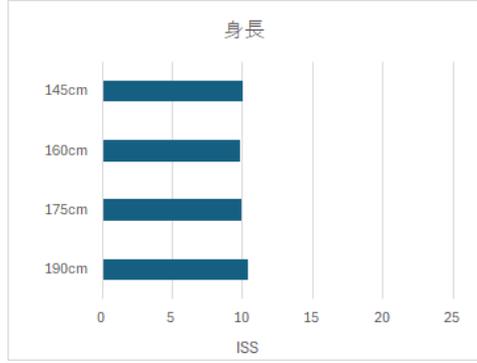
中等外傷 (AIS>=2) 以上の発生率

身長

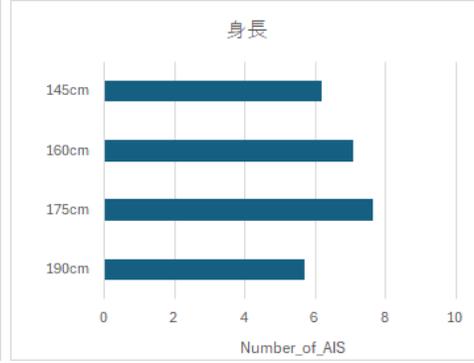
身長の影響はHeadに出やすい。



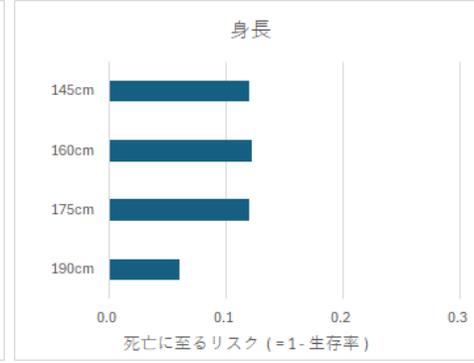
MAIS



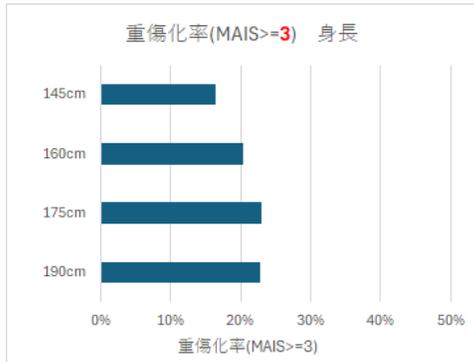
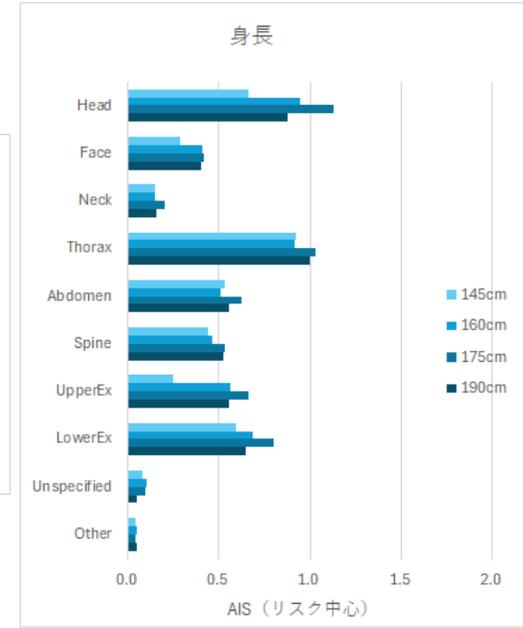
ISS



外傷の数



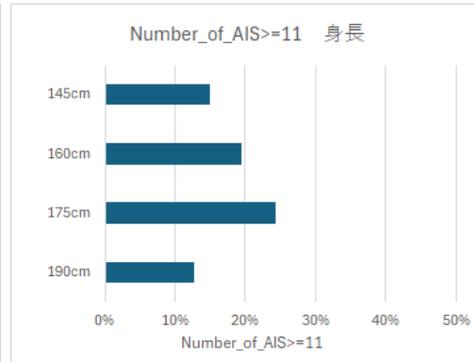
死亡に至る確率



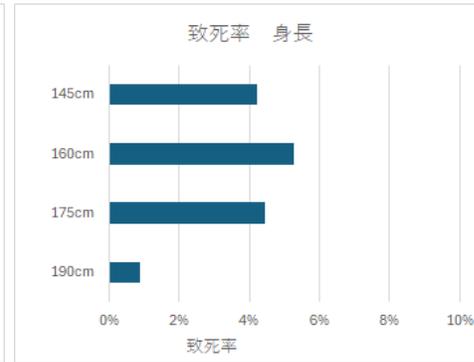
MAIS>=3の発生率



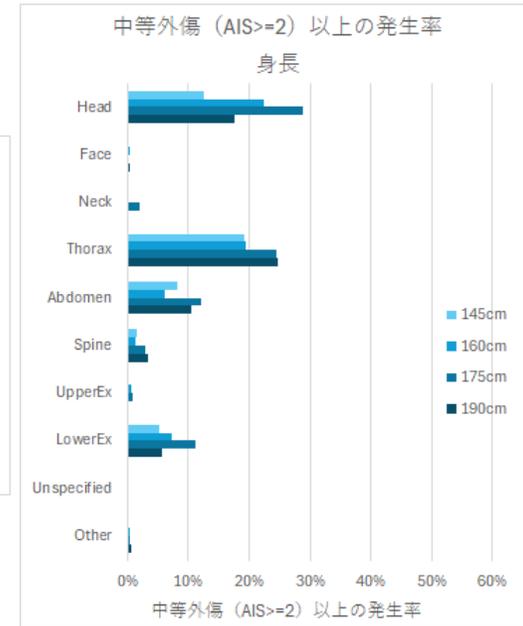
ISS>=15の発生率



外傷の数>=11の発生率

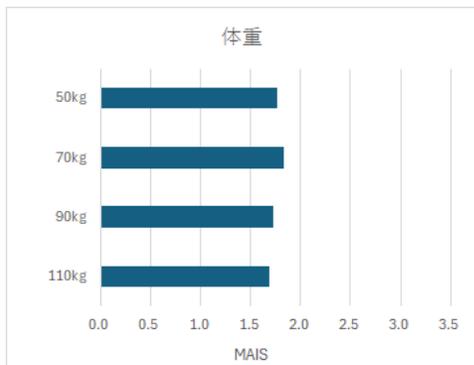


致死率

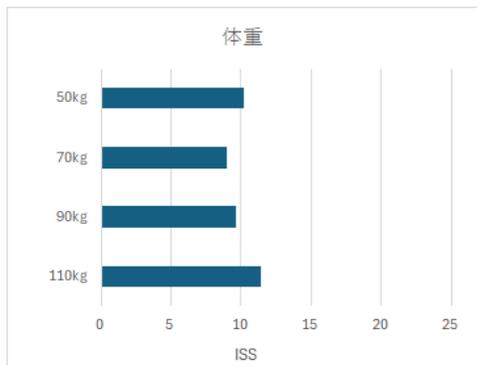


体重

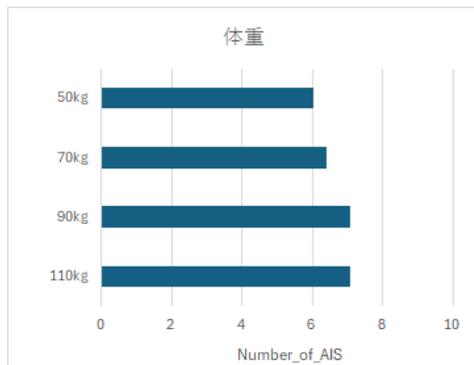
体重は重いと頭部の外傷を悪化させ、軽いとThoraxを悪化させやすい。



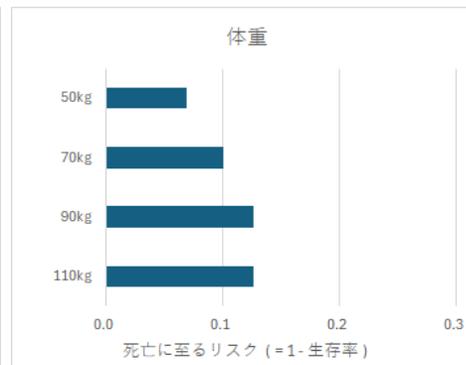
MAIS



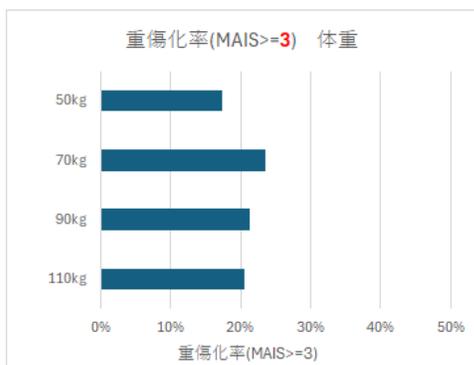
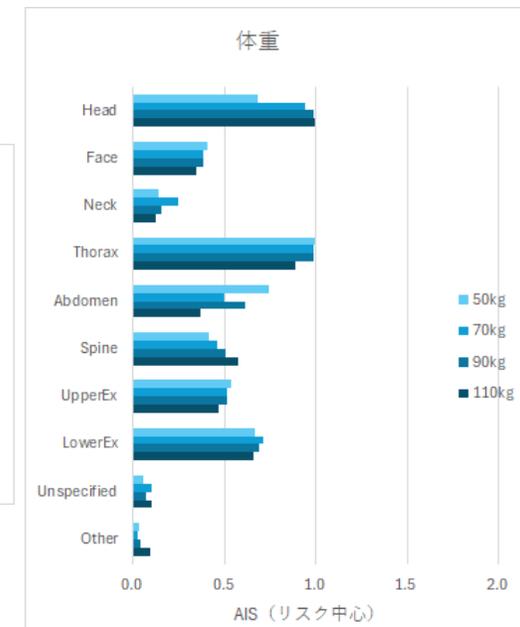
ISS



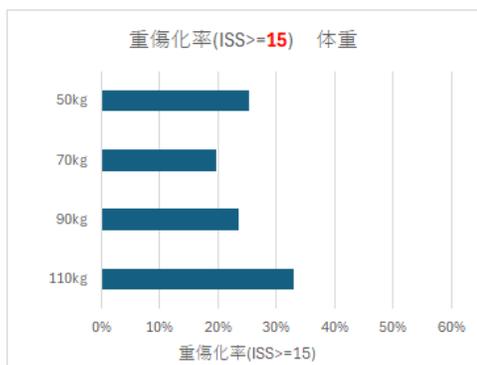
外傷の数



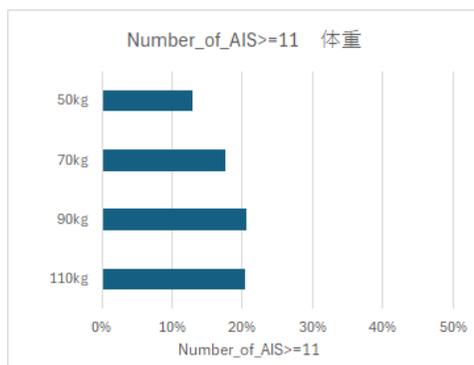
死亡に至る確率



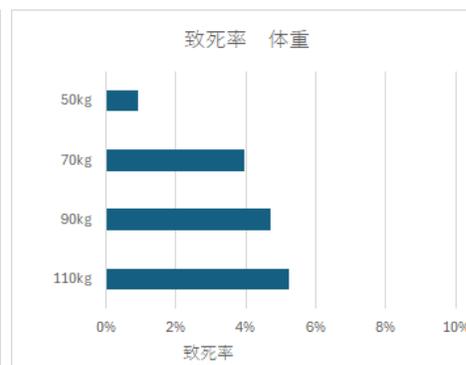
MAIS>=3の発生率



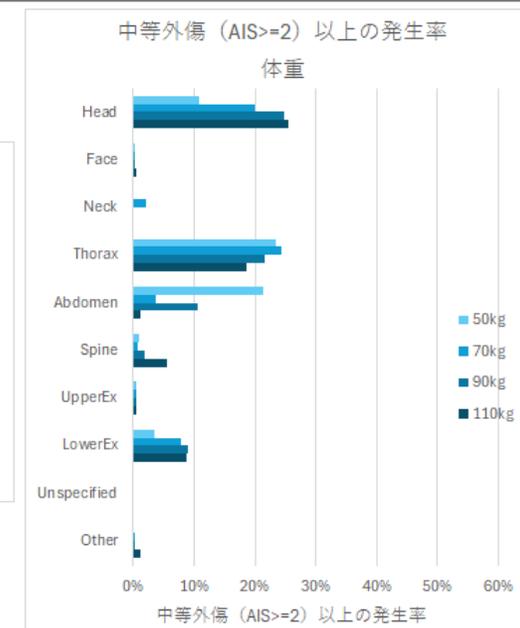
ISS>=15の発生率



外傷の数>=11の発生率

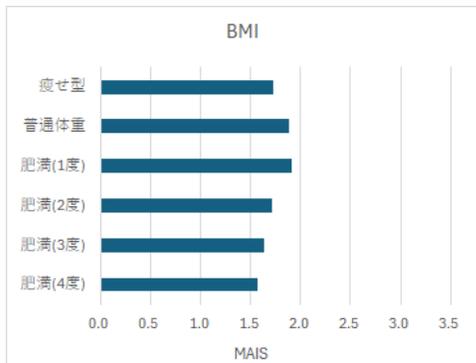


致死率

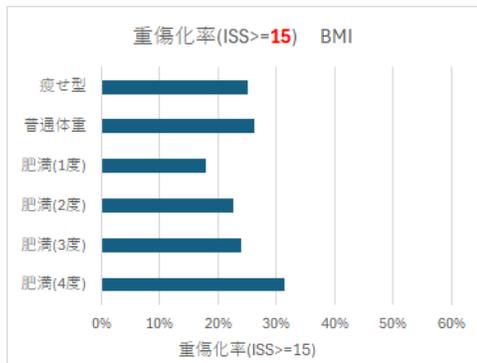


BMI

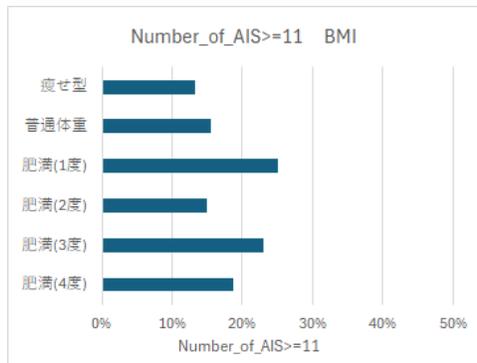
BMIと外傷は、体の耐力（剛性）に影響しているのかも？



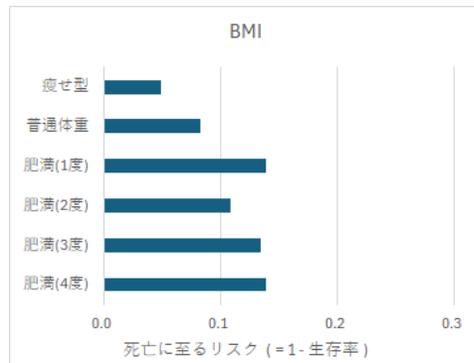
MAIS



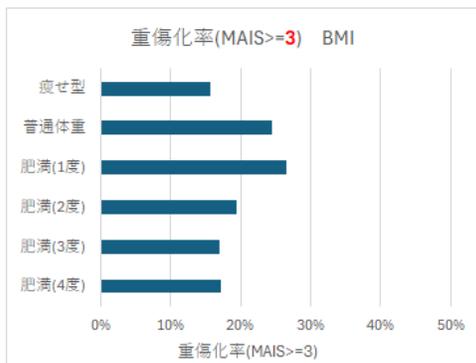
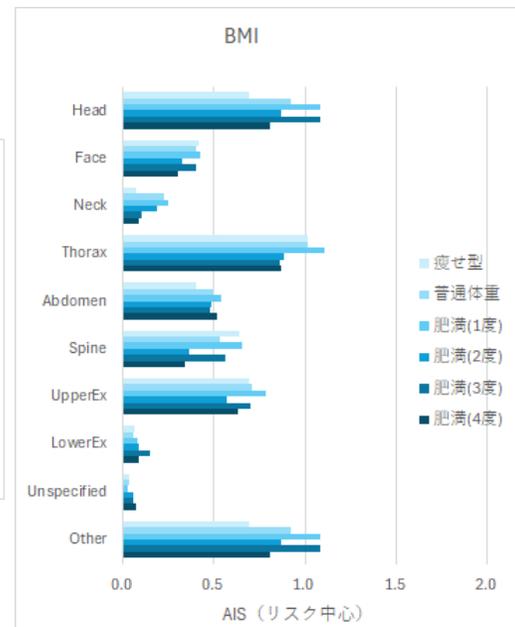
ISS



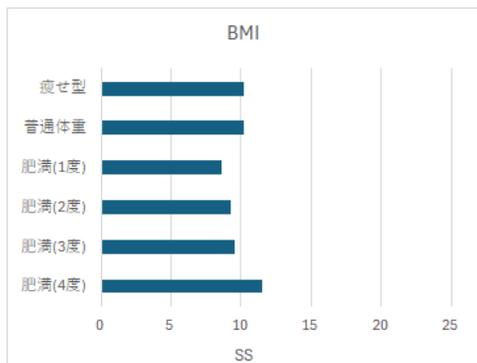
外傷の数



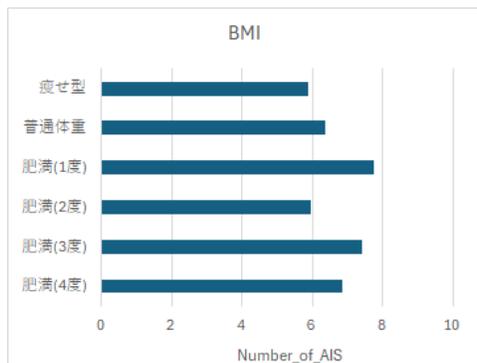
死亡に至る確率



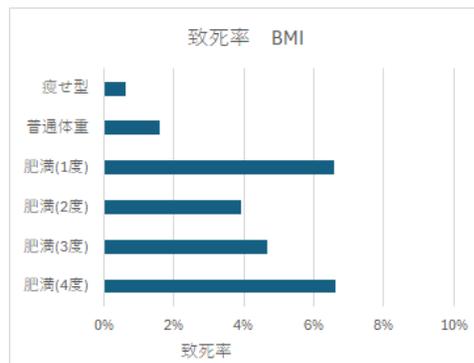
MAIS>=3の発生率



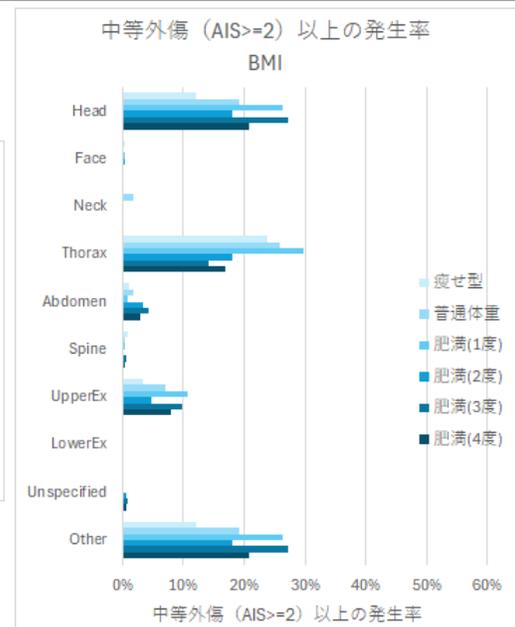
ISS>=15の発生率



外傷の数>=11の発生率

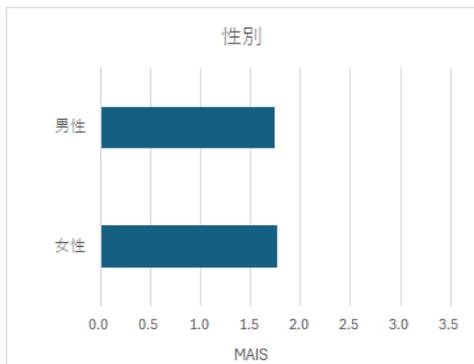


致死率

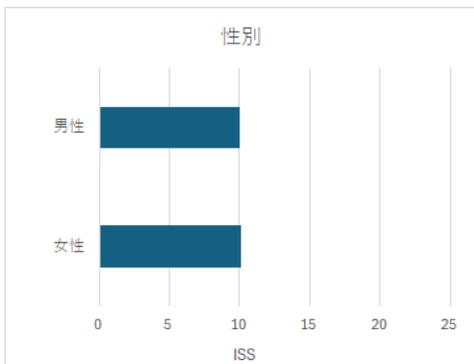


性別

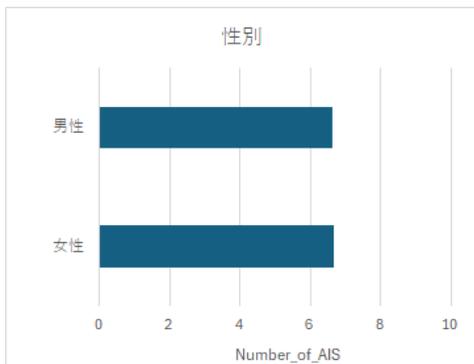
外傷においては、性別の影響は小さいが、致死率はわずかに女性が高い。



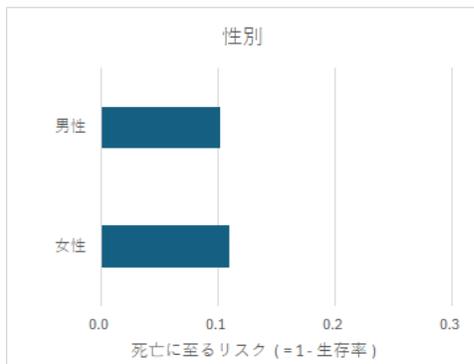
MAIS



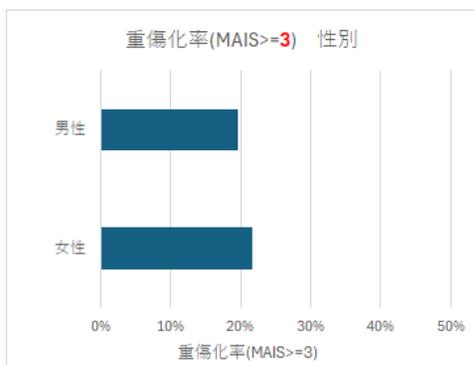
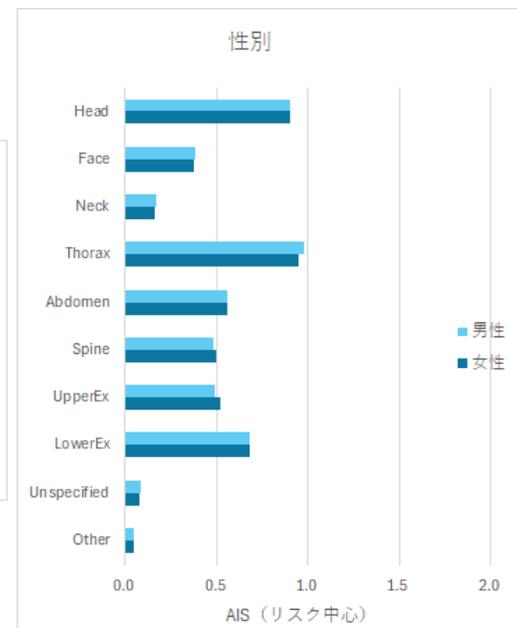
ISS



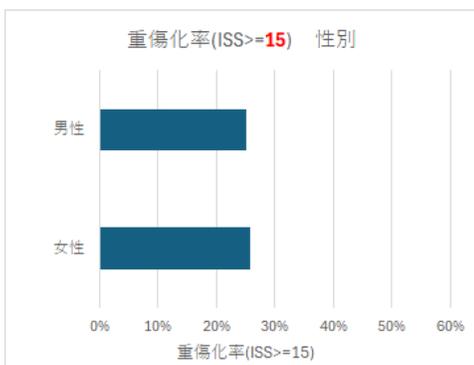
外傷の数



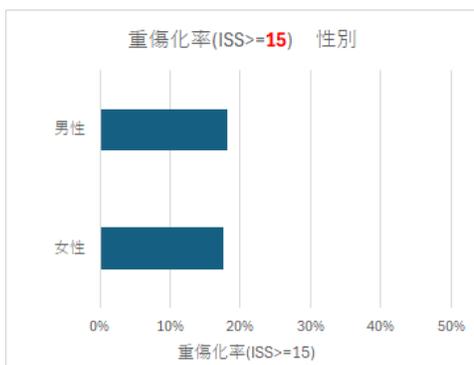
死亡に至る確率



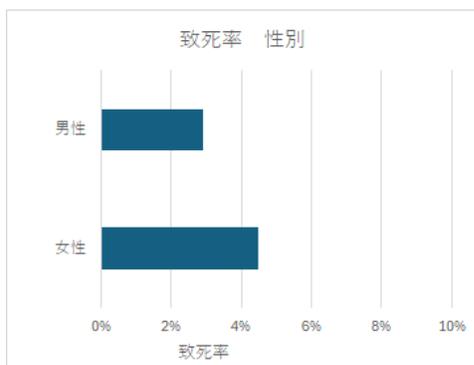
MAIS>=3の発生率



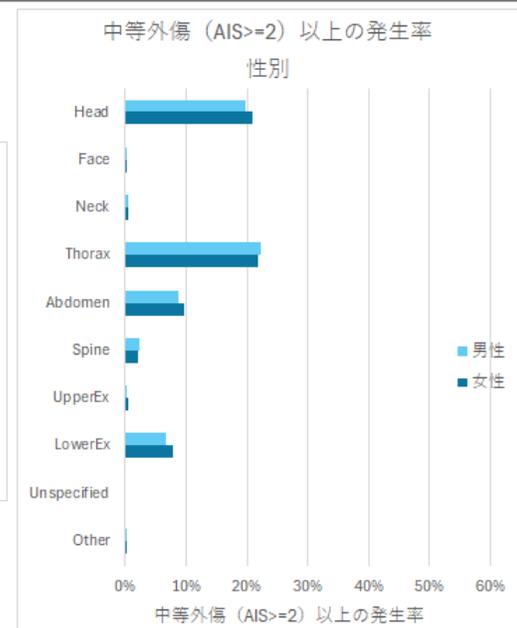
ISS>=15の発生率



外傷の数>=11の発生率

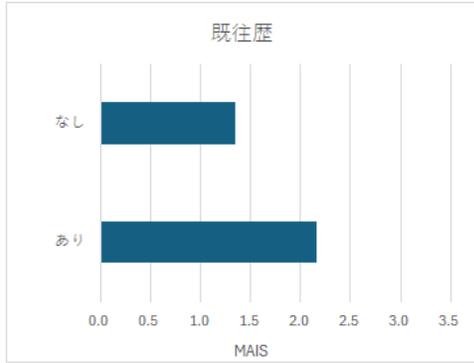


致死率

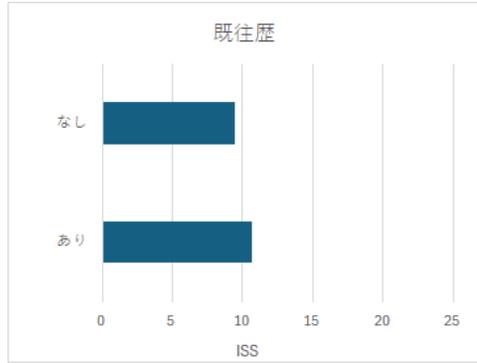


既往歴

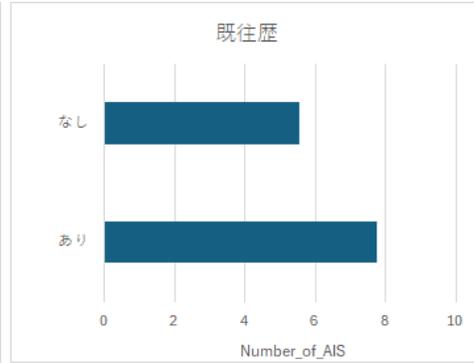
既往歴は、全ての部位に対して外傷レベルが悪化。
AIS>=2の発生率への影響は、Thorax、Abdomen、Spine、LowerExに現れる。



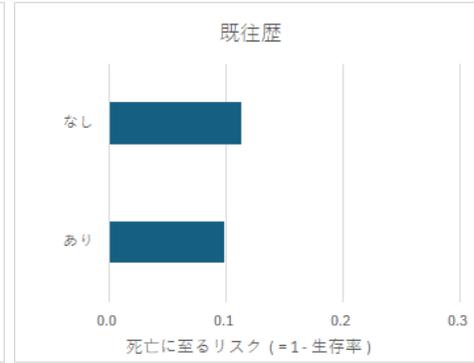
MAIS



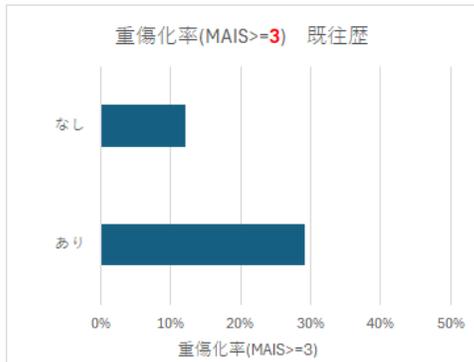
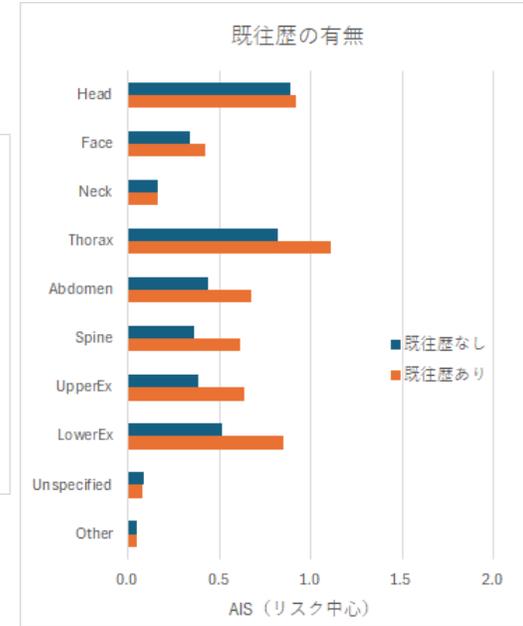
ISS



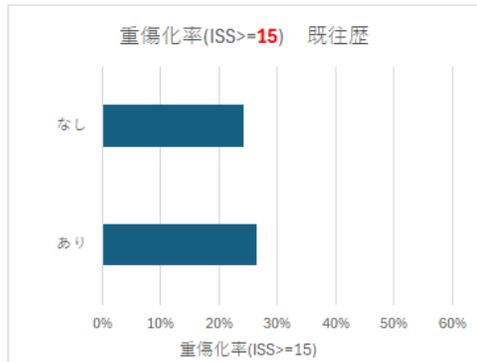
外傷の数



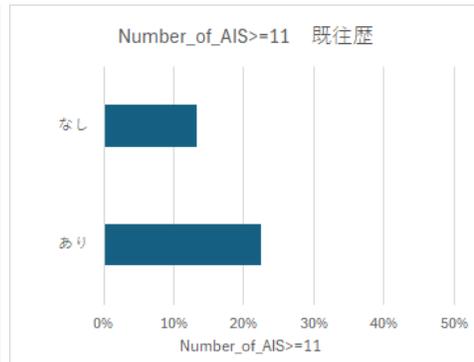
死亡に至る確率



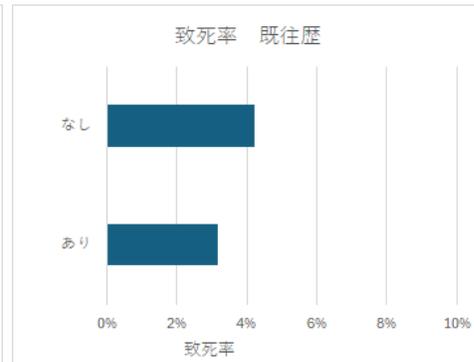
MAIS>=3の発生率



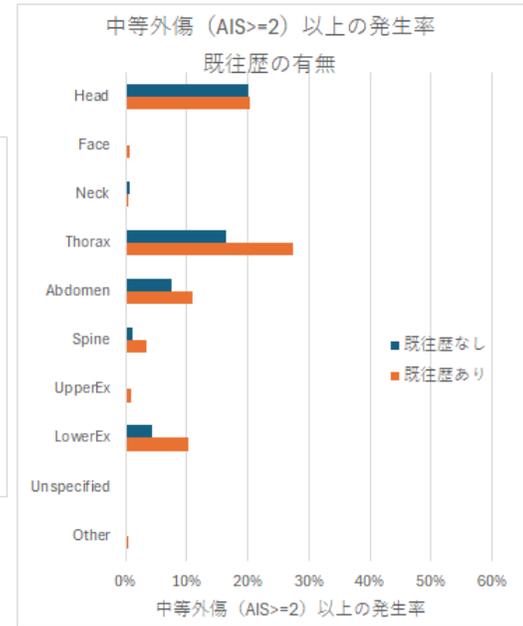
ISS>=15の発生率



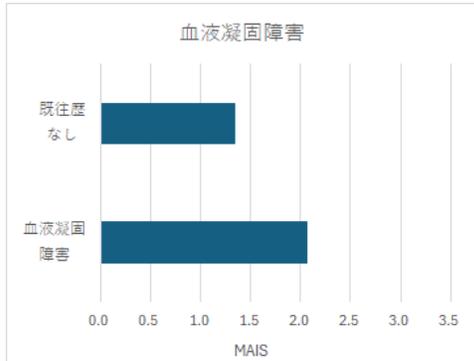
外傷の数>=11の発生率



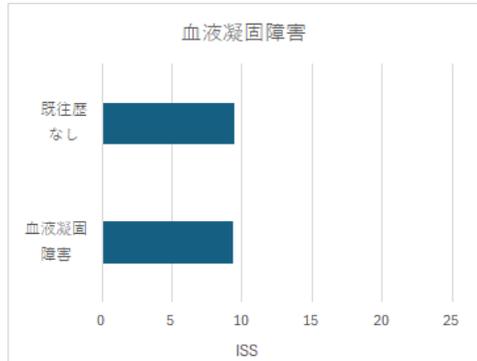
致死率



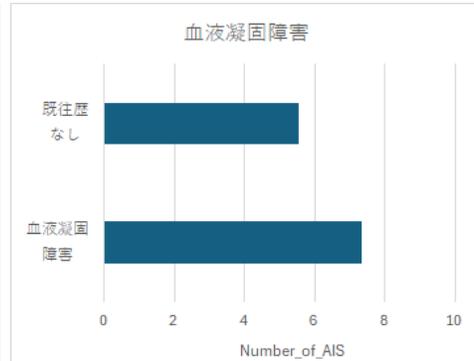
血液凝固障害



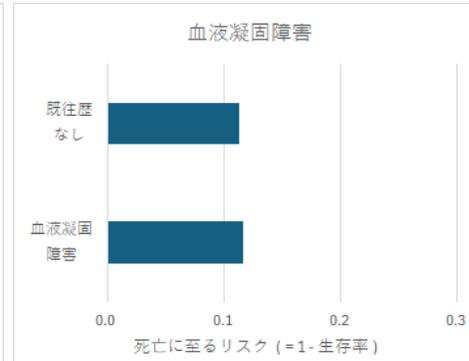
MAIS



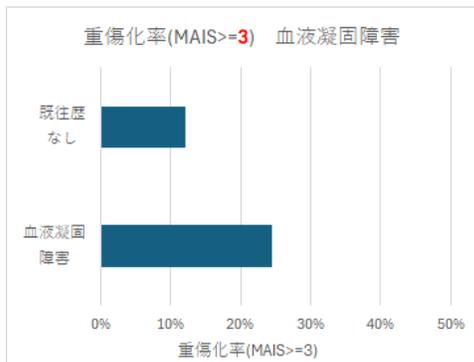
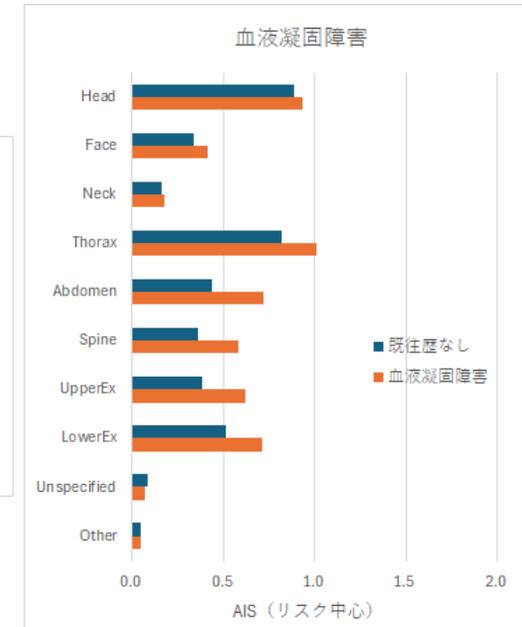
ISS



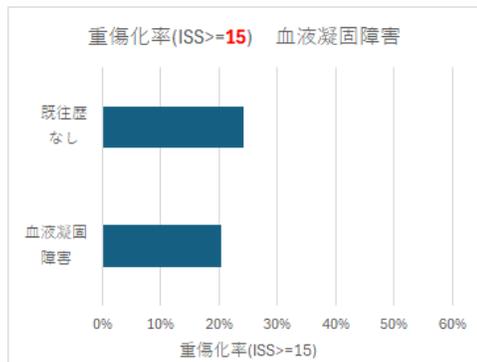
外傷の数



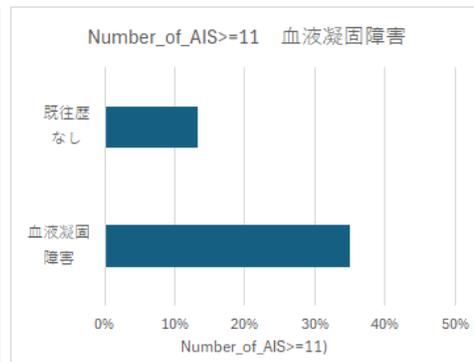
死亡に至る確率



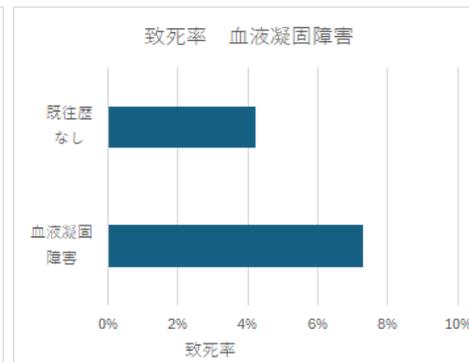
MAIS>=3の発生率



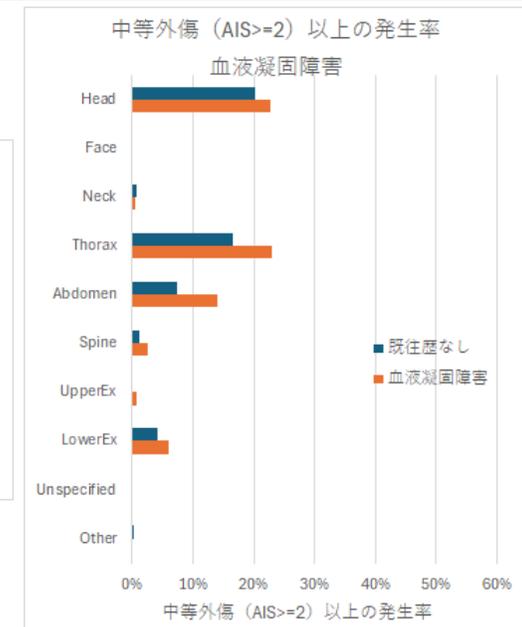
ISS>=15の発生率



外傷の数>=11の発生率

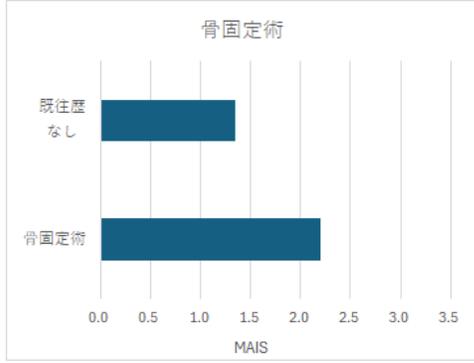


致死率

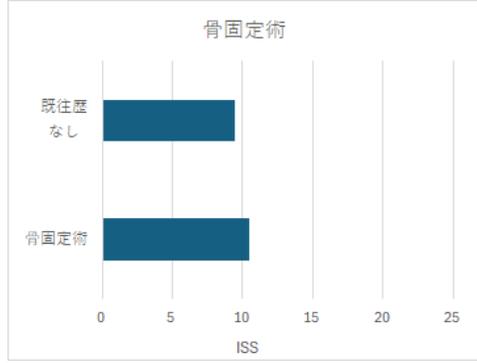


骨固定術

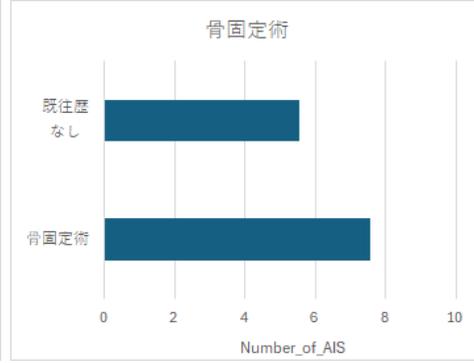
LowerExの悪化が特徴的



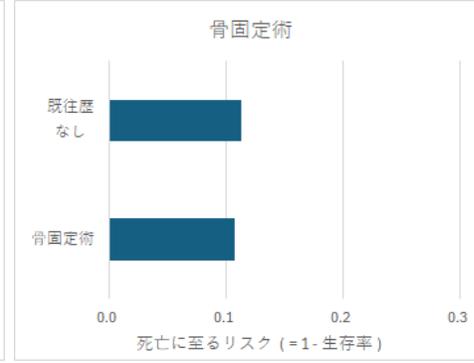
MAIS



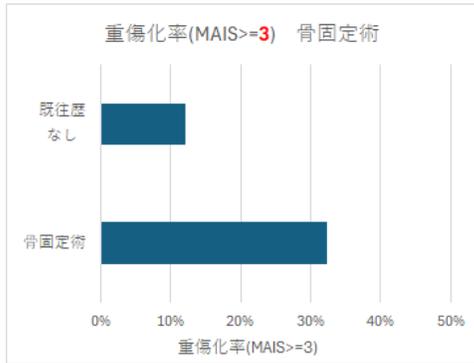
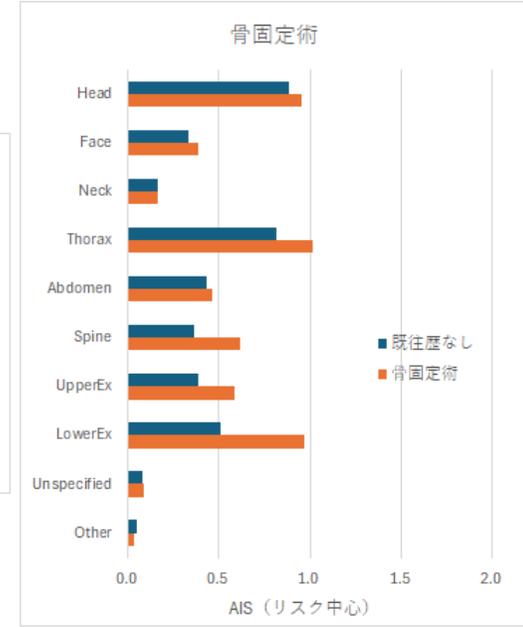
ISS



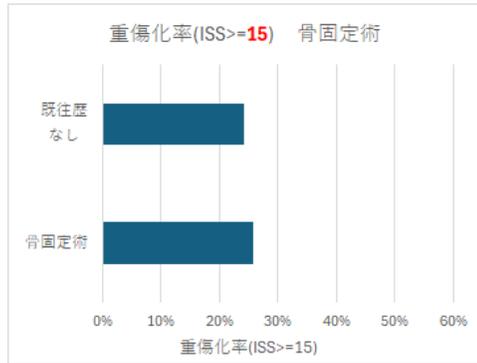
外傷の数



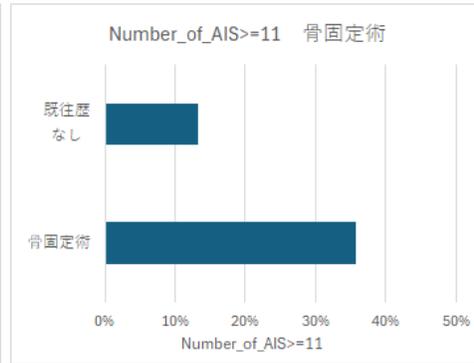
死亡に至る確率



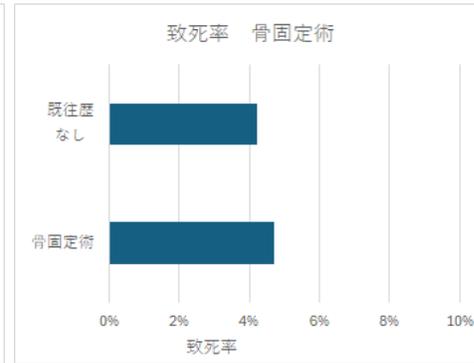
MAIS>=3の発生率



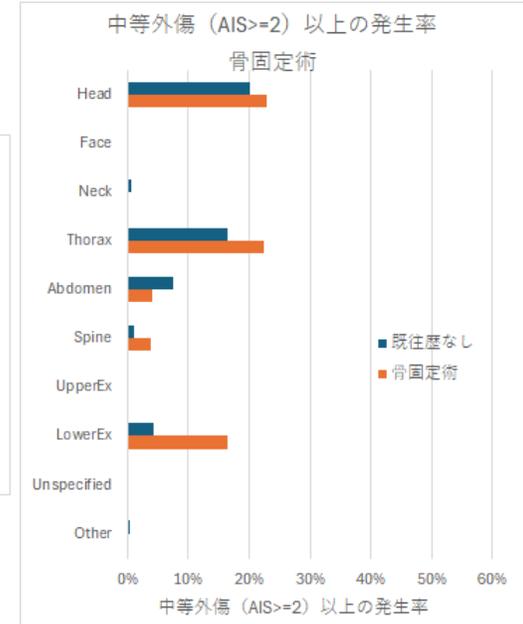
ISS>=15の発生率



外傷の数>=11の発生率

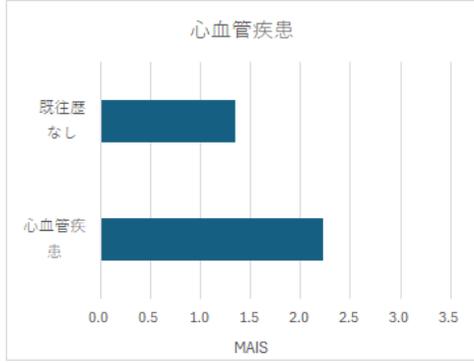


致死率

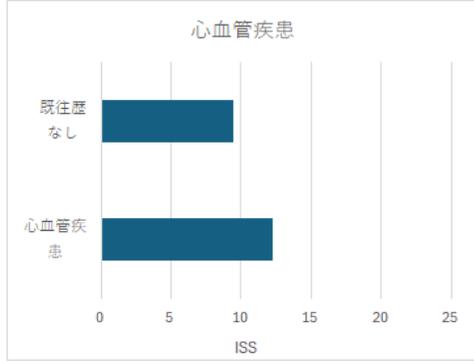


心血管疾患

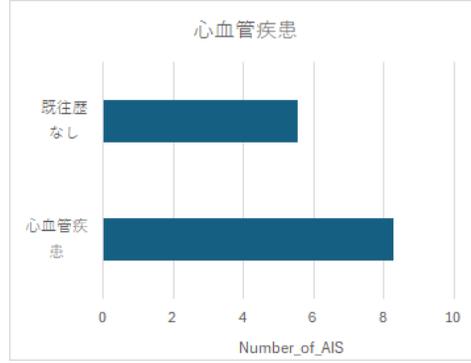
Thorax、Abdomen、LowerExの悪化が特徴的



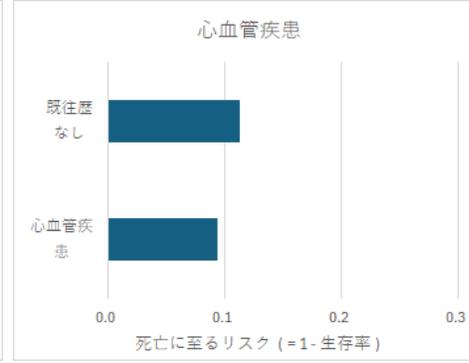
MAIS



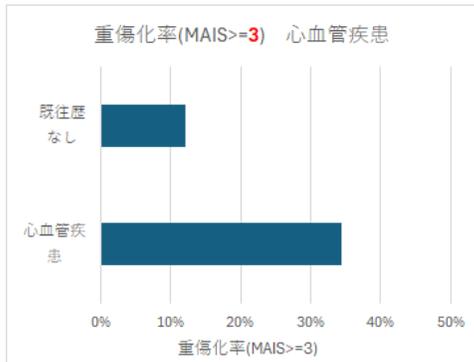
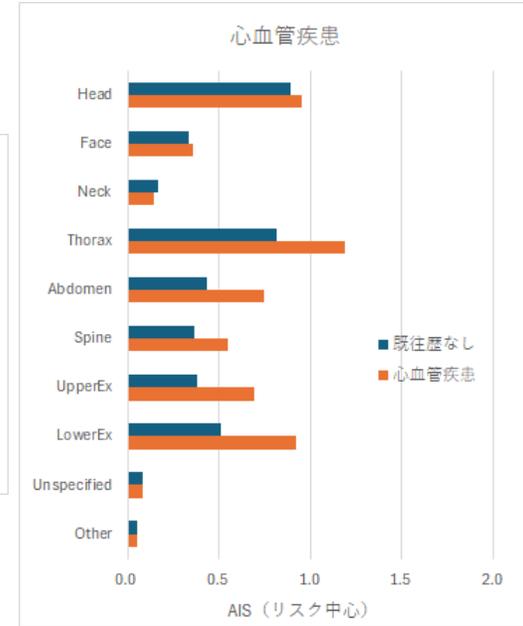
ISS



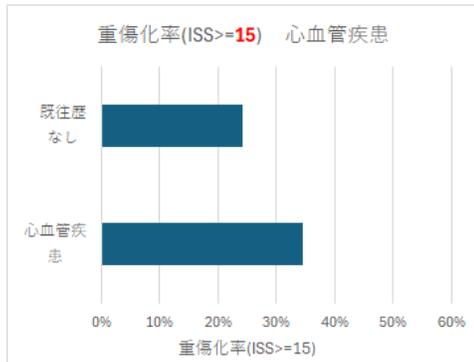
外傷の数



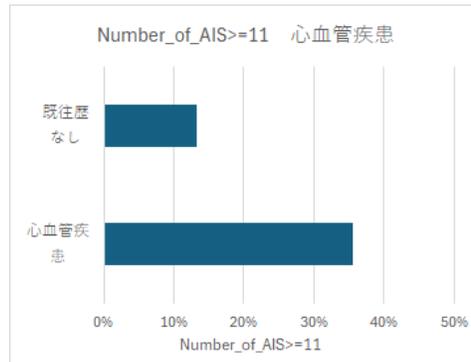
死亡に至る確率



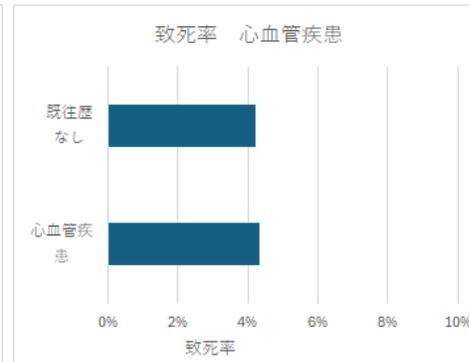
MAIS>=3の発生率



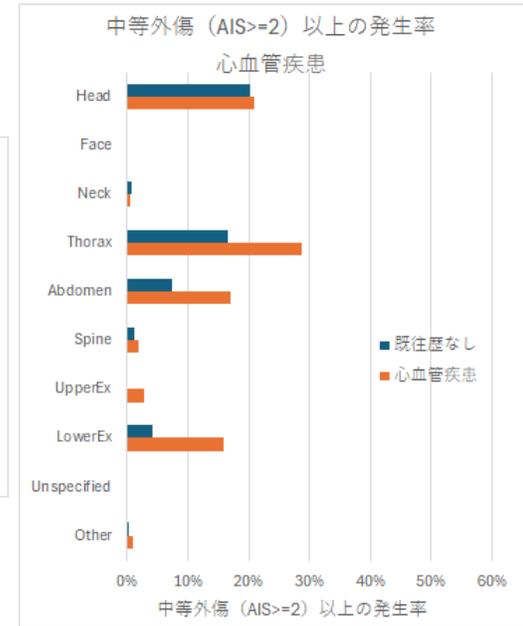
ISS>=15の発生率



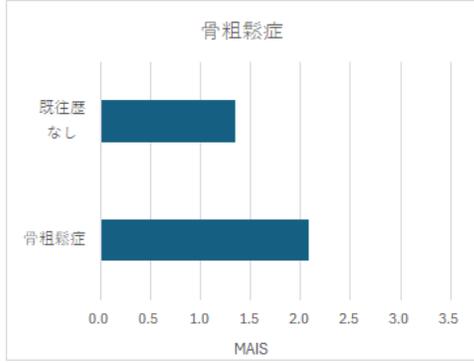
外傷の数>=11の発生率



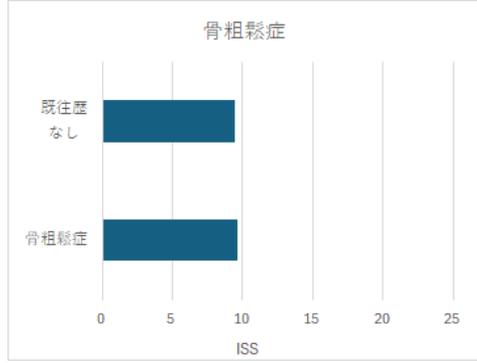
致死率



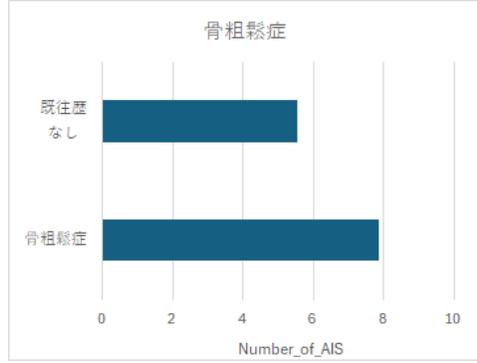
骨粗鬆症



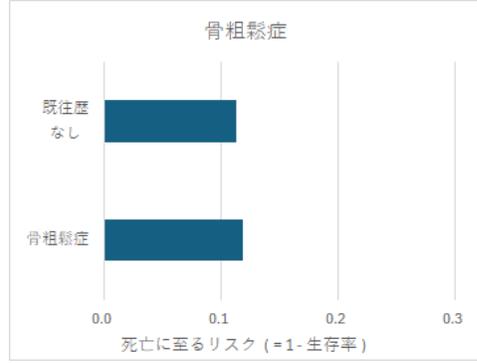
MAIS



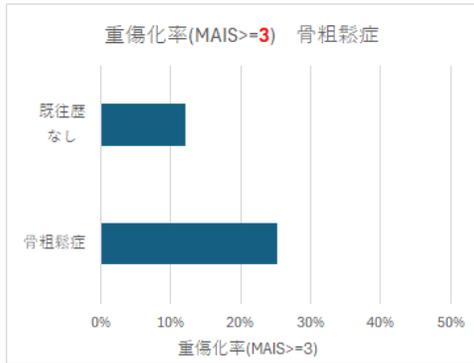
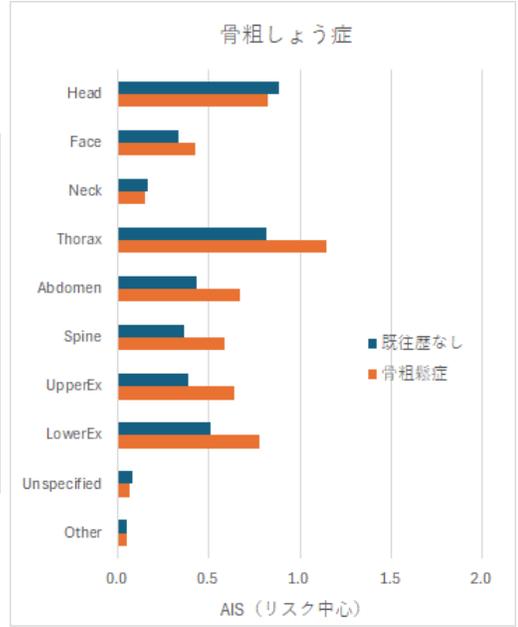
ISS



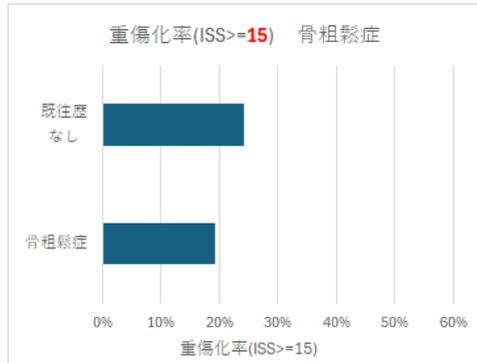
外傷の数



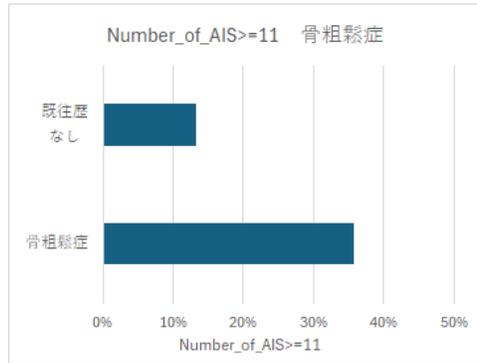
死亡に至る確率



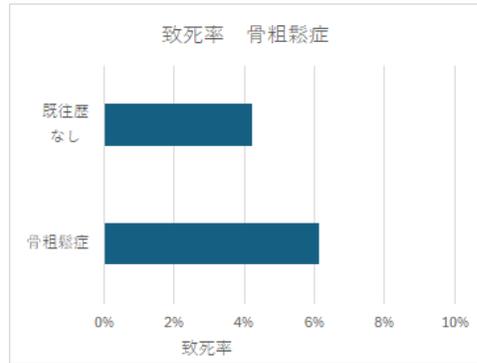
MAIS>=3の発生率



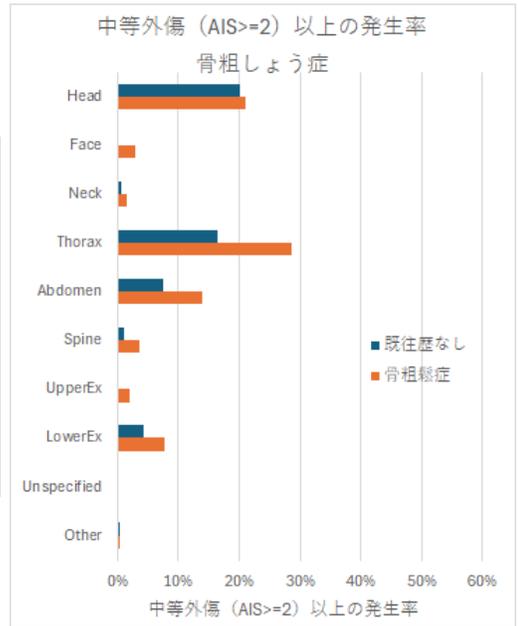
ISS>=15の発生率



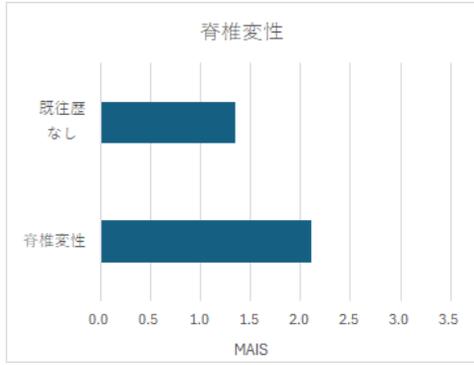
外傷の数>=11の発生率



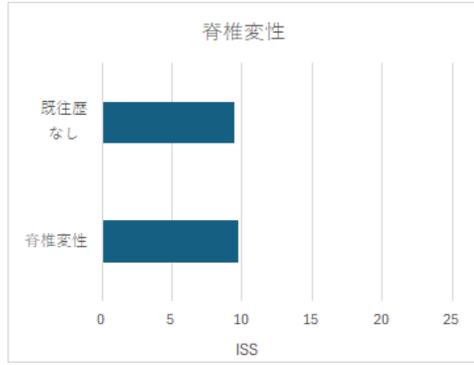
致死率



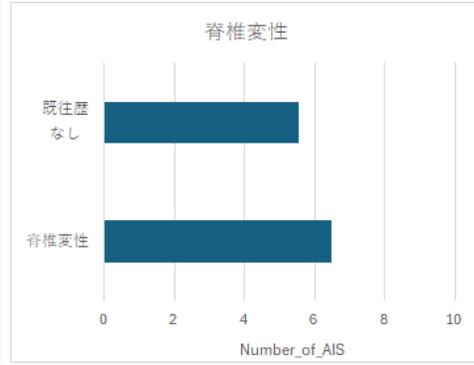
脊椎変性



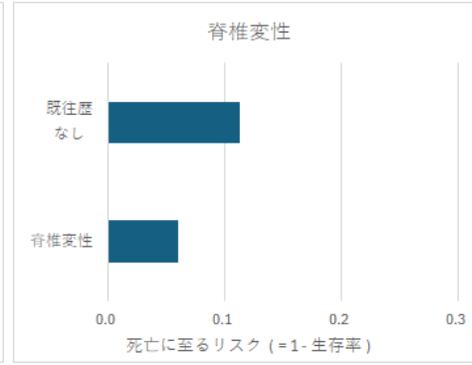
MAIS



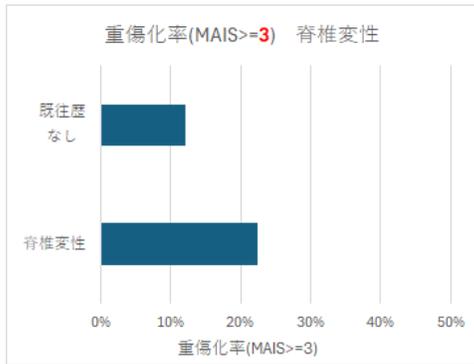
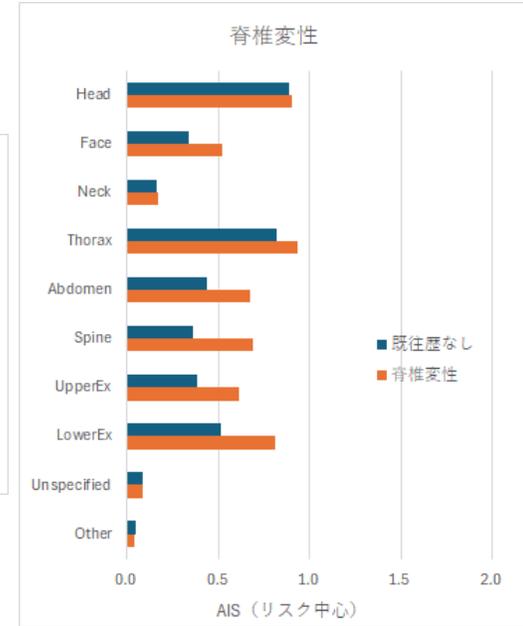
ISS



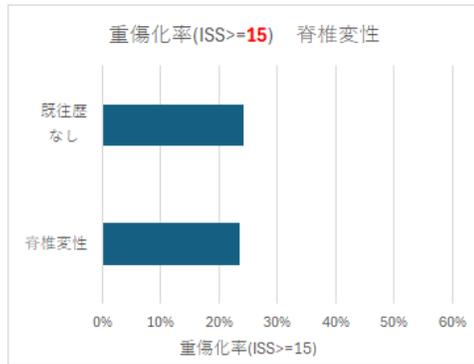
外傷の数



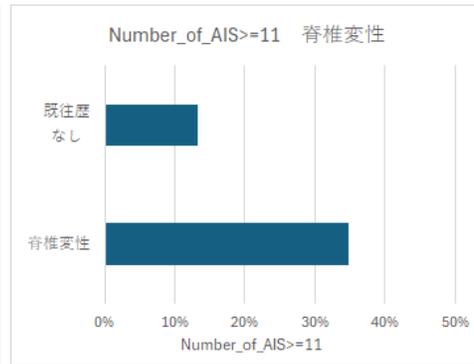
死亡に至る確率



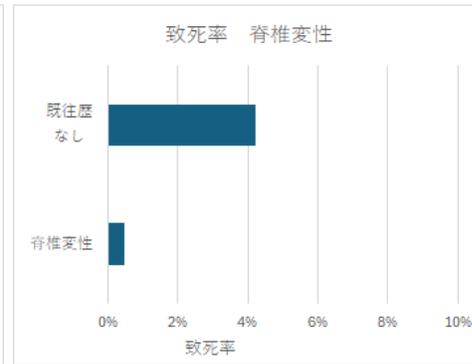
MAIS>=3の発生率



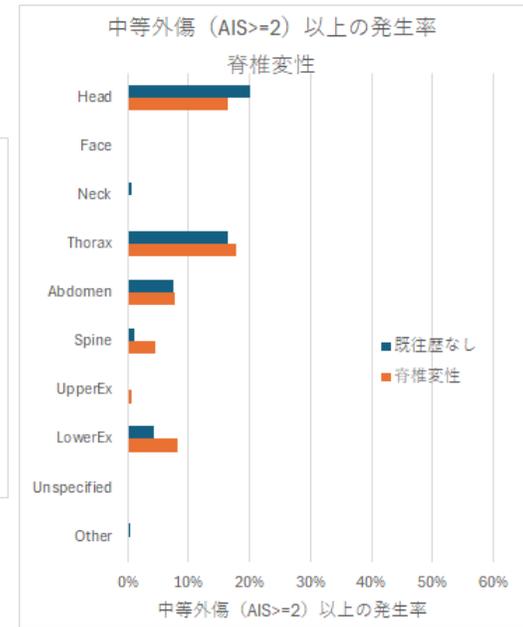
ISS>=15の発生率



外傷の数>=11の発生率

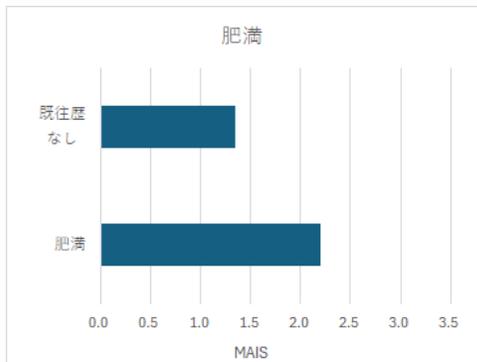


致死率

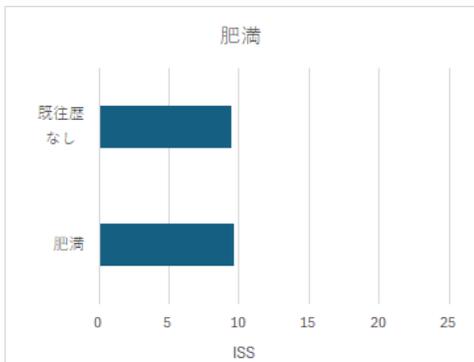


肥満

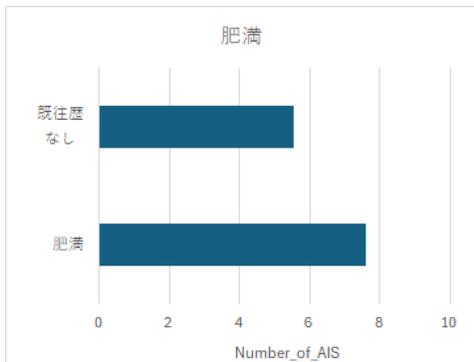
Thorax、LowerExの悪化が特徴的



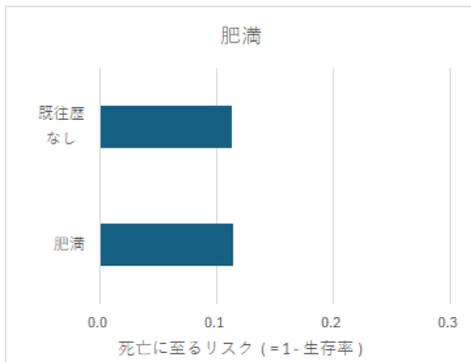
MAIS



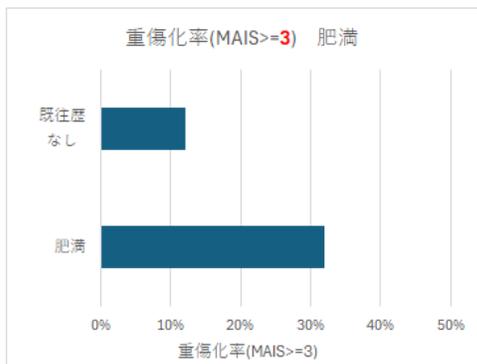
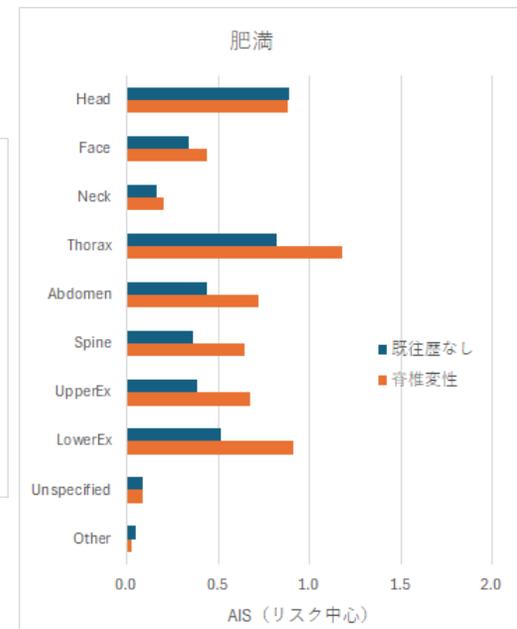
ISS



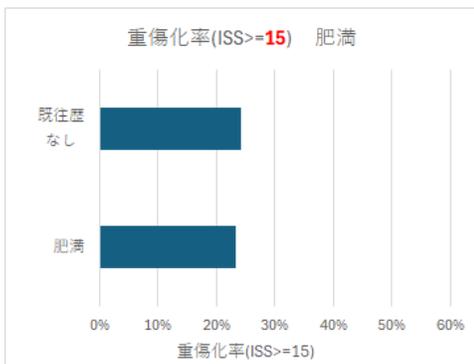
外傷の数



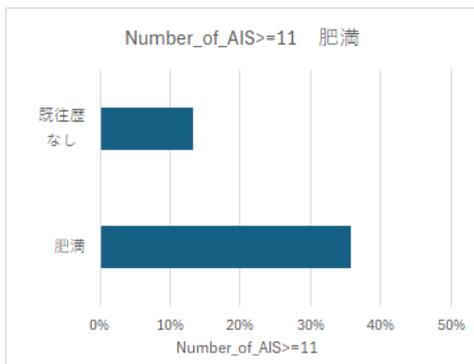
死亡に至る確率



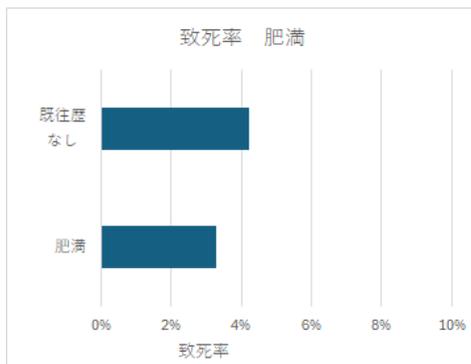
MAIS>=3の発生率



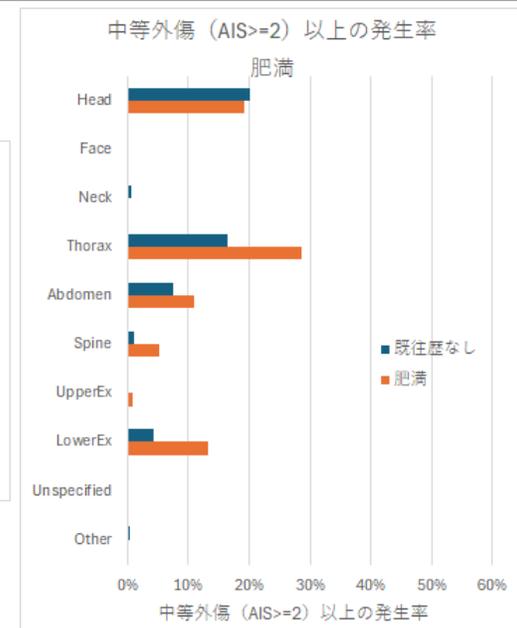
ISS>=15の発生率



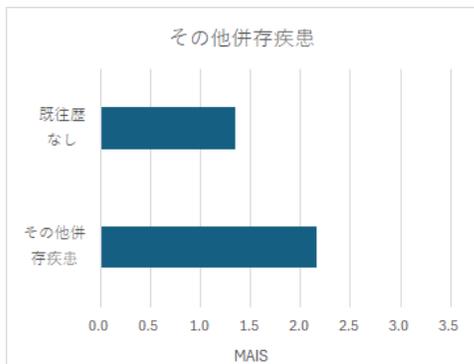
外傷の数>=11の発生率



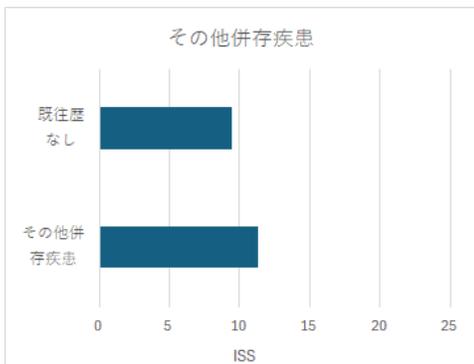
致死率



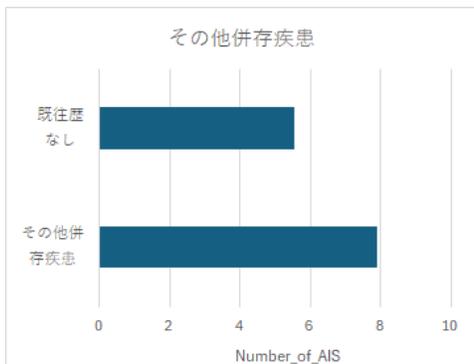
その他併存疾患



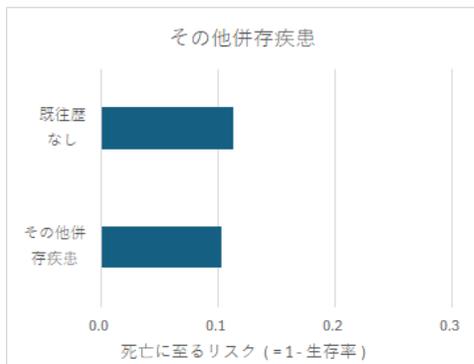
MAIS



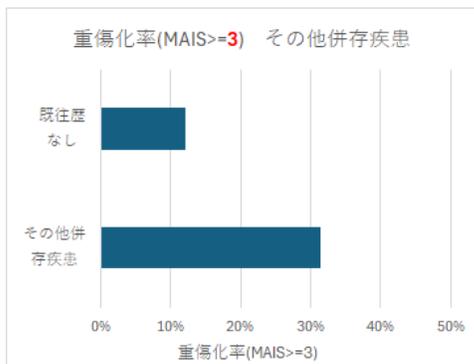
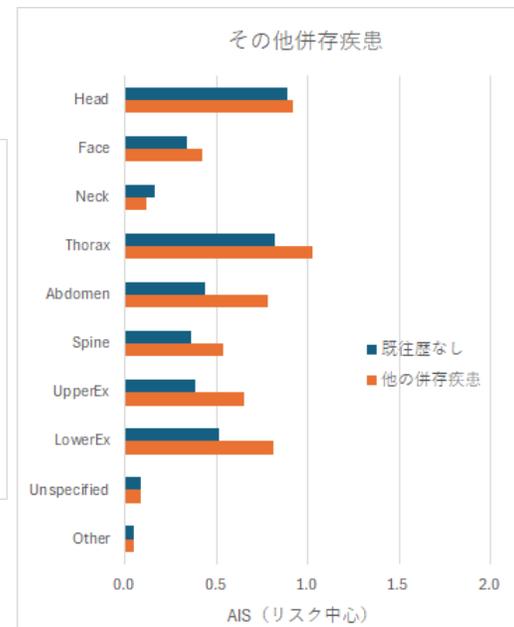
ISS



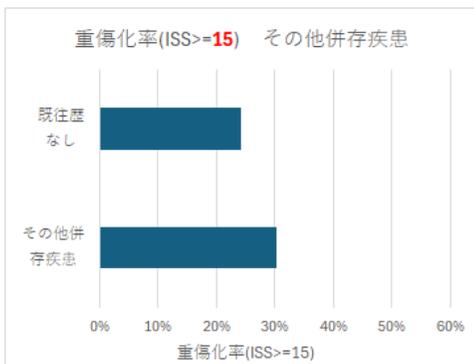
外傷の数



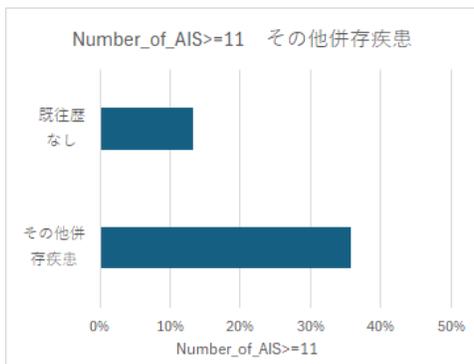
死亡に至る確率



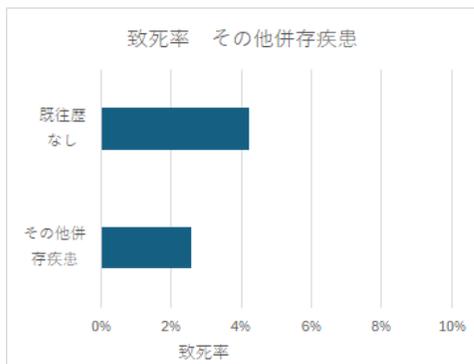
MAIS>=3の発生率



ISS>=15の発生率



外傷の数>=11の発生率



致死率

