~~IN~~-After CLASS CHALLENGE

|  |  |  |  |
| --- | --- | --- | --- |
|  | **No treatment** | **UH** | **LMWH** |
| **Risk of PE** | 10% | 1% | 1% |
| **Risk of major bleeding** | 0% | 4% | 2% |
| **Treatment costs** | $0 | $500 | $1,000 |
| **Costs of PE** | $10,000 | | |
| **Costs of major bleeding** | $15,000 | | |
| **Mortality of PE** | 20% | | |
| **Mortality of major bleeding** | 15% | | |

PE = pulmonary embolism

MB = major bleed

UH = unfractionated heparin (aka standard heparin)

LMWH = low molecular weight heparin

1. **Calculate the one-year costs for each of the three strategies**

|  |  |  |  |
| --- | --- | --- | --- |
| **Costs** | **No treatment** | **UH** | **LMWH** |
| **Treatment** | 0 | 500 | 1000 |
| **Risk of PE \* costs of PE** | 0.1\*10,000 = 1,000 | 0.01\*10,000 = 100 | 0.01\*10,000 = 100 |
| **Risk of MB \* costs of MB** | 0 | 0.04\*15,000 = 600 | 0.02\*15,000 = 300 |
| **Total** | 1,000 | 1,200 | 1,400 |

1. **Calculate the risk of death for each strategy**

|  |  |  |  |
| --- | --- | --- | --- |
| **Mortality** | **No tx** | **UH** | **LMWH** |
| **Risk of PE \* mortality of PE** | 0.1\*0.2 = 0.02 | 0.01\*0.2 = 0.002 | 0.01\*0.2 = 0.002 |
| **Risk of MB\*Mortality of MB** | 0 | 0.04\*0.15 = 0.006 | 0.02\*0.15 = 0.003 |
| **Total** | 0.02 | 0.008 | 0.005 |

1. **Calculate how much extra costs is required to avoid one death for**
   1. UH v. no treatment: (1200-1000)/(0.02-0.008) = $16,667
   2. LMWH v no treatment: (1400-1000)/(0.02-0.005) = $26,667
   3. LMWH v. UH: (1400-1200)/(0.008-0.005) = $66,667