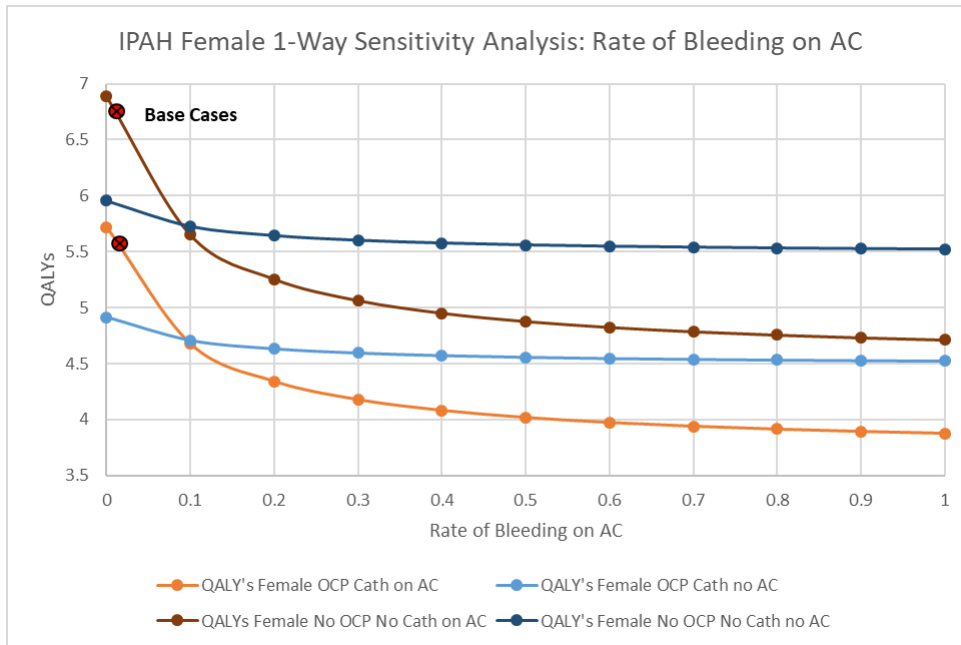
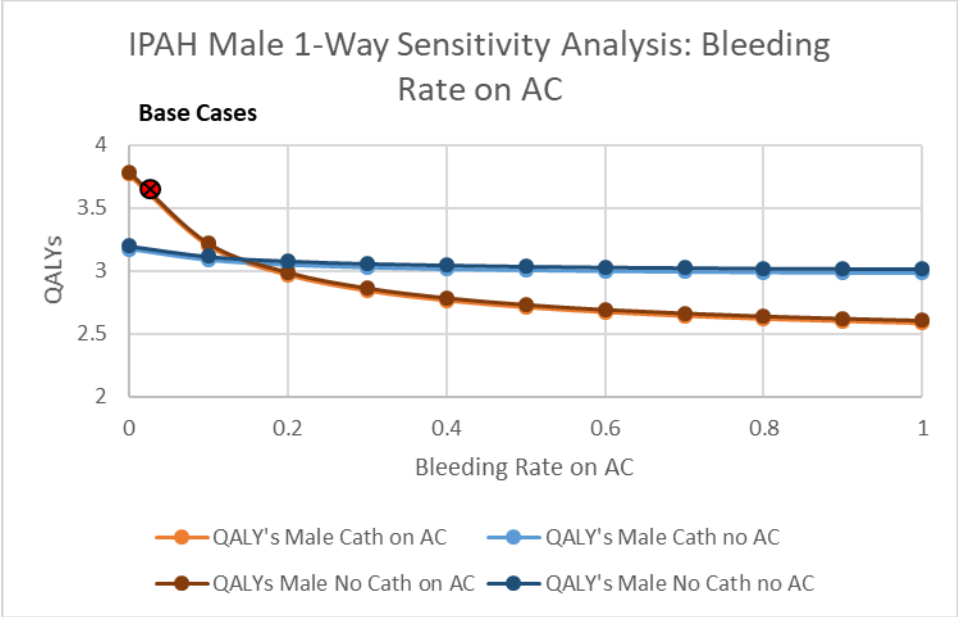


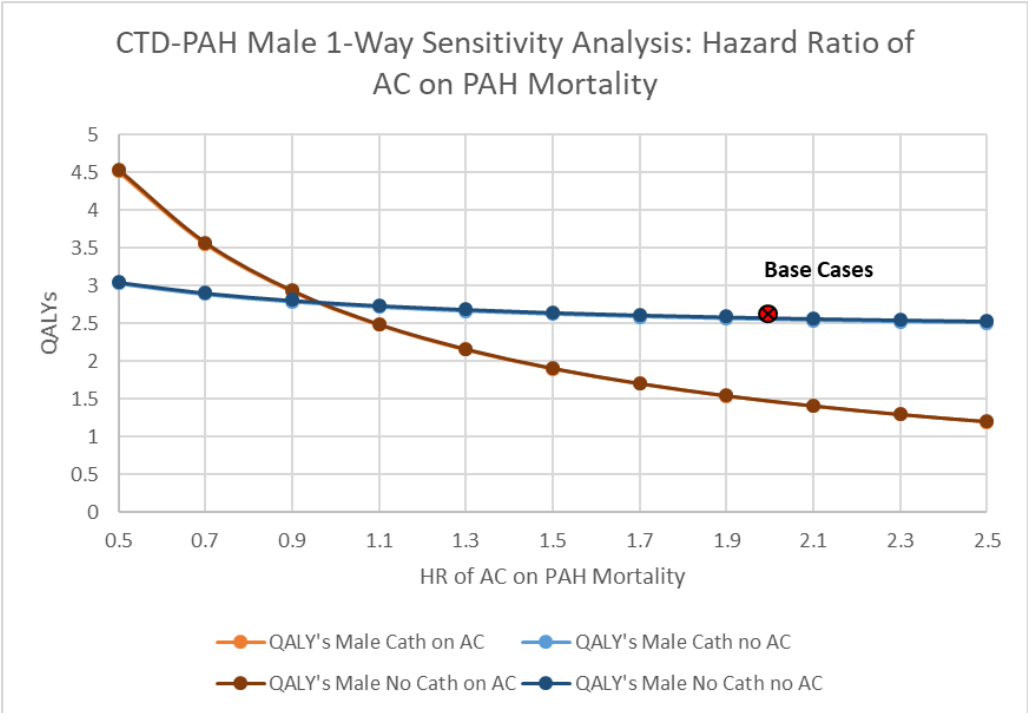
Abbreviations – AC = Anticoagulation, QALY = Quality-Adjusted Life Years, IPAH = Idiopathic Pulmonary Arterial Hypertension, OCP = Oral Contraceptive Pills  
**e-Figure 1 – Sensitivity Analysis on IPAH Males Quality of Life with AC**



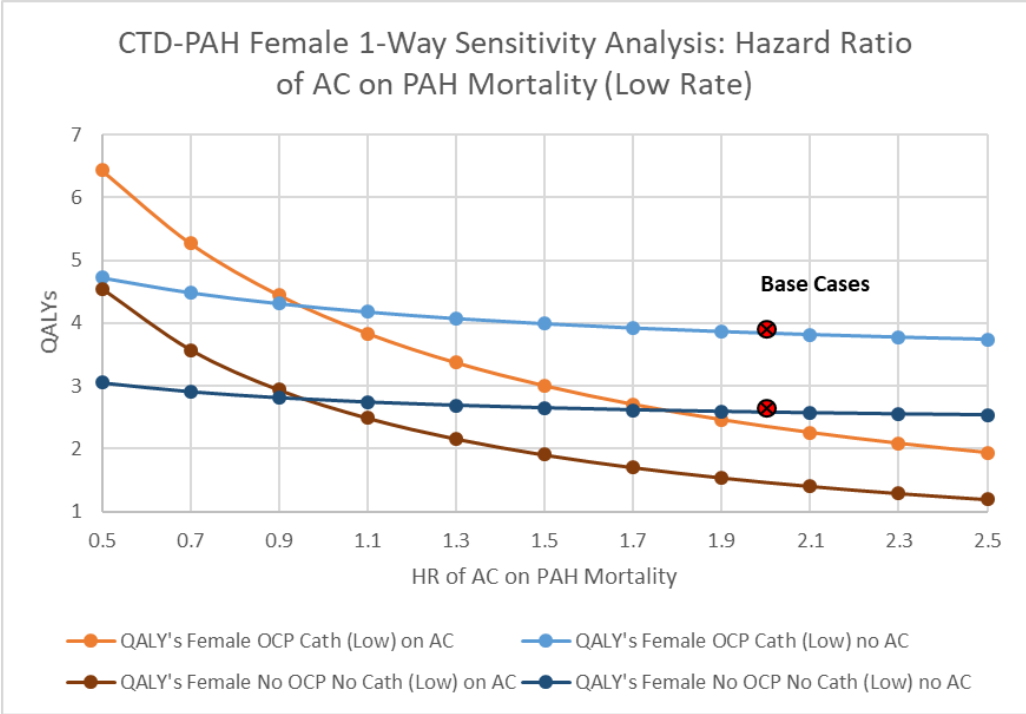
Abbreviations – AC = Anticoagulation, QALY = Quality-Adjusted Life Years, IPAH = Idiopathic Pulmonary Arterial Hypertension, OCP = Oral Contraceptive Pills  
**e-Figure 2 – Sensitivity Analysis on IPAH Females Rate of Bleeding on AC**



Abbreviations – AC = Anticoagulation, QALY = Quality-Adjusted Life Years, IPAH = Idiopathic Pulmonary Arterial Hypertension  
**e-Figure 3 – Sensitivity Analysis on IPAH Males Rate of Bleeding on AC**

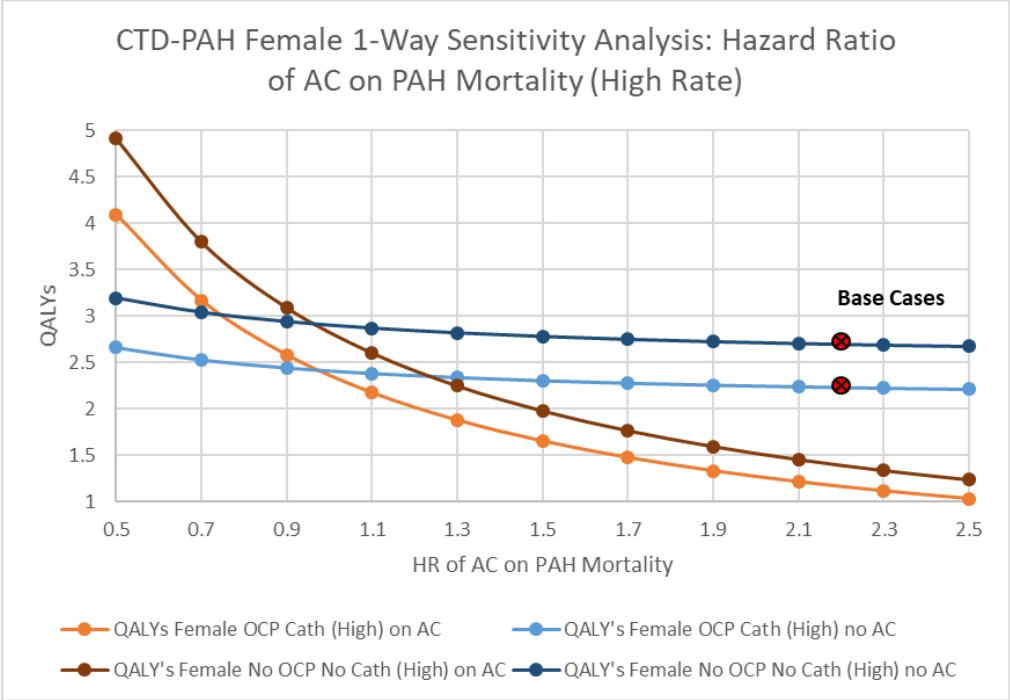


Abbreviations – AC = Anticoagulation, CTD-PAH = Connective-Tissue-Disease Associated Pulmonary Arterial Hypertension  
**e-Figure 4 – Sensitivity Analysis on CTD-PAH Males Hazard Ratio of AC on PAH Mortality**



Abbreviations – AC = Anticoagulation, CTD-PAH = Connective-Tissue-Disease Associated Pulmonary Arterial Hypertension, OCP = Oral Contraceptive Pills

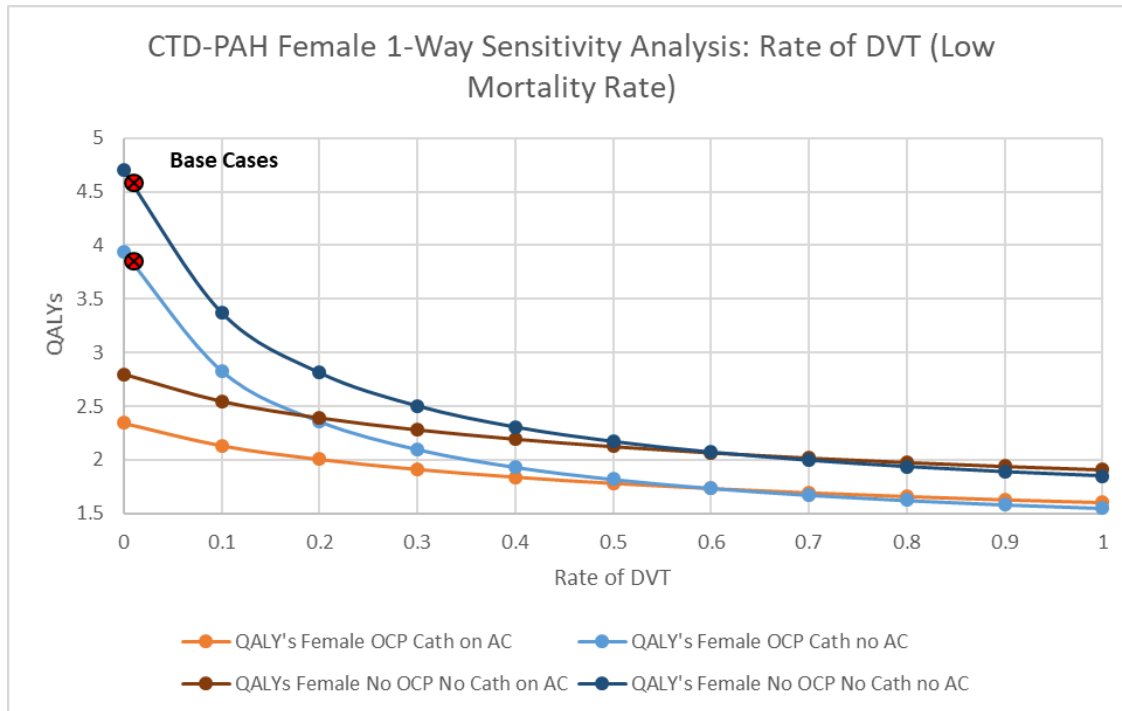
**e-Figure 5 – Sensitivity Analysis on CTD-PAH Females Hazard Ratio of AC on PAH Mortality (Low Mortality Rates)**



Abbreviations – AC = Anticoagulation, CTD-PAH = Connective-Tissue-Disease Associated Pulmonary Arterial Hypertension, OCP = Oral Contraceptive Pills

**e-Figure 6 – Sensitivity Analysis on CTD-PAH Females Hazard Ratio of AC on PAH**

**Mortality (High Mortality Rates)**



Abbreviations – AC = Anticoagulation, CTD-PAH = Connective-Tissue-Disease Associated Pulmonary Arterial Hypertension, DVT = Deep Vein Thrombosis, OCP = Oral Contraceptive Pills

**e-Figure 7 – Sensitivity Analysis on CTD-PAH (Low Mortality Rates) Annual Rate of DVT**

Table S1 – Base Case Analyses with DOAC therapy

Disease State Entering Markov Model	Anticoagulate (QALYs)	Do Not Anticoagulate (QALYs)
IPAH Male Cath	<b>3.61</b>	3.11
IPAH Male No Cath	<b>4.36</b>	3.79
IPAH Female No OCP No Cath	<b>6.53</b>	5.90
IPAH Female OCP Cath	<b>5.37</b>	4.75
CTD-PAH Male Cath (High Mortality)	0.78	<b>1.44</b>
CTD-PAH Male No Cath (High Mortality)	0.94	<b>1.75</b>
CTD-PAH Female No OCP No Cath (High Mortality)	1.51	<b>2.71</b>

CTD-PAH Female OCP Cath (High Mortality)	1.26	<b>2.20</b>
CTD-PAH Male Cath (Low Mortality)	1.45	<b>2.50</b>
CTD-PAH Male No Cath (Low Mortality)	1.74	<b>3.07</b>
CTD-PAH Female No OCP No Cath (Low Mortality)	2.80	<b>4.68</b>
CTD-PAH Female OCP Cath (Low Mortality)	2.32	<b>3.71</b>

Abbreviations – IPAH = Idiopathic Pulmonary Arterial Hypertension, CTD-PAH = Connective-Tissue-Disease associated Pulmonary Arterial Hypertension, DOAC = Direct Oral Anticoagulation therapy, AC = Anticoagulation with DOAC therapy, QALY = Quality-Adjusted Life Years, Cath = presence of central catheter, OCP = Use of oral contraceptive medications, High and Low Mortality = Annual survival estimates in CTD-PAH patients of 55% and 85% respectively

**BOLD** - Favored Strategy based on higher Utility

Model utilizes a quality-adjustment factor (Q=1) for DOAC therapy, with a modeled rate of bleeding of 2.13% annually, and a relative risk of venous thromboembolism while on anticoagulation of 0.47, and a hazard rate for stroke of 0.205 in men and 0.387 in women.

Table S2 – Base Case Analyses in PAH Patients with Multiple Medical Comorbidities

Disease State Entering Markov Model	Anticoagulate (QALYs)	Do Not Anticoagulate (QALYs)
IPAH Male Cath	<b>2.22</b>	1.94
IPAH Male No Cath	<b>2.70</b>	2.37
IPAH Female No OCP No Cath	<b>4.11</b>	3.75
IPAH Female OCP Cath	<b>3.33</b>	2.98
CTD-PAH Male Cath	0.79	<b>1.41</b>
CTD-PAH Male No Cath	0.95	<b>1.75</b>
CTD-PAH Female No OCP No Cath	1.54	<b>2.71</b>
CTD-PAH Female OCP Cath	1.27	<b>2.12</b>

Abbreviations – IPAH = Idiopathic Pulmonary Arterial Hypertension, CTD-PAH = Connective-Tissue-Disease associated Pulmonary Arterial Hypertension, AC = Anticoagulation with DOAC therapy, QALY = Quality-Adjusted Life Years, Cath = presence of central catheter, OCP = Use of oral contraceptive medications

**BOLD** - Favored Strategy based on higher Utility

Multiple medical comorbidities include hypertension, diabetes mellitus, and chronic obstructive pulmonary disease. Model utilizes an increased rate of mortality in PAH patients (3-year mortality rate of 38% in IPAH and 85% in CTD-PAH), increased risk of stroke following atrial fibrillation (4% annually in men, 6.7% annually in women), doubled rates of deep vein thrombosis, and increased bleeding on AC (5% annually).