**Organ:** Thyroid

**Photon Exposures**

*Personal Dose Equivalent ($H_P(10)$) to Organ Dose ($H_T$)*

| Photon Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <30 keV | **0.538** (0.140-0.818) | **0.000** (0.000-0.010) | **0.193** (0.032-0.368) | **0.087** (0.013-0.185) | ***0.000*** | ***0.818*** |
| 30 - 250 keV | **1.017** (0.818-1.042) | **0.298** (0.010-0.385) | **0.684** (0.368-0.757) | **0.453** (0.185-0.522) | ***0.010*** | ***1.042*** |
| >250 keV | **1.003** (0.906-1.066) | **0.684** (0.385-0.809) | **0.927** (0.757-0.961) | **0.740** (0.522-0.842) | ***0.385*** | ***1.066*** |

*Ambient Dose Equivalent ($H^*(10)$) to Organ Dose ($H_T$)*

| Photon Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <30 keV | **0.545** (0.158-0.827) | **0.000** (0.000-0.010) | **0.192** (0.036-0.372) | **0.089** (0.015-0.187) | ***0.000*** | ***0.827*** |
| 30 - 250 keV | **1.091** (0.827-1.135) | **0.321** (0.010-0.406) | **0.735** (0.372-0.799) | **0.487** (0.187-0.551) | ***0.010*** | ***1.135*** |
| >250 keV | **1.004** (0.915-1.089) | **0.683** (0.406-0.817) | **0.925** (0.799-0.967) | **0.739** (0.551-0.850) | ***0.406*** | ***1.089*** |

*Exposure (R) to Organ Dose ($H_T$)*

| Photon Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <30 keV | **0.473** (0.093-0.827) | **0.003** (0.000-0.010) | **0.183** (0.022-0.372) | **0.087** (0.009-0.187) | ***0.000*** | ***0.827*** |
| 30 - 250 keV | **1.440** (0.827-1.702) | **0.420** (0.010-0.475) | **0.965** (0.372-1.083) | **0.639** (0.187-0.718) | ***0.010*** | ***1.702*** |
| >250 keV | **0.972** (0.870-1.269) | **0.663** (0.472-0.776) | **0.894** (0.868-0.930) | **0.714** (0.637-0.808) | ***0.472*** | ***1.269*** |

*Kerma ($K_a$) to Organ Dose ($H_T$)*

| Photon Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <30 keV | **0.377** (0.001-0.910) | **0.001** (0.000-0.011) | **0.146** (0.000-0.409) | **0.068** (0.000-0.206) | ***0.000*** | ***0.910*** |
| 30 - 250 keV | **1.660** (0.910-1.938) | **0.483** (0.011-0.549) | **1.112** (0.409-1.234) | **0.735** (0.206-0.818) | ***0.011*** | ***1.938*** |
| >250 keV | **1.143** (1.007-1.477) | **0.777** (0.549-0.899) | **1.054** (1.019-1.082) | **0.841** (0.739-0.935) | ***0.549*** | ***1.477*** |

**Organ:** Uterus

**Photon Exposures**

*Personal Dose Equivalent ($H_P(10)$) to Organ Dose ($H_T$)*

| Photon Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <30 keV | **0.044** (0.000-0.195) | **0.012** (0.000-0.063) | **0.013** (0.000-0.068) | **0.009** (0.000-0.044) | ***0.000*** | ***0.195*** |
| 30 - 250 keV | **0.711** (0.195-0.762) | **0.546** (0.063-0.621) | **0.461** (0.068-0.530) | **0.343** (0.044-0.402) | ***0.044*** | ***0.762*** |
| >250 keV | **0.812** (0.754-0.820) | **0.757** (0.621-0.782) | **0.713** (0.530-0.778) | **0.628** (0.402-0.729) | ***0.402*** | ***0.820*** |

*Ambient Dose Equivalent ($H^*(10)$) to Organ Dose ($H_T$)*

| Photon Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <30 keV | **0.045** (0.000-0.197) | **0.013** (0.000-0.064) | **0.015** (0.000-0.069) | **0.009** (0.000-0.045) | ***0.000*** | ***0.197*** |
| 30 - 250 keV | **0.765** (0.197-0.834) | **0.588** (0.064-0.656) | **0.497** (0.069-0.559) | **0.369** (0.045-0.424) | ***0.045*** | ***0.834*** |
| >250 keV | **0.811** (0.784-0.817) | **0.758** (0.656-0.781) | **0.711** (0.559-0.785) | **0.627** (0.424-0.736) | ***0.424*** | ***0.817*** |

*Exposure (R) to Organ Dose ($H_T$)*

| Photon Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <30 keV | **0.061** (0.000-0.197) | **0.017** (0.000-0.064) | **0.019** (0.000-0.069) | **0.012** (0.000-0.045) | ***0.000*** | ***0.197*** |
| 30 - 250 keV | **1.011** (0.197-1.212) | **0.774** (0.064-0.913) | **0.653** (0.069-0.757) | **0.485** (0.045-0.553) | ***0.045*** | ***1.212*** |
| >250 keV | **0.786** (0.764-0.928) | **0.734** (0.724-0.764) | **0.688** (0.633-0.746) | **0.604** (0.485-0.700) | ***0.485*** | ***0.928*** |

*Kerma ($K_a$) to Organ Dose ($H_T$)*

| Photon Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <30 keV | **0.045** (0.000-0.217) | **0.010** (0.000-0.070) | **0.014** (0.000-0.076) | **0.009** (0.000-0.049) | ***0.000*** | ***0.217*** |
| 30 - 250 keV | **1.163** (0.217-1.381) | **0.890** (0.070-1.054) | **0.751** (0.076-0.874) | **0.558** (0.049-0.636) | ***0.049*** | ***1.381*** |
| >250 keV | **0.924** (0.885-1.079) | **0.863** (0.853-0.888) | **0.809** (0.739-0.864) | **0.712** (0.562-0.810) | ***0.562*** | ***1.079*** |

# APPENDIX A – NEUTRON DOSE CONVERSION FACTORS (DCF)

**Organ:** Bladder

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.214E-09** (6.40E-10 - 2.51E-9) | **9.388E-10** (2.50E-10 - 1.08E-9) | **9.704E-10** (2.75E-10 - 1.11E-9) | **6.945E-10** (2.30E-10 - 7.97E-10) | ***2.30E-10*** | ***2.51E-09*** |
| 10 - 100 keV | **5.175E-09** (2.51E-9 - 7.23E-9) | **2.133E-09** (1.08E-9 - 3.05E-9) | **2.286E-09** (1.11E-9 - 3.29E-9) | **1.779E-09** (7.97E-10 - 2.57E-9) | ***7.97E-10*** | ***7.23E-09*** |
| 0.1 - 2.0 Mev | **3.119E-08** (7.23E-9 - 4.47E-8) | **8.458E-09** (3.05E-9 - 1.42E-8) | **1.273E-08** (3.29E-9 - 1.98E-8) | **9.070E-09** (2.57E-9 - 1.46E-8) | ***2.57E-09*** | ***4.47E-08*** |
| 2.0 - 20.0 Mev | **5.462E-08** (4.47E-8 - 5.64E-8) | **3.377E-08** (1.42E-8 - 4.00E-8) | **3.502E-08** (1.98E-8 - 3.96E-8) | **2.853E-08** (1.46E-8 - 3.25E-8) | ***1.42E-08*** | ***5.64E-08*** |
| > 20.0 Mev | **4.607E-08** (4.20E-8 - 5.32E-8) | **5.276E-08** (4.00E-8 - 6.97E-8) | **4.925E-08** (3.96E-8 - 5.91E-8) | n/a | ***3.96E-08*** | ***6.97E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.633** (0.906-2.755) | **1.114** (0.361-1.161) | **1.153** (0.372-1.195) | **0.826** (0.311-0.852) | ***0.311*** | ***2.755*** |
| 10 - 100 keV | **1.291** (0.822-2.392) | **0.558** (0.346-1.030) | **0.575** (0.374-1.060) | **0.438** (0.292-0.759) | ***0.292*** | ***2.392*** |
| 0.1 - 2.0 Mev | **0.822** (0.661-1.065) | **0.229** (0.168-0.346) | **0.333** (0.258-0.471) | **0.243** (0.184-0.348) | ***0.168*** | ***1.065*** |
| 2.0 - 20.0 Mev | **1.170** (0.887-1.401) | **0.708** (0.338-0.813) | **0.740** (0.471-0.850) | **0.601** (0.348-0.685) | ***0.338*** | ***1.401*** |
| > 20.0 Mev | **1.488** (0.887-1.767) | **1.790** (0.666-2.789) | **1.653** (0.660-2.365) | n/a | ***0.660*** | ***2.789*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.301** (0.781-2.355) | **0.974** (0.305-0.992) | **1.007** (0.336-1.022) | **0.720** (0.281-0.733) | ***0.281*** | ***2.355*** |
| 10 - 100 keV | **1.268** (0.798-2.243) | **0.549** (0.336-0.966) | **0.570** (0.363-0.994) | **0.432** (0.283-0.712) | ***0.283*** | ***2.243*** |
| 0.1 - 2.0 Mev | **0.796** (0.626-1.012) | **0.216** (0.163-0.336) | **0.326** (0.247-0.447) | **0.234** (0.177-0.331) | ***0.163*** | ***1.012*** |
| 2.0 - 20.0 Mev | **1.105** (0.887-1.325) | **0.670** (0.321-0.740) | **0.698** (0.447-0.780) | **0.568** (0.331-0.629) | ***0.321*** | ***1.325*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Bone (Red Marrow)

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **9.868E-10** (3.05E-10 - 1.15E-9) | **1.568E-09** (5.70E-10 - 1.82E-9) | **9.450E-10** (3.10E-10 - 1.10E-9) | **6.618E-10** (2.40E-10 - 7.66E-10) | ***2.40E-10*** | ***1.82E-09*** |
| 10 - 100 keV | **2.676E-09** (1.15E-9 - 3.95E-9) | **4.282E-09** (1.82E-9 - 6.46E-9) | **2.506E-09** (1.10E-9 - 3.72E-9) | **1.914E-09** (7.66E-10 - 2.86E-9) | ***7.66E-10*** | ***6.46E-09*** |
| 0.1 - 2.0 Mev | **1.415E-08** (3.95E-9 - 2.22E-8) | **2.709E-08** (6.46E-9 - 3.90E-8) | **1.600E-08** (3.72E-9 - 2.41E-8) | **1.200E-08** (2.86E-9 - 1.79E-8) | ***2.86E-09*** | ***3.90E-08*** |
| 2.0 - 20.0 Mev | **3.587E-08** (2.22E-8 - 3.83E-8) | **4.567E-08** (3.90E-8 - 4.73E-8) | **3.504E-08** (2.41E-8 - 3.66E-8) | **2.897E-08** (1.79E-8 - 3.28E-8) | ***1.79E-08*** | ***4.73E-08*** |
| > 20.0 Mev | **4.183E-08** (3.74E-8 - 4.86E-8) | **4.025E-08** (3.89E-8 - 4.40E-8) | **3.999E-08** (3.59E-8 - 4.66E-8) | n/a | ***3.59E-08*** | ***4.86E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.167** (0.422-1.209) | **1.861** (0.759-1.930) | **1.113** (0.443-1.161) | **0.786** (0.335-0.811) | ***0.335*** | ***1.930*** |
| 10 - 100 keV | **0.659** (0.448-1.091) | **1.042** (0.735-1.729) | **0.615** (0.423-1.048) | **0.455** (0.324-0.729) | ***0.324*** | ***1.729*** |
| 0.1 - 2.0 Mev | **0.375** (0.279-0.528) | **0.716** (0.585-0.929) | **0.422** (0.336-0.574) | **0.316** (0.253-0.425) | ***0.253*** | ***0.929*** |
| 2.0 - 20.0 Mev | **0.761** (0.528-0.891) | **0.980** (0.733-1.179) | **0.745** (0.574-0.872) | **0.611** (0.425-0.682) | ***0.425*** | ***1.179*** |
| > 20.0 Mev | **1.395** (0.633-1.942) | **1.320** (0.733-1.700) | **1.334** (0.606-1.863) | n/a | ***0.606*** | ***1.942*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.023** (0.372-1.033) | **1.635** (0.696-1.650) | **0.980** (0.379-0.992) | **0.688** (0.293-0.693) | ***0.293*** | ***1.650*** |
| 10 - 100 keV | **0.651** (0.436-1.022) | **1.028** (0.713-1.621) | **0.607** (0.411-0.983) | **0.452** (0.315-0.683) | ***0.315*** | ***1.621*** |
| 0.1 - 2.0 Mev | **0.361** (0.268-0.502) | **0.690** (0.554-0.883) | **0.407** (0.318-0.545) | **0.305** (0.240-0.404) | ***0.240*** | ***0.883*** |
| 2.0 - 20.0 Mev | **0.720** (0.502-0.825) | **0.927** (0.733-1.125) | **0.705** (0.545-0.814) | **0.578** (0.404-0.629) | ***0.404*** | ***1.125*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Bone (Surface)

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.045E-09** (3.85E-10 - 1.21E-9) | **1.245E-09** (4.70E-10 - 1.43E-9) | **8.755E-10** (3.35E-10 - 1.02E-9) | **6.340E-10** (2.70E-10 - 7.47E-10) | ***2.70E-10*** | ***1.43E-09*** |
| 10 - 100 keV | **2.671E-09** (1.21E-9 - 4.03E-9) | **3.354E-09** (1.43E-9 - 5.07E-9) | **2.400E-09** (1.02E-9 - 3.66E-9) | **1.834E-09** (7.47E-10 - 2.81E-9) | ***7.47E-10*** | ***5.07E-09*** |
| 0.1 - 2.0 Mev | **1.696E-08** (4.03E-9 - 2.41E-8) | **2.056E-08** (5.07E-9 - 2.88E-8) | **1.633E-08** (3.66E-9 - 2.34E-8) | **1.301E-08** (2.81E-9 - 1.87E-8) | ***2.81E-09*** | ***2.88E-08*** |
| 2.0 - 20.0 Mev | **3.364E-08** (2.41E-8 - 3.62E-8) | **3.688E-08** (2.88E-8 - 3.85E-8) | **3.214E-08** (2.34E-8 - 3.41E-8) | **2.765E-08** (1.87E-8 - 3.08E-8) | ***1.87E-08*** | ***3.85E-08*** |
| > 20.0 Mev | **4.179E-08** (3.62E-8 - 4.84E-8) | **3.990E-08** (3.82E-8 - 4.21E-8) | **3.996E-08** (3.41E-8 - 4.62E-8) | n/a | ***3.41E-08*** | ***4.84E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.239** (0.519-1.292) | **1.479** (0.632-1.525) | **1.038** (0.472-1.072) | **0.752** (0.340-0.776) | ***0.340*** | ***1.525*** |
| 10 - 100 keV | **0.666** (0.457-1.151) | **0.817** (0.576-1.362) | **0.586** (0.416-0.970) | **0.441** (0.319-0.711) | ***0.319*** | ***1.362*** |
| 0.1 - 2.0 Mev | **0.451** (0.373-0.574) | **0.547** (0.455-0.685) | **0.433** (0.351-0.557) | **0.343** (0.273-0.446) | ***0.273*** | ***0.685*** |
| 2.0 - 20.0 Mev | **0.714** (0.574-0.818) | **0.785** (0.641-0.903) | **0.682** (0.557-0.787) | **0.586** (0.446-0.680) | ***0.446*** | ***0.903*** |
| > 20.0 Mev | **1.394** (0.603-1.934) | **1.315** (0.641-1.686) | **1.335** (0.569-1.849) | n/a | ***0.569*** | ***1.934*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.083** (0.470-1.104) | **1.292** (0.574-1.312) | **0.908** (0.409-0.916) | **0.657** (0.311-0.667) | ***0.311*** | ***1.312*** |
| 10 - 100 keV | **0.656** (0.444-1.079) | **0.807** (0.559-1.277) | **0.577** (0.404-0.909) | **0.435** (0.310-0.667) | ***0.310*** | ***1.277*** |
| 0.1 - 2.0 Mev | **0.436** (0.353-0.545) | **0.529** (0.433-0.651) | **0.417** (0.332-0.530) | **0.332** (0.259-0.424) | ***0.259*** | ***0.651*** |
| 2.0 - 20.0 Mev | **0.675** (0.545-0.758) | **0.743** (0.641-0.848) | **0.646** (0.530-0.731) | **0.554** (0.424-0.629) | ***0.424*** | ***0.848*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Breast (Female)

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.366E-09** (8.40E-10 - 1.66E-9) | **4.783E-10** (1.40E-10 - 5.50E-10) | **6.798E-10** (3.45E-10 - 8.22E-10) | **5.023E-10** (2.95E-10 - 6.14E-10) | ***1.40E-10*** | ***1.66E-09*** |
| 10 - 100 keV | **4.905E-09** (1.66E-9 - 8.28E-9) | **1.073E-09** (5.50E-10 - 1.52E-9) | **2.362E-09** (8.22E-10 - 3.85E-9) | **2.099E-09** (6.14E-10 - 3.66E-9) | ***5.50E-10*** | ***8.28E-09*** |
| 0.1 - 2.0 Mev | **4.469E-08** (8.28E-9 - 5.71E-8) | **6.863E-09** (1.52E-9 - 1.34E-8) | **2.323E-08** (3.85E-9 - 3.09E-8) | **2.143E-08** (3.66E-9 - 3.00E-8) | ***1.52E-09*** | ***5.71E-08*** |
| 2.0 - 20.0 Mev | **5.514E-08** (5.08E-8 - 5.77E-8) | **3.134E-08** (1.34E-8 - 3.73E-8) | **3.619E-08** (3.09E-8 - 3.81E-8) | **3.668E-08** (3.00E-8 - 3.93E-8) | ***1.34E-08*** | ***5.77E-08*** |
| > 20.0 Mev | **3.153E-08** (2.48E-8 - 5.08E-8) | **4.586E-08** (3.73E-8 - 5.31E-8) | **2.902E-08** (2.73E-8 - 3.64E-8) | n/a | ***2.48E-08*** | ***5.31E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.612** (0.938-1.676) | **0.569** (0.172-0.591) | **0.803** (0.419-0.838) | **0.595** (0.333-0.611) | ***0.172*** | ***1.676*** |
| 10 - 100 keV | **1.117** (0.941-1.585) | **0.276** (0.173-0.524) | **0.548** (0.437-0.783) | **0.472** (0.416-0.584) | ***0.173*** | ***1.585*** |
| 0.1 - 2.0 Mev | **1.180** (0.940-1.358) | **0.180** (0.106-0.318) | **0.611** (0.437-0.735) | **0.563** (0.414-0.714) | ***0.106*** | ***1.358*** |
| 2.0 - 20.0 Mev | **1.185** (0.846-1.412) | **0.657** (0.318-0.758) | **0.789** (0.607-0.884) | **0.779** (0.642-0.878) | ***0.318*** | ***1.412*** |
| > 20.0 Mev | **0.982** (0.846-1.050) | **1.534** (0.622-2.122) | **0.928** (0.607-1.223) | n/a | ***0.607*** | ***2.122*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.411** (0.925-1.486) | **0.498** (0.155-0.505) | **0.709** (0.408-0.734) | **0.525** (0.320-0.548) | ***0.155*** | ***1.486*** |
| 10 - 100 keV | **1.111** (0.914-1.486) | **0.271** (0.168-0.491) | **0.545** (0.425-0.734) | **0.471** (0.404-0.548) | ***0.168*** | ***1.486*** |
| 0.1 - 2.0 Mev | **1.145** (0.892-1.291) | **0.173** (0.101-0.302) | **0.592** (0.420-0.698) | **0.542** (0.393-0.679) | ***0.101*** | ***1.291*** |
| 2.0 - 20.0 Mev | **1.121** (0.846-1.355) | **0.622** (0.302-0.690) | **0.729** (0.607-0.817) | **0.737** (0.642-0.839) | ***0.302*** | ***1.355*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Colon

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.697E-09** (4.45E-10 - 1.94E-9) | **1.264E-09** (3.85E-10 - 1.46E-9) | **9.216E-10** (2.65E-10 - 1.05E-9) | **7.074E-10** (2.00E-10 - 8.10E-10) | ***2.00E-10*** | ***1.94E-09*** |
| 10 - 100 keV | **3.688E-09** (1.94E-9 - 5.13E-9) | **2.988E-09** (1.46E-9 - 4.28E-9) | **2.297E-09** (1.05E-9 - 3.10E-9) | **1.717E-09** (8.10E-10 - 2.44E-9) | ***8.10E-10*** | ***5.13E-09*** |
| 0.1 - 2.0 Mev | **1.926E-08** (5.13E-9 - 3.02E-8) | **1.324E-08** (4.28E-9 - 2.18E-8) | **1.086E-08** (3.10E-9 - 1.80E-8) | **7.476E-09** (2.44E-9 - 1.24E-8) | ***2.44E-09*** | ***3.02E-08*** |
| 2.0 - 20.0 Mev | **4.539E-08** (3.02E-8 - 4.78E-8) | **3.879E-08** (2.18E-8 - 4.44E-8) | **3.307E-08** (1.80E-8 - 3.79E-8) | **2.723E-08** (1.24E-8 - 3.25E-8) | ***1.24E-08*** | ***4.78E-08*** |
| > 20.0 Mev | **4.888E-08** (4.78E-8 - 4.94E-8) | **5.055E-08** (4.44E-8 - 5.36E-8) | **4.593E-08** (3.79E-8 - 5.66E-8) | n/a | ***3.79E-08*** | ***5.66E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.012** (0.589-2.102) | **1.500** (0.533-1.559) | **1.090** (0.367-1.134) | **0.837** (0.278-0.872) | ***0.278*** | ***2.102*** |
| 10 - 100 keV | **0.961** (0.583-1.850) | **0.767** (0.487-1.386) | **0.554** (0.352-1.000) | **0.431** (0.277-0.771) | ***0.277*** | ***1.850*** |
| 0.1 - 2.0 Mev | **0.504** (0.375-0.718) | **0.355** (0.262-0.520) | **0.283** (0.208-0.429) | **0.200** (0.152-0.295) | ***0.152*** | ***0.718*** |
| 2.0 - 20.0 Mev | **0.967** (0.718-1.127) | **0.818** (0.520-0.925) | **0.698** (0.429-0.791) | **0.573** (0.295-0.668) | ***0.295*** | ***1.127*** |
| > 20.0 Mev | **1.606** (0.797-2.016) | **1.673** (0.740-2.154) | **1.543** (0.632-2.264) | n/a | ***0.632*** | ***2.264*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.758** (0.532-1.797) | **1.310** (0.470-1.333) | **0.955** (0.324-0.978) | **0.734** (0.244-0.746) | ***0.244*** | ***1.797*** |
| 10 - 100 keV | **0.947** (0.567-1.734) | **0.753** (0.473-1.299) | **0.546** (0.342-0.938) | **0.425** (0.269-0.723) | ***0.269*** | ***1.734*** |
| 0.1 - 2.0 Mev | **0.490** (0.361-0.683) | **0.338** (0.254-0.494) | **0.274** (0.200-0.408) | **0.193** (0.146-0.280) | ***0.146*** | ***0.683*** |
| 2.0 - 20.0 Mev | **0.912** (0.683-1.049) | **0.775** (0.494-0.851) | **0.659** (0.408-0.725) | **0.541** (0.280-0.612) | ***0.280*** | ***1.049*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Esophagus

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.328E-09** (2.50E-10 - 1.55E-9) | **1.681E-09** (4.75E-10 - 1.90E-9) | **1.010E-09** (2.65E-10 - 1.16E-9) | **7.175E-10** (2.00E-10 - 8.35E-10) | ***2.00E-10*** | ***1.90E-09*** |
| 10 - 100 keV | **3.045E-09** (1.55E-9 - 4.22E-9) | **3.742E-09** (1.90E-9 - 5.21E-9) | **2.371E-09** (1.16E-9 - 3.26E-9) | **1.683E-09** (8.35E-10 - 2.39E-9) | ***8.35E-10*** | ***5.21E-09*** |
| 0.1 - 2.0 Mev | **1.612E-08** (4.22E-9 - 2.77E-8) | **1.661E-08** (5.21E-9 - 2.46E-8) | **1.068E-08** (3.26E-9 - 1.82E-8) | **7.644E-09** (2.39E-9 - 1.32E-8) | ***2.39E-09*** | ***2.77E-08*** |
| 2.0 - 20.0 Mev | **4.303E-08** (2.77E-8 - 4.52E-8) | **4.062E-08** (2.46E-8 - 4.48E-8) | **3.679E-08** (1.82E-8 - 4.08E-8) | **2.863E-08** (1.32E-8 - 3.32E-8) | ***1.32E-08*** | ***4.52E-08*** |
| > 20.0 Mev | **4.874E-08** (4.18E-8 - 5.96E-8) | **4.707E-08** (4.37E-8 - 5.31E-8) | **4.712E-08** (4.08E-8 - 5.61E-8) | n/a | ***4.08E-08*** | ***5.96E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.575** (0.379-1.656) | **1.996** (0.613-2.075) | **1.201** (0.356-1.250) | **0.851** (0.264-0.886) | ***0.264*** | ***2.075*** |
| 10 - 100 keV | **0.787** (0.479-1.476) | **0.949** (0.592-1.814) | **0.585** (0.370-1.109) | **0.425** (0.272-0.795) | ***0.272*** | ***1.814*** |
| 0.1 - 2.0 Mev | **0.427** (0.277-0.661) | **0.445** (0.349-0.592) | **0.283** (0.197-0.434) | **0.204** (0.154-0.313) | ***0.154*** | ***0.661*** |
| 2.0 - 20.0 Mev | **0.919** (0.661-1.101) | **0.859** (0.586-0.986) | **0.785** (0.434-0.910) | **0.601** (0.313-0.670) | ***0.313*** | ***1.101*** |
| > 20.0 Mev | **1.634** (0.718-2.385) | **1.560** (0.746-2.122) | **1.572** (0.679-2.243) | n/a | ***0.679*** | ***2.385*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.378** (0.305-1.415) | **1.746** (0.567-1.786) | **1.047** (0.321-1.069) | **0.750** (0.241-0.757) | ***0.241*** | ***1.786*** |
| 10 - 100 keV | **0.775** (0.466-1.384) | **0.937** (0.575-1.700) | **0.591** (0.359-1.039) | **0.421** (0.264-0.746) | ***0.264*** | ***1.700*** |
| 0.1 - 2.0 Mev | **0.412** (0.267-0.628) | **0.430** (0.336-0.575) | **0.271** (0.190-0.412) | **0.196** (0.148-0.298) | ***0.148*** | ***0.628*** |
| 2.0 - 20.0 Mev | **0.869** (0.628-1.037) | **0.812** (0.557-0.907) | **0.735** (0.412-0.837) | **0.569** (0.298-0.619) | ***0.298*** | ***1.037*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Lung

**Nuetrons Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.283E-09** (3.85E-10 - 1.46E-9) | **1.381E-09** (4.05E-10 - 1.58E-9) | **9.128E-10** (2.90E-10 - 1.04E-9) | **6.722E-10** (2.35E-10 - 7.72E-10) | ***2.35E-10*** | ***1.58E-09*** |
| 10 - 100 keV | **2.943E-09** (1.46E-9 - 4.20E-9) | **3.349E-09** (1.58E-9 - 4.81E-9) | **2.172E-09** (1.04E-9 - 3.19E-9) | **1.650E-09** (7.72E-10 - 2.42E-9) | ***7.72E-10*** | ***4.81E-09*** |
| 0.1 - 2.0 Mev | **2.218E-08** (4.20E-9 - 3.42E-8) | **2.669E-08** (4.81E-9 - 4.09E-8) | **1.648E-08** (3.19E-9 - 2.60E-8) | **1.196E-08** (2.42E-9 - 1.99E-8) | ***2.42E-09*** | ***4.09E-08*** |
| 2.0 - 20.0 Mev | **4.709E-08** (3.42E-8 - 4.87E-8) | **5.132E-08** (4.09E-8 - 5.26E-8) | **3.974E-08** (2.60E-8 - 4.20E-8) | **3.282E-08** (1.99E-8 - 3.63E-8) | ***1.99E-08*** | ***5.26E-08*** |
| > 20.0 Mev | **4.563E-08** (4.54E-8 - 4.77E-8) | **4.487E-08** (4.32E-8 - 5.06E-8) | **4.474E-08** (4.18E-8 - 4.91E-8) | n/a | ***4.18E-08*** | ***5.06E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.523** (0.524-1.587) | **1.646** (0.583-1.711) | **1.070** (0.400-1.120) | **0.795** (0.297-0.824) | ***0.297*** | ***1.711*** |
| 10 - 100 keV | **0.751** (0.478-1.392) | **0.820** (0.547-1.506) | **0.541** (0.363-0.994) | **0.410** (0.275-0.735) | ***0.275*** | ***1.506*** |
| 0.1 - 2.0 Mev | **0.579** (0.405-0.813) | **0.699** (0.496-0.974) | **0.429** (0.296-0.619) | **0.310** (0.203-0.475) | ***0.203*** | ***0.974*** |
| 2.0 - 20.0 Mev | **1.004** (0.794-1.183) | **1.097** (0.844-1.310) | **0.845** (0.619-0.984) | **0.694** (0.475-0.787) | ***0.475*** | ***1.310*** |
| > 20.0 Mev | **1.492** (0.794-1.858) | **1.453** (0.844-1.771) | **1.481** (0.700-1.963) | n/a | ***0.700*** | ***1.963*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.332** (0.470-1.358) | **1.436** (0.495-1.462) | **0.847** (0.354-0.966) | **0.697** (0.276-0.708) | ***0.276*** | ***1.462*** |
| 10 - 100 keV | **0.737** (0.464-1.305) | **0.802** (0.531-1.412) | **0.533** (0.352-0.932) | **0.406** (0.267-0.689) | ***0.267*** | ***1.412*** |
| 0.1 - 2.0 Mev | **0.557** (0.383-0.773) | **0.671** (0.470-0.926) | **0.414** (0.280-0.588) | **0.300** (0.192-0.451) | ***0.192*** | ***0.926*** |
| 2.0 - 20.0 Mev | **0.950** (0.773-1.115) | **1.040** (0.844-1.238) | **0.798** (0.588-0.916) | **0.656** (0.451-0.738) | ***0.451*** | ***1.238*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Gonads (female - ovaries)

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.610E-09** (3.75E-10 - 1.86E-9) | **1.492E-09** (4.00E-10 - 1.71E-9) | **9.845E-10** (2.50E-10 - 1.13E-9) | **6.959E-10** (1.90E-10 - 8.10E-10) | ***1.90E-10*** | ***1.86E-09*** |
| 10 - 100 keV | **3.702E-09** (1.86E-9 - 5.08E-9) | **3.224E-09** (1.71E-9 - 4.97E-9) | **2.425E-09** (1.13E-9 - 3.43E-9) | **1.756E-09** (8.10E-10 - 2.49E-9) | ***8.10E-10*** | ***5.08E-09*** |
| 0.1 - 2.0 Mev | **1.659E-08** (5.08E-9 - 2.69E-8) | **1.755E-08** (4.97E-9 - 2.72E-8) | **1.026E-08** (3.43E-9 - 1.87E-8) | **6.955E-09** (2.49E-9 - 1.18E-8) | ***2.49E-09*** | ***2.72E-08*** |
| 2.0 - 20.0 Mev | **4.500E-08** (2.69E-8 - 4.79E-8) | **4.564E-08** (2.72E-8 - 5.07E-8) | **3.594E-08** (1.87E-8 - 3.97E-8) | **2.873E-08** (1.18E-8 - 3.27E-8) | ***1.18E-08*** | ***5.07E-08*** |
| > 20.0 Mev | **5.053E-08** (4.55E-8 - 5.96E-8) | **4.746E-08** (4.65E-8 - 5.07E-8) | **5.011E-08** (3.97E-8 - 5.71E-8) | n/a | ***3.97E-08*** | ***5.96E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.910** (0.556-1.999) | **1.775** (0.528-1.841) | **1.168** (0.379-1.209) | **0.825** (0.239-0.859) | ***0.239*** | ***1.999*** |
| 10 - 100 keV | **0.950** (0.578-1.771) | **0.886** (0.565-1.627) | **0.606** (0.390-1.072) | **0.440** (0.283-0.771) | ***0.283*** | ***1.771*** |
| 0.1 - 2.0 Mev | **0.439** (0.310-0.640) | **0.437** (0.321-0.648) | **0.277** (0.189-0.446) | **0.187** (0.143-0.283) | ***0.143*** | ***0.648*** |
| 2.0 - 20.0 Mev | **0.955** (0.640-1.127) | **0.966** (0.648-1.115) | **0.758** (0.446-0.887) | **0.605** (0.280-0.707) | ***0.280*** | ***1.127*** |
| > 20.0 Mev | **1.684** (0.784-2.385) | **1.549** (0.845-1.902) | **1.677** (0.661-2.284) | n/a | ***0.661*** | ***2.385*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.670** (0.458-1.709) | **1.549** (0.476-1.574) | **1.020** (0.305-1.036) | **0.727** (0.216-0.734) | ***0.216*** | ***1.709*** |
| 10 - 100 keV | **0.935** (0.561-1.661) | **0.875** (0.549-1.525) | **0.599** (0.379-1.005) | **0.436** (0.274-0.723) | ***0.274*** | ***1.661*** |
| 0.1 - 2.0 Mev | **0.424** (0.298-0.608) | **0.423** (0.309-0.616) | **0.265** (0.184-0.424) | **0.181** (0.138-0.274) | ***0.138*** | ***0.616*** |
| 2.0 - 20.0 Mev | **0.903** (0.608-1.042) | **0.913** (0.616-1.040) | **0.717** (0.424-0.820) | **0.571** (0.266-0.649) | ***0.266*** | ***1.042*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Gonads (male - testes)

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.964E-09** (1.00E-9 - 2.33E-9) | **6.421E-10** (1.80E-10 - 7.28E-10) | **7.823E-10** (3.40E-10 - 9.17E-10) | **6.032E-10** (3.25E-10 - 7.09E-10) | ***1.80E-10*** | ***2.33E-09*** |
| 10 - 100 keV | **6.309E-09** (2.33E-9 - 1.04E-8) | **1.448E-09** (7.28E-10 - 2.00E-9) | **2.300E-09** (9.17E-10 - 3.61E-9) | **1.932E-09** (7.09E-10 - 3.16E-9) | ***7.09E-10*** | ***1.04E-08*** |
| 0.1 - 2.0 Mev | **5.070E-08** (1.04E-8 - 6.36E-8) | **6.101E-09** (2.00E-9 - 1.12E-8) | **1.845E-08** (3.61E-9 - 2.65E-8) | **1.739E-08** (3.16E-9 - 2.45E-8) | ***2.00E-09*** | ***6.36E-08*** |
| 2.0 - 20.0 Mev | **6.001E-08** (5.43E-8 - 6.39E-8) | **3.333E-08** (1.12E-8 - 4.06E-8) | **3.626E-08** (2.65E-8 - 3.90E-8) | **3.320E-08** (2.45E-8 - 3.71E-8) | ***1.12E-08*** | ***6.39E-08*** |
| > 20.0 Mev | **3.278E-08** (2.78E-8 - 5.43E-8) | **5.090E-08** (4.06E-8 - 6.42E-8) | **4.318E-08** (3.79E-8 - 5.15E-8) | n/a | ***2.78E-08*** | ***6.42E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.311** (1.283-2.411) | **0.757** (0.259-0.790) | **0.915** (0.458-0.955) | **0.711** (0.382-0.735) | ***0.259*** | ***2.411*** |
| 10 - 100 keV | **1.478** (1.181-2.223) | **0.373** (0.228-0.693) | **0.556** (0.410-0.874) | **0.450** (0.359-0.675) | ***0.228*** | ***2.223*** |
| 0.1 - 2.0 Mev | **1.349** (1.147-1.515) | **0.163** (0.113-0.265) | **0.483** (0.378-0.632) | **0.456** (0.348-0.582) | ***0.113*** | ***1.515*** |
| 2.0 - 20.0 Mev | **1.293** (0.906-1.550) | **0.695** (0.265-0.791) | **0.772** (0.632-0.884) | **0.702** (0.582-0.777) | ***0.265*** | ***1.550*** |
| > 20.0 Mev | **1.030** (0.906-1.135) | **1.718** (0.677-2.567) | **1.442** (0.650-2.062) | n/a | ***0.650*** | ***2.567*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.034** (1.206-2.084) | **0.666** (0.220-0.679) | **0.808** (0.415-0.819) | **0.624** (0.355-0.633) | ***0.220*** | ***2.084*** |
| 10 - 100 keV | **1.466** (1.147-2.084) | **0.363** (0.221-0.650) | **0.550** (0.398-0.819) | **0.448** (0.349-0.633) | ***0.221*** | ***2.084*** |
| 0.1 - 2.0 Mev | **1.307** (1.089-1.440) | **0.152** (0.110-0.252) | **0.470** (0.357-0.600) | **0.440** (0.330-0.553) | ***0.110*** | ***1.440*** |
| 2.0 - 20.0 Mev | **1.222** (0.906-1.490) | **0.658** (0.252-0.721) | **0.729** (0.600-0.825) | **0.664** (0.553-0.723) | ***0.252*** | ***1.490*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Liver

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.715E-09** (4.90E-10 - 1.95E-9) | **1.294E-09** (3.50E-10 - 1.48E-9) | **1.079E-09** (3.05E-10 - 1.24E-9) | **7.280E-10** (2.30E-10 - 8.35E-10) | ***2.30E-10*** | ***1.95E-09*** |
| 10 - 100 keV | **3.960E-09** (1.95E-9 - 5.63E-9) | **2.869E-09** (1.48E-9 - 4.23E-9) | **2.511E-09** (1.24E-9 - 3.59E-9) | **1.826E-09** (8.35E-10 - 2.63E-9) | ***8.35E-10*** | ***5.63E-09*** |
| 0.1 - 2.0 Mev | **2.520E-08** (5.63E-9 - 3.71E-8) | **1.617E-08** (4.23E-9 - 2.55E-8) | **1.509E-08** (3.59E-9 - 2.36E-8) | **1.008E-08** (2.63E-9 - 1.70E-8) | ***2.63E-09*** | ***3.71E-08*** |
| 2.0 - 20.0 Mev | **4.904E-08** (3.71E-8 - 5.09E-8) | **4.108E-08** (2.55E-8 - 4.42E-8) | **3.797E-08** (2.36E-8 - 4.08E-8) | **3.059E-08** (1.70E-8 - 3.44E-8) | ***1.70E-08*** | ***5.09E-08*** |
| > 20.0 Mev | **4.413E-08** (4.31E-8 - 4.89E-8) | **4.623E-08** (4.29E-8 - 5.20E-8) | **4.569E-08** (4.08E-8 - 4.92E-8) | n/a | ***4.08E-08*** | ***5.20E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.038** (0.667-2.116) | **1.536** (0.511-1.594) | **1.275** (0.394-1.333) | **0.860** (0.311-0.893) | ***0.311*** | ***2.116*** |
| 10 - 100 keV | **0.997** (0.640-1.856) | **0.753** (0.481-1.410) | **0.631** (0.408-1.181) | **0.452** (0.299-0.795) | ***0.299*** | ***1.856*** |
| 0.1 - 2.0 Mev | **0.664** (0.508-0.884) | **0.421** (0.314-0.607) | **0.391** (0.291-0.562) | **0.268** (0.182-0.404) | ***0.182*** | ***0.884*** |
| 2.0 - 20.0 Mev | **1.047** (0.816-1.231) | **0.873** (0.607-1.008) | **0.806** (0.562-0.941) | **0.644** (0.404-0.723) | ***0.404*** | ***1.231*** |
| > 20.0 Mev | **1.442** (0.816-1.809) | **1.532** (0.735-2.082) | **1.516** (0.680-1.970) | n/a | ***0.680*** | ***2.082*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.778** (0.598-1.815) | **1.349** (0.427-1.370) | **1.121** (0.356-1.139) | **0.754** (0.281-0.767) | ***0.281*** | ***1.815*** |
| 10 - 100 keV | **0.983** (0.621-1.740) | **0.743** (0.467-1.322) | **0.623** (0.397-1.107) | **0.447** (0.290-0.746) | ***0.290*** | ***1.740*** |
| 0.1 - 2.0 Mev | **0.641** (0.481-0.840) | **0.407** (0.301-0.577) | **0.381** (0.276-0.534) | **0.259** (0.175-0.384) | ***0.175*** | ***0.840*** |
| 2.0 - 20.0 Mev | **0.990** (0.816-1.157) | **0.825** (0.577-0.935) | **0.761** (0.534-0.870) | **0.609** (0.384-0.669) | ***0.384*** | ***1.157*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Remainder Organs

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.285E-09** (4.00E-10 - 1.50E-9) | **1.345E-09** (4.25E-10 - 1.57E-9) | **9.441E-10** (2.85E-10 - 1.10E-9) | **6.383E-10** (2.20E-10 - 7.47E-10) | ***2.20E-10*** | ***1.57E-09*** |
| 10 - 100 keV | **3.355E-09** (1.50E-9 - 4.97E-9) | **3.799E-09** (1.57E-9 - 5.58E-9) | **2.414E-09** (1.10E-9 - 3.53E-9) | **1.911E-09** (7.47E-10 - 2.76E-9) | ***7.47E-10*** | ***5.58E-09*** |
| 0.1 - 2.0 Mev | **2.057E-08** (4.97E-9 - 3.09E-8) | **2.272E-08** (5.58E-9 - 3.40E-8) | **1.622E-08** (3.53E-9 - 2.53E-8) | **1.189E-08** (2.76E-9 - 1.92E-8) | ***2.76E-09*** | ***3.40E-08*** |
| 2.0 - 20.0 Mev | **4.422E-08** (3.09E-8 - 4.64E-8) | **4.633E-08** (3.40E-8 - 4.79E-8) | **3.875E-08** (2.53E-8 - 4.10E-8) | **3.273E-08** (1.92E-8 - 3.65E-8) | ***1.92E-08*** | ***4.79E-08*** |
| > 20.0 Mev | **4.906E-08** (4.63E-8 - 5.20E-8) | **4.916E-08** (4.61E-8 - 5.41E-8) | **4.797E-08** (4.10E-8 - 5.61E-8) | n/a | ***4.10E-08*** | ***5.61E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.524** (0.556-1.587) | **1.595** (0.599-1.656) | **1.120** (0.400-1.168) | **0.756** (0.316-0.783) | ***0.316*** | ***1.656*** |
| 10 - 100 keV | **0.830** (0.565-1.428) | **0.905** (0.634-1.494) | **0.600** (0.401-1.048) | **0.439** (0.314-0.711) | ***0.314*** | ***1.494*** |
| 0.1 - 2.0 Mev | **0.540** (0.426-0.735) | **0.595** (0.470-0.809) | **0.422** (0.309-0.603) | **0.314** (0.241-0.458) | ***0.241*** | ***0.809*** |
| 2.0 - 20.0 Mev | **0.942** (0.735-1.096) | **0.990** (0.785-1.157) | **0.824** (0.603-0.960) | **0.692** (0.458-0.784) | ***0.458*** | ***1.157*** |
| > 20.0 Mev | **1.620** (0.773-2.092) | **1.627** (0.785-2.163) | **1.604** (0.684-2.243) | n/a | ***0.684*** | ***2.243*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.331** (0.488-1.356) | **1.397** (0.519-1.415) | **0.982** (0.348-0.998) | **0.666** (0.269-0.669) | ***0.269*** | ***1.415*** |
| 10 - 100 keV | **0.819** (0.549-1.339) | **0.895** (0.616-1.401) | **0.592** (0.389-0.983) | **0.435** (0.305-0.667) | ***0.305*** | ***1.401*** |
| 0.1 - 2.0 Mev | **0.525** (0.407-0.698) | **0.577** (0.452-0.769) | **0.409** (0.292-0.573) | **0.301** (0.230-0.435) | ***0.230*** | ***0.769*** |
| 2.0 - 20.0 Mev | **0.889** (0.698-1.021) | **0.934** (0.769-1.094) | **0.778** (0.573-0.892) | **0.655** (0.435-0.733) | ***0.435*** | ***1.094*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Skin

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **9.326E-10** (6.75E-10 - 1.23E-9) | **9.267E-10** (6.50E-10 - 1.22E-9) | **7.056E-10** (5.00E-10 - 9.49E-10) | **5.190E-10** (3.95E-10 - 6.96E-10) | ***3.95E-10*** | ***1.23E-09*** |
| 10 - 100 keV | **4.398E-09** (1.23E-9 - 7.57E-9) | **4.382E-09** (1.22E-9 - 7.54E-9) | **3.671E-09** (9.49E-10 - 6.40E-9) | **3.376E-09** (6.96E-10 - 6.00E-9) | ***6.96E-10*** | ***7.57E-09*** |
| 0.1 - 2.0 Mev | **3.294E-08** (7.57E-9 - 4.14E-8) | **3.282E-08** (7.54E-9 - 4.14E-8) | **3.012E-08** (6.40E-9 - 3.85E-8) | **2.776E-08** (6.00E-9 - 3.59E-8) | ***6.00E-09*** | ***4.14E-08*** |
| 2.0 - 20.0 Mev | **4.545E-08** (4.14E-8 - 4.75E-8) | **4.543E-08** (4.14E-8 - 4.75E-8) | **4.270E-08** (3.85E-8 - 4.43E-8) | **3.936E-08** (3.59E-8 - 4.09E-8) | ***3.59E-08*** | ***4.75E-08*** |
| > 20.0 Mev | **2.985E-08** (2.67E-8 - 4.33E-8) | **2.977E-08** (2.66E-8 - 4.33E-8) | **3.023E-08** (2.75E-8 - 4.11E-8) | n/a | ***2.66E-08*** | ***4.33E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.091** (0.596-1.169) | **1.086** (0.585-1.163) | **0.830** (0.441-0.904) | **0.610** (0.322-0.663) | ***0.322*** | ***1.169*** |
| 10 - 100 keV | **0.989** (0.860-1.169) | **0.986** (0.857-1.163) | **0.816** (0.727-0.913) | **0.714** (0.663-0.753) | ***0.663*** | ***1.169*** |
| 0.1 - 2.0 Mev | **0.879** (0.817-0.987) | **0.876** (0.815-0.987) | **0.801** (0.710-0.917) | **0.738** (0.661-0.855) | ***0.661*** | ***0.987*** |
| 2.0 - 20.0 Mev | **0.982** (0.722-1.127) | **0.981** (0.722-1.127) | **0.925** (0.685-1.067) | **0.840** (0.665-0.966) | ***0.665*** | ***1.127*** |
| > 20.0 Mev | **0.961** (0.722-1.328) | **0.958** (0.722-1.330) | **0.980** (0.674-1.370) | n/a | ***0.674*** | ***1.370*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **0.955** (0.592-1.096) | **0.957** (0.585-1.090) | **0.729** (0.437-0.847) | **0.538** (0.313-0.621) | ***0.313*** | ***1.096*** |
| 10 - 100 keV | **0.986** (0.836-1.117) | **0.982** (0.832-1.117) | **0.814** (0.706-0.887) | **0.714** (0.621-0.765) | ***0.621*** | ***1.117*** |
| 0.1 - 2.0 Mev | **0.853** (0.773-0.938) | **0.850** (0.770-0.938) | **0.776** (0.674-0.871) | **0.713** (0.625-0.812) | ***0.625*** | ***0.938*** |
| 2.0 - 20.0 Mev | **0.918** (0.722-1.052) | **0.917** (0.722-1.050) | **0.863** (0.685-1.003) | **0.794** (0.665-0.922) | ***0.665*** | ***1.052*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Stomach

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.162E-09** (6.15E-10 - 2.45E-9) | **9.786E-10** (2.50E-10 - 1.12E-9) | **9.915E-10** (2.95E-10 - 1.13E-9) | **7.128E-10** (2.25E-10 - 8.16E-10) | ***2.25E-10*** | ***2.45E-09*** |
| 10 - 100 keV | **4.904E-09** (2.45E-9 - 6.93E-9) | **2.302E-09** (1.12E-9 - 3.18E-9) | **2.401E-09** (1.13E-9 - 3.42E-9) | **1.771E-09** (8.16E-10 - 2.58E-9) | ***8.16E-10*** | ***6.93E-09*** |
| 0.1 - 2.0 Mev | **3.238E-08** (6.93E-9 - 4.58E-8) | **8.968E-09** (3.18E-9 - 1.53E-8) | **1.387E-08** (3.42E-9 - 2.13E-8) | **1.008E-08** (2.58E-9 - 1.63E-8) | ***2.58E-09*** | ***4.58E-08*** |
| 2.0 - 20.0 Mev | **5.432E-08** (4.58E-8 - 5.58E-8) | **3.416E-08** (1.53E-8 - 3.96E-8) | **3.537E-08** (2.13E-8 - 3.95E-8) | **2.935E-08** (1.63E-8 - 3.35E-8) | ***1.53E-08*** | ***5.58E-08*** |
| > 20.0 Mev | **4.531E-08** (4.09E-8 - 5.30E-8) | **5.196E-08** (3.96E-8 - 6.32E-8) | **4.673E-08** (3.95E-8 - 5.81E-8) | n/a | ***3.95E-08*** | ***6.32E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.567** (0.889-2.679) | **1.161** (0.356-1.209) | **1.176** (0.406-1.216) | **0.844** (0.316-0.872) | ***0.316*** | ***2.679*** |
| 10 - 100 keV | **1.244** (0.787-2.332) | **0.579** (0.361-1.066) | **0.593** (0.388-1.079) | **0.441** (0.293-0.777) | ***0.293*** | ***2.332*** |
| 0.1 - 2.0 Mev | **0.858** (0.675-1.090) | **0.236** (0.171-0.364) | **0.365** (0.277-0.508) | **0.266** (0.192-0.388) | ***0.171*** | ***1.090*** |
| 2.0 - 20.0 Mev | **1.160** (0.883-1.387) | **0.721** (0.364-0.830) | **0.748** (0.508-0.849) | **0.618** (0.388-0.694) | ***0.364*** | ***1.387*** |
| > 20.0 Mev | **1.458** (0.883-1.726) | **1.752** (0.660-2.526) | **1.570** (0.659-2.324) | n/a | ***0.659*** | ***2.526*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **2.244** (0.751-2.295) | **1.016** (0.305-1.033) | **1.028** (0.360-1.042) | **0.738** (0.275-0.750) | ***0.275*** | ***2.295*** |
| 10 - 100 keV | **1.221** (0.765-2.186) | **0.571** (0.351-1.000) | **0.584** (0.377-1.011) | **0.437** (0.285-0.729) | ***0.285*** | ***2.186*** |
| 0.1 - 2.0 Mev | **0.824** (0.639-1.036) | **0.226** (0.166-0.351) | **0.351** (0.263-0.483) | **0.256** (0.185-0.369) | ***0.166*** | ***1.036*** |
| 2.0 - 20.0 Mev | **1.099** (0.883-1.312) | **0.682** (0.346-0.760) | **0.707** (0.483-0.782) | **0.584** (0.369-0.641) | ***0.346*** | ***1.312*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

**Organ:** Thyroid

**Neutron Exposures**

*Fluence ($\phi$) to Organ Dose Equivalent ($H_T$) (cSv cm$^2$)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.526E-09** (7.05E-10 - 1.80E-9) | **5.344E-10** (1.45E-10 - 6.07E-10) | **8.223E-10** (3.70E-10 - 9.62E-10) | **5.675E-10** (2.95E-10 - 6.58E-10) | ***1.45E-10*** | ***1.80E-09*** |
| 10 - 100 keV | **4.581E-09** (1.80E-9 - 7.51E-9) | **1.037E-09** (6.07E-10 - 1.62E-9) | **2.402E-09** (9.62E-10 - 3.77E-9) | **1.707E-09** (6.58E-10 - 2.55E-9) | ***6.07E-10*** | ***7.51E-09*** |
| 0.1 - 2.0 Mev | **4.256E-08** (7.51E-9 - 5.57E-8) | **5.291E-09** (1.62E-9 - 9.83E-9) | **2.195E-08** (3.77E-9 - 3.24E-8) | **1.219E-08** (2.55E-9 - 1.82E-8) | ***1.62E-09*** | ***5.57E-08*** |
| 2.0 - 20.0 Mev | **5.520E-08** (5.18E-8 - 5.72E-8) | **2.543E-08** (9.83E-9 - 3.14E-8) | **4.384E-08** (3.24E-8 - 4.59E-8) | **3.257E-08** (1.82E-8 - 4.07E-8) | ***9.83E-09*** | ***5.72E-08*** |
| > 20.0 Mev | **3.787E-08** (3.18E-8 - 5.18E-8) | **5.471E-08** (3.14E-8 - 6.72E-8) | **4.625E-08** (4.56E-8 - 4.66E-8) | n/a | ***3.14E-08*** | ***6.72E-08*** |

*Ambient Dose Equivalent (H*(10)) to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.803** (0.919-1.882) | **0.623** (0.193-0.660) | **0.964** (0.425-1.010) | **0.674** (0.298-0.694) | ***0.193*** | ***1.882*** |
| 10 - 100 keV | **1.079** (0.853-1.717) | **0.311** (0.184-0.578) | **0.579** (0.428-0.916) | **0.398** (0.290-0.627) | ***0.184*** | ***1.717*** |
| 0.1 - 2.0 Mev | **1.125** (0.848-1.325) | **0.144** (0.092-0.234) | **0.567** (0.400-0.772) | **0.320** (0.248-0.434) | ***0.092*** | ***1.325*** |
| 2.0 - 20.0 Mev | **1.186** (0.864-1.418) | **0.533** (0.234-0.611) | **0.934** (0.765-1.081) | **0.682** (0.434-0.729) | ***0.234*** | ***1.418*** |
| > 20.0 Mev | **1.199** (0.864-1.351) | **1.864** (0.524-2.688) | **1.515** (0.765-1.881) | n/a | ***0.524*** | ***2.688*** |

*Deep Dose Equivalent $H_{p,slab}(10)$ to Organ Dose Equivalent ($H_T$) (cSv/cSv)*

| Neutron Energy | $DCF_{AP}$ | $DCF_{PA}$ | $DCF_{ROT}$ | $DCF_{ISO}$ | $DCF_{Min}$ | $DCF_{Max}$ |
|---|---|---|---|---|---|---|
| <10 keV | **1.579** (0.861-1.610) | **0.554** (0.177-0.568) | **0.856** (0.395-0.863) | **0.588** (0.303-0.595) | ***0.177*** | ***1.610*** |
| 10 - 100 keV | **1.066** (0.829-1.610) | **0.302** (0.179-0.542) | **0.571** (0.416-0.859) | **0.391** (0.281-0.587) | ***0.179*** | ***1.610*** |
| 0.1 - 2.0 Mev | **1.086** (0.805-1.259) | **0.132** (0.089-0.222) | **0.552** (0.378-0.734) | **0.309** (0.235-0.412) | ***0.089*** | ***1.259*** |
| 2.0 - 20.0 Mev | **1.123** (0.864-1.355) | **0.504** (0.222-0.561) | **0.881** (0.734-1.013) | **0.644** (0.412-0.692) | ***0.222*** | ***1.355*** |
| > 20.0 Mev | n/a | n/a | n/a | n/a | ***n/a*** | ***n/a*** |

# APPENDIX B - IREP-EXCEL INPUT FORMAT

| PERSONAL INFORMATION | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| Claimant Name | Claim # | Claimant SSN | DOL Claim Center | Gender | Birth Year | Year of Diagnosis | Cancer Model | Should alt model be run? |
| John Q. Doe | 000001-DE | 123-45-6789 | Denver CO | Male | 1942 | 2002 | Oral Cavity and Pharynx | No |

| CLAIMANT CANCER DIAGNOSES | | | | | | |
|---|---|---|---|---|---|---|
| | Primary Cancer #1 | Primary Cancer #2 | Primary Cancer #3 | Secondary Cancer #1 | Secondary Cancer #2 | Secondary Cancer #3 |
| Cancer Type | N/A | N/A | N/A | N/A | N/A | N/A |
| Date of Daignosis | N/A | N/A | N/A | N/A | N/A | N/A |

| EXPOSURE INFORMATION | | | | | | | |
|---|---|---|---|---|---|---|---|
| Number of exposures | | | | | | | |
| 1 | | | | | | | |
| Exposure # | Exposure Year | Exposure Rate | Radiation Type | Dose Distribution Type | Parameter 1 | Parameter 2 | Parameter 3 |
| 1 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 2 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 3 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 4 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 5 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 6 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 7 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 8 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 9 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 10 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 11 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 12 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 13 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 14 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 15 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 16 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 17 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 18 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 19 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 20 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 21 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 22 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 23 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 24 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 25 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 26 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 27 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 28 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 29 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |
| 30 | 1982 | chronic | electrons | Lognormal | 2.000 | 2.000 | 0.000 |