Overall conclusions of evidence for obstetric risks in female childhood and adolescent cancer survivors (key outcomes)

| Who needs preconception counseling? Who needs high-risk pregnancy surveillance? | | | |
|--|---|--|--|
| Risk of miscarriage in female cancer survivors diagnosed before age 25 years | Level of evidence* | | |
| No increased risk in CAYA cancer survivors vs controls. | ⊕⊕⊕⊖ MODERATE ^{9, 24,} 25, 27, 29, 32 | | |
| Increased risk after (abdominopelvic) radiotherapy vs. no radiotherapy. | ⊕⊕⊕⊖ MODERATE ^{9, 14,} | | |
| Increased risk with increasing doses of abdominopelvic and pituitary radiotherapy vs. no radiotherapy. | ⊕⊕⊖ LOW ^{29, 30} | | |
| No significant effect of <i>chemotherapy</i> vs. no chemotherapy. | $\bigoplus_{25, 26, 30} \bigoplus MODERATE^{9, 1}$ | | |
| Increased risk after chemotherapy and radiotherapy (no specific field) vs. no | ⊕⊕⊖ LOW ^{9, 14, 24, 25, 30} | | |
| chemotherapy and radiotherapy. | | | |
| No significant effect of age at diagnosis. | ⊕⊕⊖⊖ LOW ⁹ | | |
| Risk of terminations in female cancer survivors diagnosed before age 25 years | Level of evidence | | |
| No increased risk in CAYA cancer survivors vs controls. | ⊕⊖⊖ VERY LOW ^{29, 32} | | |
| Increased risk after radiotherapy vs. no radiotherapy. | ⊕⊕⊖ LOW ^{14, 26} | | |
| Increased risk after chemotherapy vs. no chemotherapy. | ⊕⊖⊖ VERY LOW ^{14, 26} | | |
| Increased risk after chemotherapy and/or radiotherapy (to any field or gonadal) vs. no chemotherapy and radiotherapy. | ⊕⊕⊖ LOW ^{14, 23} | | |
| Risk of stillbirth in female cancer survivors diagnosed before age 25 years | Level of evidence | | |
| No increased risk in CAYA cancer survivors vs controls. | ⊕⊕⊕⊖ MODERATE ^{9, 29} | | |
| No significant effect of <i>radiotherapy</i> vs. no radiotherapy. | ⊕⊕⊖ LOW ^{9, 14, 26, 30, 41} | | |
| Increased risk after high-dose ovarian-abdominal radiotherapy vs. no radiotherapy. | ⊕⊕⊖ LOW ^{30, 33, 41} | | |
| Increased risk after abdominopelvic radiotherapy (>1.00 Gy) given before menarche | $\oplus \oplus \ominus \ominus LOW^{33}$ | | |
| vs. no radiotherapy, but no significant effect when given after menarche | 0000-011 | | |
| No significant effect of <i>chemotherapy</i> vs. no chemotherapy. | ⊕⊕⊖ LOW ^{9, 14, 26, 30} | | |
| No significant effect of alkylating agent dose. | $\oplus \oplus \ominus \ominus LOW^{33}$ | | |
| No significant effect of alkylating agents in combination with abdominal-pelvic radiation vs. no alkylating agents and abdominal-pelvic radiation. | ⊕⊕⊖⊖ LOW ^{14, 23, 30} | | |
| Risk of gestational hypertension in female cancer survivors diagnosed before age 25 years | Level of evidence | | |
| No increased risk in CAYA cancer survivors vs controls. | ⊕⊖⊖ VERY LOW ^{13, 35} | | |
| Increased risk after abdominopelvic radiotherapy vs. no radiotherapy. | $\bigoplus_{35} \bigoplus \bigoplus VERY LOW^{13, 34,}$ | | |
| Increased risk with <i>increasing doses of flank radiotherapy</i> in CAYA Wilms tumor survivors. | ⊕⊖⊖ VERY LOW ⁴⁵ | | |
| No significant effect of <i>chemotherapy</i> vs. no chemotherapy. | ⊕⊖⊖ VERY LOW ³⁵ | | |
| No significant effect of age at diagnosis. | ⊕⊕⊖⊖ LOW ³⁴ | | |
| Risk of pre-eclampsia in female cancer survivors diagnosed before age 25 years | Level of evidence | | |
| Increased risk in CAYA cancer survivors vs controls. | ⊕⊕⊖ LOW ^{9, 11, 13} | | |
| No significant effect of abdominopelvic radiotherapy vs. no radiotherapy. | ⊕⊖⊖ VERY LOW ¹³ | | |
| Risk of maternal anemia in female cancer survivors diagnosed before age 25 years | Level of evidence | | |
| No increased risk in CAYA cancer survivors vs controls. | ⊕⊕⊕ MODERATE ^{9, 11} | | |
| Increased risk after (abdominopelvic) radiotherapy vs. no radiotherapy. | $\bigoplus \bigoplus \bigoplus \bigcup LOW^{11,34}$ | | |
| Increased risk after <i>chemotherapy</i> vs. no chemotherapy. | $\oplus \oplus \ominus \ominus \sqcup \cup \sqcup \cup$ | | |
| No significant effect of <i>radiotherapy and chemotherapy</i> vs. controls. | $\oplus \oplus \ominus \ominus LOW^{11}$ | | |
| No significant effect of age at diagnosis. | ⊕⊕⊕⊕ MODERATE ^{11, 3} | | |
| Risk of gestational diabetes in female cancer survivors diagnosed before age 25 years | Level of evidence | | |
| Increased risk in CAYA cancer survivors vs controls. | ⊕⊕⊖ LOW ^{9, 11, 35} | | |
| Increased risk after (abdominopelvic) radiotherapy vs. no radiotherapy. | | | |
| mercusca risk arter (abaominopervic) radiotherapy vs. no radiotherapy. | | | |

| No significant effect of <i>chemotherapy</i> vs. no chemotherapy. | ⊕⊕⊕ MODERATE ^{9, 11,} |
|---|--|
| | 35 |
| Increased risk after chemotherapy in combination with radiotherapy vs. controls. | ⊕⊖⊖ VERY LOW ^{9, 11} |
| No significant effect of age at diagnosis. | ⊕⊕⊕ HIGH ^{9, 11, 34} |
| Risk of malposition in female cancer survivors diagnosed before age 25 years | Level of evidence |
| No increased risk in CAYA cancer survivors vs. controls. | ⊕⊖⊖⊖ VERY LOW¹0 |
| No significant effect of <i>radiotherapy</i> vs. no radiotherapy. | ⊕⊕⊖⊖ LOW³⁴ |
| Increased risk with increasing doses flank radiation. | ⊕⊖⊖⊖ VERY LOW ⁴⁵ |
| No significant effect of age at diagnosis. | ⊕⊕⊕⊕ HIGH ^{10, 34} |
| Risk of postpartum hemorrhage in female cancer survivors diagnosed before age 25 years | Level of evidence |
| Increased risk in CAYA cancer survivors vs controls. | ⊕⊕⊖ LOW ^{8-10, 13, 34} |
| Increased risk after abdominopelvic radiotherapy vs. no radiotherapy. | ⊕⊖⊖ VERY LOW ^{13, 34} |
| No significant effect of age at diagnosis. | ⊕⊕⊖ LOW ³⁴ |
| Risk of premature birth in female cancer survivors diagnosed before age 25 years | Level of evidence |
| Increased risk in CAYA cancer survivors vs. controls. | ⊕⊕⊕ MODERATE ^{9-13,} |
| | 27, 35 |
| Increased risk after (abdominopelvic) radiotherapy vs. no radiotherapy. | ⊕⊕⊕⊕ HIGH ^{9, 11, 13, 28, 34,} |
| Increased risk with increasing doses of ovarian-abdominal radiotherapy (>5/15 Gy). | ⊕⊕⊖ LOW ^{12, 45} |
| Increased risk after <i>chemotherapy</i> vs. no chemotherapy. | ⊕⊕⊖ LOW ^{9, 11, 35} |
| No significant effect of alkylating agent dose. | ⊕⊕⊖⊖ LOW ¹² |
| Increased risk after <i>radiotherapy and chemotherapy</i> vs. no radiotherapy and | ⊕⊕⊕ MODERATE ^{9, 11} |
| chemotherapy. | |
| Increased risk in <i>survivors aged >5 yrs at cancer diagnosis</i> vs. controls, but no | ⊕⊕⊖ LOW ^{9, 11, 34} |
| significant effect in survivors aged <5 yrs at cancer diagnosis | |
| Risk of low birth weight in female cancer survivors diagnosed before age 25 years | Level of evidence |
| Increased risk in CAYA cancer survivors vs controls. | ⊕⊕⊕ MODERATE ^{9-13,} 27, 35 |
| Increased risk after (abdominopelvic) radiotherapy vs. no radiotherapy. | ⊕⊕⊕⊕ HIGH ^{9, 11, 13, 28, 30,} 34, 35 |
| Increased risk after increasing doses of abdominopelvic radiotherapy (>2.5/25 Gy) | ⊕⊕⊕ MODERATE ^{12, 27,} 30, 45 |
| Increased risk after <i>chemotherapy</i> vs. no chemotherapy. | $\bigoplus_{35} \bigoplus \bigoplus VERY LOW^{9, 11, 30,}$ |
| No significant effect alkylating agent dose. | ⊕⊖⊖ VERY LOW ¹² |
| Increased risk after <i>radiotherapy and chemotherapy</i> vs. no radiotherapy and | $\bigoplus \ominus \ominus \ominus \bigvee VERY LOW^{9, 11, 30}$ |
| chemotherapy. | |
| Increased risk in <i>survivors aged ≥20 yrs at cancer diagnosis</i> vs. controls, but no | ⊕⊖⊖ VERY LOW ^{9, 11, 34} |
| significant effect in survivors aged <20 yrs at cancer diagnosis | |
| Risk of delivery of a child small for gestational age in female cancer survivors | Level of evidence |
| diagnosed before age 25 years | |
| No increased risk in CAYA cancer survivors vs. controls. | ⊕⊕⊖ LOW ^{11, 12, 35} |
| No significant effect of (abdominopelvic) radiotherapy vs. no radiotherapy. | ⊕⊕⊖ LOW ^{13, 28, 30, 35} |
| Increased risk after increasing doses of abdominopelvic radiotherapy. | ⊕⊕⊖⊖ LOW ^{12, 30} |
| No significant effect of <i>chemotherapy</i> vs. no chemotherapy. | ⊕⊖⊖⊖ VERY LOW ³⁵ |
| No significant effect of <i>chemotherapy</i> vs. no chemotherapy. No significant effect of alkylating agent dose. | |
| No significant effect of anylating agent dose. No significant effect of radiotherapy and chemotherapy vs. surgery only. | ⊕⊖⊖⊖ VERY LOW ³⁰ |
| Risk of intrauterine growth restriction in female cancer survivors diagnosed before | Level of evidence |
| age 25 years | Level of evidence |
| | ↑ ↑ ↑ VEDV LOW9 |
| No increased risk in CAYA cancer survivors vs. controls. | ⊕⊖⊖⊖ VERY LOW ⁹ |
| Likelihood of vaginal delivery in female cancer survivors diagnosed before age 25 | Level of evidence |
| Likelihood of vaginal delivery in female cancer survivors diagnosed before age 25 years Decreased likelihood of vaginal birth in in CAYA cancer survivors vs. controls. | ⊕⊕⊕⊕ HIGH ^{8, 10} |

| Likelihood of assisted vaginal delivery in female cancer survivors diagnosed before age 25 years | Level of evidence | | | |
|--|---|--|--|--|
| No increased likelihood of in CAYA cancer survivors vs. controls. | ⊕⊕⊕ MODERATE ^{8, 10,} | | | |
| No significant effect of <i>radiotherapy</i> vs. no radiotherapy. | ⊕⊖⊖ VERY LOW ¹³ | | | |
| No significant effect of age at diagnosis. | ⊕⊕⊖ LOW ¹⁰ | | | |
| Risk of any cesarean section in female cancer survivors diagnosed before age 25 | Level of evidence | | | |
| years | | | | |
| Increased likelihood of any cesarean section in in CAYA cancer survivors vs controls. | ⊕⊕⊖ LOW ^{9-11, 35} | | | |
| Increased likelihood after <i>radiotherapy</i> vs. no radiotherapy. | ⊕⊕⊖ LOW ^{9, 35} | | | |
| Increased likelihood after <i>chemotherapy</i> vs. no chemotherapy, | ⊕⊕⊖ LOW ^{9, 35} | | | |
| Significant effect of age at diagnosis (increased effect if 0-14 yrs at diagnosis) | ⊕⊖⊖ VERY LOW ^{9, 10} | | | |
| Likelihood of an elective/primary cesarean section in female cancer survivors | Level of evidence | | | |
| diagnosed before age 25 years | | | | |
| Increased likelihood in CAYA cancer survivors vs controls. | ⊕⊕⊕ HIGH ^{8, 10, 11, 34} | | | |
| Increased likelihood after radiotherapy vs. no radiotherapy, specifically after | ⊕⊕⊕ MODERATE ³⁴ | | | |
| abdominal radiotherapy in Wilms survivors. | | | | |
| No significant effect of age at diagnosis. | ⊕⊕⊕ HIGH ³⁴ | | | |
| Likelihood of an emergency/secondary/urgent cesarean section in female cancer | Level of evidence | | | |
| survivors diagnosed before age 25 years | | | | |
| No increased likelihood in CAYA cancer survivors vs controls. | ⊕⊕⊕ MODERATE ^{8, 10,} | | | |
| No significant effect of <i>radiotherapy</i> vs. no radiotherapy. | ⊕⊕⊕ HIGH ^{13, 34} | | | |
| No significant effect of age at diagnosis. | ⊕⊕⊕ MODERATE ^{8, 34} | | | |
| Risk of congenital anomalies/abnormalities in female cancer survivors diagnosed before age 25 years | Level of evidence | | | |
| No increased risk in CAYA cancer survivors vs controls. | ⊕⊕⊕⊕ HIGH ^{9, 11, 13, 32, 36-} | | | |
| No significant effect of (ovarian-abdominal) radiotherapy vs. no radiotherapy. | ⊕⊕⊕⊕ HIGH ^{13, 30, 36, 38,} 39, 41, 42 | | | |
| No significant effect of radiotherapy dose. | ⊕⊕⊕⊖ MODERATE ^{30, 36,} 41, 42, 45 | | | |
| No significant effect of alkylating agents vs. no alkylating agents. | ⊕⊕⊕⊕ MODERATE ^{30, 38,} 39, 41, 42, 52 | | | |
| No significant effect of alkylating agent dose. | ⊕⊖⊖ VERY LOW ⁴² | | | |
| No significant effect of alkylating agents in combination with abdominal-pelvic | ⊕⊕⊕ MODERATE ^{23, 30,} | | | |
| radiation vs. no alkylating agents and abdominal-pelvic radiation. | 41 | | | |
| No significant effect of age at diagnosis. | ⊕⊖⊖ VERY LOW ³⁹ | | | |
| Rate of supervision of high-risk pregnancy in female cancer survivors diagnosed before age 25 years | Level of evidence | | | |
| No increased rates in CAYA cancer survivors vs controls. | ⊕⊕⊖ LOW ³⁴ | | | |
| No significant effect of <i>radiotherapy</i> vs. no radiotherapy. | ⊕⊕⊖ LOW³4 | | | |
| Risk of retained placenta/manual removal of the placenta in female cancer | Level of evidence | | | |
| survivors diagnosed before age 25 years | | | | |
| No increased risk in CAYA cancer survivors vs. controls. | ⊕⊕⊖ LOW ^{9, 13} | | | |
| Risk of placental pathologies in female cancer survivors diagnosed before age 25 | Level of evidence | | | |
| years | | | | |
| No increased risk in CAYA cancer survivors vs. controls. | ⊕⊖⊖ VERY LOW ¹⁰ | | | |
| Risk of resuscitation of the neonate born to female cancer survivors diagnosed | Level of evidence | | | |
| before age 25 years | | | | |
| Increased risk in CAYA cancer survivors vs. controls. | ⊕⊖⊖ VERY LOW ⁹ | | | |
| Likelihood of admission to a special care unit in neonates born to female cancer survivors diagnosed before age 25 years | Level of evidence | | | |
| Increased likelihood in CAYA cancer survivors vs. controls. | ⊕⊖⊖ VERY LOW ⁹ | | | |
| | 1 0 0 0 0 1 - 111 - 20 11 | | | |

| Risk of early or threatened labor in female cancer survivors diagnosed before age 25 | Level of evidence |
|--|--|
| years The studies are suited as sixty of each and the said CAVA are sure in sure and are | ₩ |
| Two studies reported on risk of early or threatened labor in CAYA cancer survivors and one | ⊕⊖⊖ VERY LOW ^{9,45} |
| showed a higher prevalence in patients treated with higher flank radiation therapy dose. | |
| Risk of obstructed labor in female cancer survivors diagnosed before age 25 years | Level of evidence |
| Two studies reported on risk of obstructed labor in CAYA cancer survivors and show no | ⊕⊖⊖⊖ VERY |
| increased risk by radiotherapy, one showed an increased risk in patients 10-14 yrs at | LOW ^{34,45} |
| diagnosis. | |
| Risk of abnormality of forces of labor in female cancer survivors diagnosed before age 25 years | Level of evidence |
| Two studies reported on risk of abnormality of forces of labor in CAYA cancer survivors and | $\oplus \oplus \ominus \ominus LOW^{34,45}$ |
| show no increased risk by radiotherapy or age at diagnosis. | |
| Risk of umbilical cord complications in female cancer survivors diagnosed before age 25 | Level of evidence |
| years | |
| Two studies reported on risk of umbilical cord complications in CAYA cancer survivors and | ⊕⊕⊖ LOW ^{34,45} |
| show no increased risk by radiotherapy or age at diagnosis. | |
| Risk of premature rupture of the membranes in female cancer survivors diagnosed before | Level of evidence |
| age 25 years | |
| Three studies reported on risk of premature rupture of the membranes (PROM) in CAYA | ⊕⊕⊖ LOW ^{9,34,45} |
| cancer survivors and show no increased risk by radiotherapy or age at diagnosis. | 00000 |
| Risk of fetal problems in female cancer survivors diagnosed before age 25 years | Level of evidence |
| One study reported on the risk of fetal problems in CAYA cancer survivors and suggests no | ⊕⊕⊖⊖ LOW ³⁴ |
| increased risk of fetal problems. | 000020 |
| Risk of delivery complicated by fetal stress in female cancer survivors diagnosed before | Level of evidence |
| age 25 years | Level of evidence |
| One study reported on the risk of delivery complicated by fetal stress in CAYA cancer | ⊕⊕⊖⊖ LOW³4 |
| survivors and suggests no increased risk as compared to controls. | 0000000 |
| Risk of a long labor in female cancer survivors diagnosed before age 25 years | Level of evidence |
| One study reported on the risk of a long labor in CAYA cancer survivors and suggests no | ⊕⊕⊖⊖ LOW ³⁴ |
| increased risk as compared to controls. | AAAA row |
| | Lovel of avidones |
| Risk of antepartum hemorrhage in female cancer survivors diagnosed before age 25 years | Level of evidence |
| Two studies reported on the risk of antepartum hemorrhage in CAYA cancer survivors and | $\oplus\ominus\ominus\ominus$ VERY |
| | 101489 |
| suggest no increased risk as compared to controls. | LOW ^{8,9} |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years | Level of evidence |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests | Level of evidence ⊕⊖⊖⊖ VERY |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. | Level of evidence ⊕⊖⊖⊖ VERY LOW ⁹ |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years | Level of evidence Output Description: Description: Description: Description: Level of evidence |
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| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years One study reported on the risk of induction of labor in CAYA cancer survivors and suggests an increased risk as compared to controls, specifically when diagnosed aged 0-14 yrs. | Level of evidence ⊕⊖⊖ VERY LOW ⁹ Level of evidence ⊕⊖⊖ VERY LOW ¹⁰ |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years One study reported on the risk of induction of labor in CAYA cancer survivors and suggests an increased risk as compared to controls, specifically when diagnosed aged 0-14 yrs. Risk of uterine scar from previous surgery in female cancer survivors diagnosed before | Level of evidence Output Description Description Level of evidence Output Description Des |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years One study reported on the risk of induction of labor in CAYA cancer survivors and suggests an increased risk as compared to controls, specifically when diagnosed aged 0-14 yrs. Risk of uterine scar from previous surgery in female cancer survivors diagnosed before age 25 years | Level of evidence \(\phi\)\to\\ \to\\ \o\ |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years One study reported on the risk of induction of labor in CAYA cancer survivors and suggests an increased risk as compared to controls, specifically when diagnosed aged 0-14 yrs. Risk of uterine scar from previous surgery in female cancer survivors diagnosed before age 25 years No increased risk in CAYA cancer survivors vs. controls. | Level of evidence \(\begin{align*} ali |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years One study reported on the risk of induction of labor in CAYA cancer survivors and suggests an increased risk as compared to controls, specifically when diagnosed aged 0-14 yrs. Risk of uterine scar from previous surgery in female cancer survivors diagnosed before age 25 years No increased risk in CAYA cancer survivors vs. controls. Risk of perineal laceration in female cancer survivors diagnosed before age 25 years | Level of evidence \(\phi\)\to\\ VERY \(\text{LOW}^9\) Level of evidence \(\phi\)\to\\ VERY \(\text{LOW}^{10}\) Level of evidence \(\phi\)\to\\ LoW^{34} Level of evidence |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years One study reported on the risk of induction of labor in CAYA cancer survivors and suggests an increased risk as compared to controls, specifically when diagnosed aged 0-14 yrs. Risk of uterine scar from previous surgery in female cancer survivors diagnosed before age 25 years No increased risk in CAYA cancer survivors vs. controls. | Level of evidence \(\begin{align*} ali |
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| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years One study reported on the risk of induction of labor in CAYA cancer survivors and suggests an increased risk as compared to controls, specifically when diagnosed aged 0-14 yrs. Risk of uterine scar from previous surgery in female cancer survivors diagnosed before age 25 years No increased risk in CAYA cancer survivors vs. controls. Risk of perineal laceration in female cancer survivors diagnosed before age 25 years No increased risk in CAYA cancer survivors vs. controls. | Level of evidence ⊕⊖⊖ VERY LOW³ Level of evidence ⊕⊖⊖ VERY LOW¹⁰ Level of evidence ⊕⊕⊖ LOW³⁴ Level of evidence ⊕⊕⊖ LOW³⁴ |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years One study reported on the risk of induction of labor in CAYA cancer survivors and suggests an increased risk as compared to controls, specifically when diagnosed aged 0-14 yrs. Risk of uterine scar from previous surgery in female cancer survivors diagnosed before age 25 years No increased risk in CAYA cancer survivors vs. controls. Risk of perineal laceration in female cancer survivors diagnosed before age 25 years No increased risk in CAYA cancer survivors vs. controls. Risk of delivering a child with a low Apgar score in female cancer survivors diagnosed before age 25 years | Level of evidence ⊕⊖⊖ VERY LOW³ Level of evidence ⊕⊖⊖ VERY LOW¹0 Level of evidence ⊕⊕⊖ LOW³⁴ Level of evidence ⊕⊕⊖ LOW³⁴ Level of evidence ⊕⊕⊖⊖ LOW³⁴ Level of evidence |
| Risk of failure to progress in female cancer survivors diagnosed before age 25 years One study reported on the risk of failure to progress in CAYA cancer survivors and suggests no increased risk as compared to controls. Risk of induction of labor in female cancer survivors diagnosed before age 25 years One study reported on the risk of induction of labor in CAYA cancer survivors and suggests an increased risk as compared to controls, specifically when diagnosed aged 0-14 yrs. Risk of uterine scar from previous surgery in female cancer survivors diagnosed before age 25 years No increased risk in CAYA cancer survivors vs. controls. Risk of perineal laceration in female cancer survivors diagnosed before age 25 years No increased risk in CAYA cancer survivors vs. controls. Risk of delivering a child with a low Apgar score in female cancer survivors diagnosed | Level of evidence ⊕⊖⊖ VERY LOW ⁹ Level of evidence ⊕⊖⊖ VERY LOW ¹⁰ Level of evidence ⊕⊕⊖ LOW ³⁴ Level of evidence ⊕⊕⊖ LOW ³⁴ Level of evidence |

^{*}Citations refer to papers on which the GRADE level of evidence was based on, and do not necessarily support the overall conclusion.

Color scheme of overall conclusions of evidence for obstetric risks in female childhood and adolescent cancer patients

| Outcome | General | Radiotherapy | Dose of Radiotherapy | Dose of RT by age | Chemotherapy | Dose of chemotherapy | Combination of RT and chemo | Age of diagnosis |
|--|-------------------|-----------------------|---|-------------------------------|--------------------------|-----------------------|-----------------------------|--|
| Spontaneous abortion /miscarriage | No increased risk | Significant 个 | Significant 个 with increasing dose | | No significant effect | | Significant ↑ | No significant effect |
| Terminations | No increased risk | Significant ↑ | | | Significant 个 | | Significant ↑ | |
| Still births | No increased risk | No significant effect | Significant 个 with increasing dose | Significant ↑ before menarche | No significant effect | No significant effect | No significant effect | |
| Gestational hypertension | No increased risk | Significant 个 | Significant↑ with increasing dose on the flank | | No significant effect | | | No significant effect |
| Pre-eclampsia | Significant 个 | No significant effect | | | | | | |
| Maternal anemia | No increased risk | Significant 个 | | | Significant ↑ | | No significant effect | No significant effect |
| Gestational diabetes | Significant ↑ | Significant ↑ | | | No significant effect | | Significant↑ | No significant effect |
| Malposition | No increased risk | No significant effect | Significant ↑ with increasing dose on the flank | | | | | No significant effect |
| Rate of supervision of high-risk pregnancy | No increased risk | No significant effect | | | | | | No significant effect |
| Retained placenta | No increased risk | No significant effect | | | | | | |
| Placental pathologies | No increased risk | | | | | | | |
| Premature birth | Significant ↑ | Significant 个 | Significant 个 with increasing abdominal dose | | Significant 个 | No significant effect | Significant 个 | Significant 个 (>5 yrs of age) |
| Low birth weight | Significant 个 | Significant 个 | Significant 个 with increasing abdominal dose | | Significant↑ | No significant effect | Significant个 | Significant↑ (>20 yrs of age at diagnosis) |
| Small for gestational age | No increased risk | No significant effect | Significant 个 with increasing abdominal dose | | No significant effect | No significant effect | No significant effect | |
| IUGR | No increased risk | | | | | | | |
| Early or threatened labor | No increased risk | | Significant↑ | | | | | |

| Obstructed labor | No increased risk | no significant effect | no significant effect | | | | Significant个 (10-14 yrs of age at diagnosis) |
|--------------------------------------|-------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---|
| Abnormality of forces of labor | No increased risk | No significant effect | No significant effect | | | | No significant effect |
| Umbilical cord complications | No increased risk | No significant effect | No significant effect | | | | No significant effect |
| Premature rupture of the membranes | No increased risk | No significant effect | No significant effect | | | | No significant effect |
| Fetal problems | No increased risk | No significant effect | | | | | No significant effect |
| Delivery complicated by fetal stress | No increased risk | No significant effect | | | | | No significant effect |
| Long labor | No increased risk | No significant effect | | | | | No significant effect |
| Antepartum hemorrhage | No increased risk | | | | | | |
| Failure to progress | No increased risk | | | | | | |
| Induction of labor | Significant↑ | | | | | | Significant↑ (if 0-14 yrs at diagnosis, but not sign if 15-24 yrs at diagnosis) |
| Vaginal birth | Significant ↓ | | | | | | no significant effect |
| Assisted delivery | No increased risk | No significant effect | | | | | No significant effect |
| Any cesarean section | Significant ↑ | Significant ↑ | | Significant ↑ | | No significant effect | Significant↑ (if 0-14 yrs at diagnosis) |
| Elective/primary cesarean section | Significant 个 | Significant ↑ | | | | | No significant effect |
| Emergency/secondary cesarean section | No increased risk | No significant effect | | | | | No significant effect |
| Uterine scar from previous surgery | No increased risk | No significant effect | | | | | No significant effect |
| Perineal laceration | No increased risk | No significant effect | | | | | No significant effect |
| Low Apgar score | Significant ↑ | Significant ↑ | | No significant effect | | | Significant↑ (if >20 yrs at diagnosis) |
| Postpartum hemorrhage | Significant 个 | Significant↑ | | | | | No significant effect |
| Congenital anomalies/abnormalities | No increased risk | No significant effect |

| Ī | Resusciation in neonates | Significant ↑ | No significant effect | No significant effect | Significant 个 | No significant | No significant effect |
|---|--------------------------|---------------|-----------------------|-----------------------|---------------|----------------|-----------------------|
| | | | | | | effect | |
| | Admission to ICU | Significant ↑ | | | | | |

Level of evidence:

⊕⊕⊕⊕ high quality evidence

⊕⊕⊕ moderate quality evidence

⊕⊕⊖⊖ low quality evidence

⊕⊖⊖ very low quality evidence