| | Setting | | | Patient exclusion criteria | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| Dataset reference | Location and time period a* | Study design | Patient inclusion criteria | History of prior C-sections | Multiple ECV attempts per pregnancy | Transverse or oblique lies b* | Amniotic fluid exclusion cutoff | Other exclusion criteria c* | Handling of missing data |
| **Lau 1997** | Hong Kong<br>2 year period (dates unspecified) | Prospective Cohort Study | Women with singleton breech presentation ≥36wga | Excluded (implied as uterine scar is contraindicated) | Unclear | Unclear | Oligohydramnios, clinically suspected or US-proven | Diabetes or impaired glucose tolerance, heart disease, thyrotoxicosis, ROM, uterine scar, placenta previa, clinically suspected or US-proven IUGR, nuchal cord, abnormal Doppler A/B ratio. | No mention of missing data or lack thereof |
| **Wong 2000** | Hong Kong<br>Ph. 1: Sep 1994 - Jun 1996<br>Ph. 2: Jul 1996 - Sep 1998 | Two-phase Cohort Study (Both Prospective) | Women with singleton breech presentation ≥36wga | None were in the dataset | Included each ECV separately (n=1, Ph. 2) | Unclear | Oligohydramnios, criteria unspecified | IUGR, hypertension, placenta previa | No mention of missing data or lack thereof |
| **Aisenbrey 1999** | USA (Albuquerque, NM)<br>1987-1996 | Prospective Cohort Study | Women with singleton breech presentation ≥37wga | Included<br>(n not given) | Not mentioned in article | Unclear | AFI≤5cm | Placenta previa, history of vaginal bleeding, fetal anomalies, IUGR, previous uterine scar other than low-transverse, non-reassuring NST, EFW>4000g, suspicion of nuchal cord or uterine malformation | No mention of missing data or lack thereof |
| **Dahl 2021** | USA (Chicago, IL)<br>2006 - 2016 | Retrospective Cohort Study | Women ≥18yo who received prenatal care <36wga and who underwent ECV attempt. | Included<br>(n=18, 1.6%) | Only patients with 1 ECV in the pregnancy were included | Included<br>(n=107 oblique or transverse) | None stated | Earlier pregnancy with ECV within study period, suspected placenta or vasa previa, structurally anomalous fetuses, history of cavity-entering myomectomy, bicornate uterus, nonreassuring fetal status before ECV, spontaneous version before ECV attempt, and vaginal breech delivery before scheduled ECV. | All cases included with frequency of missing data reported. Imputation NOT performed. |
| **Newman 1993** | USA (Charleston, SC)<br>Ph. 1: 1984 - 1986;<br>Ph. 2: Oct 1986 - Oct 1992 | Two-phase Cohort Study (Retrospective; Prospective) | Women with singleton gestations having undergone ECV | Included<br>(n not given) | Not mentioned in article | Data excluded, but ECVs performed | Unclear, perhaps SDP<2cm | formal indication for CS, abnormal placentation, vasa previa, 3rd trimester bleeding, non-reactive NST, IUGR, fetal major malformation, uterine malformations, multiple gestation, and deflected fetal head<br>Additionally, nuchal cord, uterine scar, and active labor per Policiano2014 and Vaz de Macedo2015 | No mention of missing data or lack thereof |
| **Tasnim 2012** | Pakistan (Islamabad)<br>4 year period (dates unspecified) | Prospective Cohort Study | Women singleton gestations ≥37wga with breech presentation, fulfilling the criteria for ECV (not specified) | Excluded (implied as uterine scar is contraindicated) | Not mentioned in article | Unclear | AFI < 7cm (However, 1 pt still included) | Previous uterine scar, deeply engaged breech, NRFHR, fetal or placental anomalies, in active labor or any contraindication to vaginal delivery | No mention of missing data or lack thereof |
| **Silva 2018** | Portugal (Lisbon)<br>1997 - Sep 2016 | Retrospective Cohort Study | Women with singleton breech fetuses and medically supervised pregnancies between 36-38wga | Excluded (implied as uterine scar is contraindicated) | Unclear if data used, but performed at institution d* | Data excluded, but ECVs performed | AFI≤5cm | Formal indication for CS, abnormal placentation, vasa previa, 3rd trimester bleeding, non-reactive NST, IUGR, fetal major malformation, uterine malformations, multiple gestation, and deflected fetal head<br>Additionally, nuchal cord, uterine scar, and active labor per Policiano2014 and Vaz de Macedo2015 | Patients excluded |
| **Burgos 2011<br>Burgos 2012 e*** | Spain (Basque Country)<br>Ph. 1: Mar 2002 - Mar 2008;<br>Ph. 2: Apr 2008 - Nov 2010 | Two-phase Cohort Study (Both Prospective) | Women with a singleton pregnancy ≥37wga, a live fetus in a breech position, and no contraindications to vaginal birth | Unclear f* | Unclear | Unclear | Oligohydramnios, criteria unspecified | Placenta previa, placental abruption, fetal compromise, fetal death, severe fetal malformation, Rhesus sensitization, uterine abnormalities and clotting disorders | Unclear |
| **Burgos 2015 e*** | Spain (Basque Country)<br>Mar 2002 - Jul 2012 (Majority of data overlaps with prior articles by Burgos et al.) | Prospective Cohort Study | Women with singleton pregnancies who had a successful, uncomplicated ECV resulting in a fetus in cephalic presentation | Included ≤3 prior CS<br>(n=43, 6.9%), | Unclear | Unclear | AFI<5cm | Pre-ECV criteria: Premature placental abruption, placenta previa, evidence of fetal compromise, fetal death, severe malformations, Rhesus incompatibility, coagulation disorders, indication for CS unrelated to fetal presentation;<br>Post-ECV criteria: urgent C-section as ECV complication (n=7), delivery at another hospital (n=58), reversion to non-cephalic before delivery (n=16) | Multivariate logistic regression performed only on complete cases (n=534). |
| **López-Pérez 2020** | Spain (Murcia)<br>Mar 2013 - Apr 2019 | Retrospective Cohort Study | Women with a singleton ≥36wga fetus in breech presentation or transverse lie. Minors were included. | Included ≤1 prior CS<br>(n=33, 10.4%) | Not mentioned in article | Yes | Anyhydramnios | Contraindications for vaginal birth (2 previous CS, placenta previa) or ECV (anhydramnios, uterine malformation, Rh isoimmunization, severe pre-eclampsia) | Unclear; evidence of missing data is seen in tables |
| **Kok 2011** | The Netherlands (Amsterdam)<br>Aug 2004 - Dec 2006 | Secondary analysis of Randomized Controlled Trial (Nifedpine vs placebo for uterine relaxation; ISRCTN 28715121) | Women with a singleton pregnancy in breech presentation ≥36wga | Included<br>(implied; n not given) g* | Only first ECV attempts were included | Unclear | AFI≤5cm | Contraindication to labor or vaginal birth, a scarred uterus other than transverse in the lower segment, known uterine anomalies, placental abruption in the obstetric history, preeclampsia, maternal cardiac disease, and 3rd-trimester bleeding. IUGR (EFW <5th percentile for GA), fetal anomalies or an extended fetal head, and nonreassuring signs of fetal well-being | Single imputation for the 9.4% of data missing |
| **De Hundt 2012** | The Netherlands (Amsterdam)<br>Aug 2002 - Jan 2009 (excluding those in Kok 2011) | Retrospective Cohort Study | Women with a singleton pregnancy in breech presentation ≥36wga | Included<br>(implied; n not given) g* | Not mentioned in article | Excluded | None stated (presumably the same as Kok 2011) | Contraindication for vaginal labor, placenta abruption in the history, uterus anomalies, suspicion of ROM, HELLP syndrome, preeclampsia or severe pregnancy-induced hypertension, fetus with congenital abnormalities, and IUGR (EFW <5th percentile) | Single imputation for the 4.8% of data missing |
| **Velzel 2018** | The Netherlands (Amsterdam)<br>Aug 2009 - May 2014 | Secondary analysis of Randomized Controlled Trial (Atosiban vs fenoterol tocolysis) | Women ≥18yo and ≥34wga with a singleton fetus in breech position who were scheduled for ECV | Not mentioned in article | Unclear | Included | SDP<2cm | Contraindications to vaginal birth (placenta previa), to ECV (placental abruption, ROM, scarred uterus other than transverse in the lower segment, known uterine anomalies, severe preeclampsia or HELLP syndrome, 3rd-trimester blood loss or 7 days prior to ECV), or contraindication to either atosiban or fenoterol. Also fetal anomalies, NRFH, or suspected IUGR (EFW < 5th percentile for GA). | Multiple imputation (10 times) |
| **Hutton 2017** | Primarily: Europe; Australia; Chile; Canada; Middle east<br>**Early ECV Pilot**: Jul 1999 - Feb 2002;<br>**Early ECV Trial 2**: Dec 2004 - Jun 2008 | Secondary analysis of two Randomized Controlled Trials (both early vs delayed ECV; ISRCTN 56498577); | Women with a singleton fetus with breech presentation. | Included<br>(n not given) | Included last successful ECV attempt (n=138, 11.0%) h* | Included<br>(n=34, 2.7%) | Unclear | Contraindications to ECV, labor, or vaginal birth, increased risk of unstable lie, planned CS, fetus in cephalic presentation, and planned vaginal birth if the fetus was non-cephalic | Patients excluded from multivariate logistic regression. Imputation used for CART analysis. |
| **Ebner 2015** | Germany (Baden-Württemberg)<br>Jan 2010 - Jul 2013 | Retrospective Cohort Study | Patients with a singleton breech pregnancy ≥36wga who had a single ECV attempt. | Excluded | Only patients with 1 ECV in the pregnancy were included | Unclear | None stated | Placental abruption, placenta previa, PROM, and NRFHR patterns, uterine malformations (uterus bicornis), and active breech labor. ECV performed but excluded from analysis for patients without a documented US examination within 21 days or with previous uterine surgery | No mention of missing data or lack thereof |
| **Cobec 2022** | Germany (Baden-Württemberg)<br>Jan 2016 - Mar 2021 | Retrospective Cohort Study | Patients with singleton fetuses in breech presentation who agreed to the maneuver | Included<br>(n=4, 3.5%) | Not mentioned in article | Unclear, implied none in dataset | None stated; However, lowest AFI was 8cm | *Not reported* | No missing of key data |
| **Svensson 2021** | Sweden (southeast region)<br>Jan 2014 - Dec 2019 | Retrospective Cohort Study | Women who underwent an ECV in any of the 7 hospitals in the southeast region of Sweden j* | Included ≤1 prior CS<br>(n not given) | Only first ECV attempts were included | Included | All fluid levels included | *Not reported* | Patients included. Fields with data missing (i.e. BMI, n=88) were not included in the model. |
| **Isakov 2019 and erratum** | Israel (Tel Aviv)<br>Feb 2016 - Jul 2018 | Retrospective Cohort Study | Women with singleton pregnancies and breech presentations between 36-41wga | Included<br>(n not given) | Not mentioned in article | Unclear | AFI<8cm<br>(n=9) | Contraindications to ECV (any contraindication for vaginal delivery, placental abruption, placenta previa, uterine malfomrations), PPROM, NRFHR (n=2), evidence of nuchal cord (n=3), and regular contractions (n=8) | No mention of missing data or lack thereof |
| **Bilgory 2021 and erratum** | Israel (Bnei Brak)<br>Nov 2011 - Dec 2018 | Retrospective Cohort Study | Women ≥37wga with a non-vertex presenting fetus and no contraindications who underwent both an ECV trial and delivery at their institute | Included<br>(n=83, 8.8%) | Included last successful ECV | Included | AFI<5cm | 2+ prior CS, ROM, non-reassuring maternal status (suspected placental abruption, severe preeclampsia), NRFHR, suspected fetal malformation, suspected IUGR or macrosomia, known pelvic or uterine malformation, **women who underwent a trial of ECV during the latent phase of labor, and women who delivered a breech presenting fetus vaginally** | No mention of missing data or lack thereof |
| **Anand 2019<br>Palepu 2021 k*** | India (Puducherry)<br>Jan 2010 k - Dec 2017 | Retrospective Cohort Study | Women who presented with breech presentation >36wga | Included<br>(n=43, 7.0%) | Unclear | Unclear | AFI<5cm | Signs of fetal compromise (NRFHR and/or absent or reversed UA Doppler or cerebral–placental ratio <1.1), fetal death, major malformations, antepartum hemorrhage, Rh-isoimmunization, coagulation disorder, or another indication for CS | No mention of missing data or lack thereof |
| **Zheng 2021** | Mainland China (Fujian)<br>2016 - 2019 | Prospective Cohort Study | Women with singleton breech pregnancies between 37-40wga who underwent ECV attempts. | Excluded (implied as uterine scar is contraindicated) | Unclear | Included | Oligohydramnios, criteria unspecified | Placenta previa, PROM, scarred uterus, multifetal gestation, prenatal hemorrhage, fetal distress, preeclampsia, uterine malformation, and recent uterine bleeding | No mention of missing data or lack thereof |
| **Lin 2022** | Mainland China (Shanghai)<br>Nov 2019 - Apr 2022 | Prospective Cohort Study | Women requiring ECV in a singleton pregnancy with intact fetal membranes, non-cephalic presentation, and >36wga | Not mentioned in article | Not mentioned in article | Included<br>(n=12, 7.9%) | All included | Contraindications to vaginal delivery, placenta previa, placental abruption, fetal or uterine malformations, unexplained bleeding, IUGR associated with abnormal, alloimmunization, and maternal or fetal diseases requiring immediate delivery | No mention of missing data or lack thereof |
| **Dong 2021** | Mainland China (Zhejiang)<br>Apr 2018 - Sep 2019 | Retrospective Cohort Study | Women with a singleton non-cephalic pregnancy ≥36wga willing to accept ECV | Included<br>(implied; n not given) | Only first ECV attempts included | Included<br>(n<6) | SDP<2cm | Contraindication to vaginal birth (placenta previa, placental abruption), any contraindication for ECV (ROM, known uterine anomalies, scarred uterus other than transverse in the lower segment, severe preeclampsia or HELLP syndrome), fetal anomalies or NRFHR | Multiple imputation (10 times by R MICE) |

** This indicates location of patient population, which is not necessarily the location of author affiliations or of the journal.

a* Transverse and oblique lies are generally known to have significantly higher success rates than true breech presentations. As such, authors may decide to exclude them from their model datasets, but still perform the ECVs on these patients.

b* This reports all other exclusions not in the prior categories. The text was standardized to be more easily compared across articles.

c* In other articles by Silva et al. (e.g. Vaz de Macedo 2015), only the first ECV was used.

d* Burgos 2015 used a dataset significantly overlapping the datasets from Burgos 2011 and Burgos 2012.

e* Burgos 2015 stated "Vaginal birth after cesarean delivery is standard practice at the study hospital and is attempted when there are no contraindications (≥1 previous classic cesarean,previous uterine surgery accessing the uterine cavity, previous uterine rupture, contraindications for vaginal birth, or >3 cesareans)". However, this was not mentioned in Burgos 2011 and Burgos 2012.

f* Kok 2011 and De Hundt 2012 included both vaginal and "abdominal" delivery in their definition of multiparity. Therefore, it is implied that prior C-sections were not an exclusion criteria for these studies.

g* Hutton 2017 included the last successful ECV attempt. If all failed, then they included the first ECV failure. Multiple attempts occured in 138 (11.0%) cases.

h* Svensson 2021 did not detail specific inclusion or exclusion criteria.

j* Anand 2019 and Palepu 2021 were from the same group of authors. Anand 2019 reports their dataset began on Jan 1, 2010, while Palepu 2021 reports Jan 1, 2011. They both had the same number of ECVs and reported the same end date (Dec 31, 2017). Thus, we presume that the earlier article had a typo in the earlier start date.