

# Multiple Pregnancy: Diagnosis and Management

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# Twin Gestation

1997-2000

Expected

Total births USA

Actual

15,856,807

Twins: 43,329

Twins: 96,726

ART



Twins



Triplets

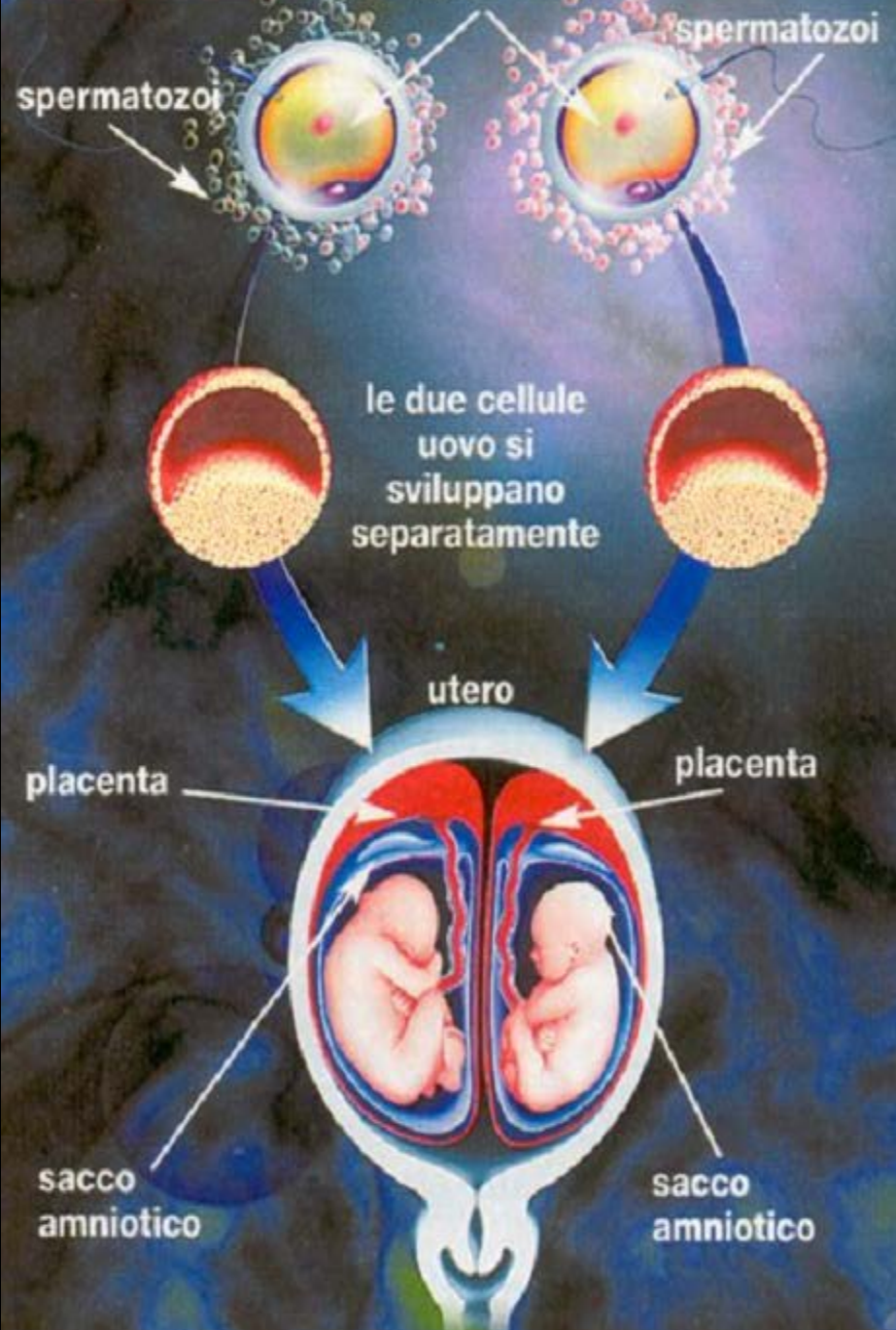


# OUTLINE

- Chorionicity
- Complications of the twin gestations
- Anomalies in twins
- Growth in twins

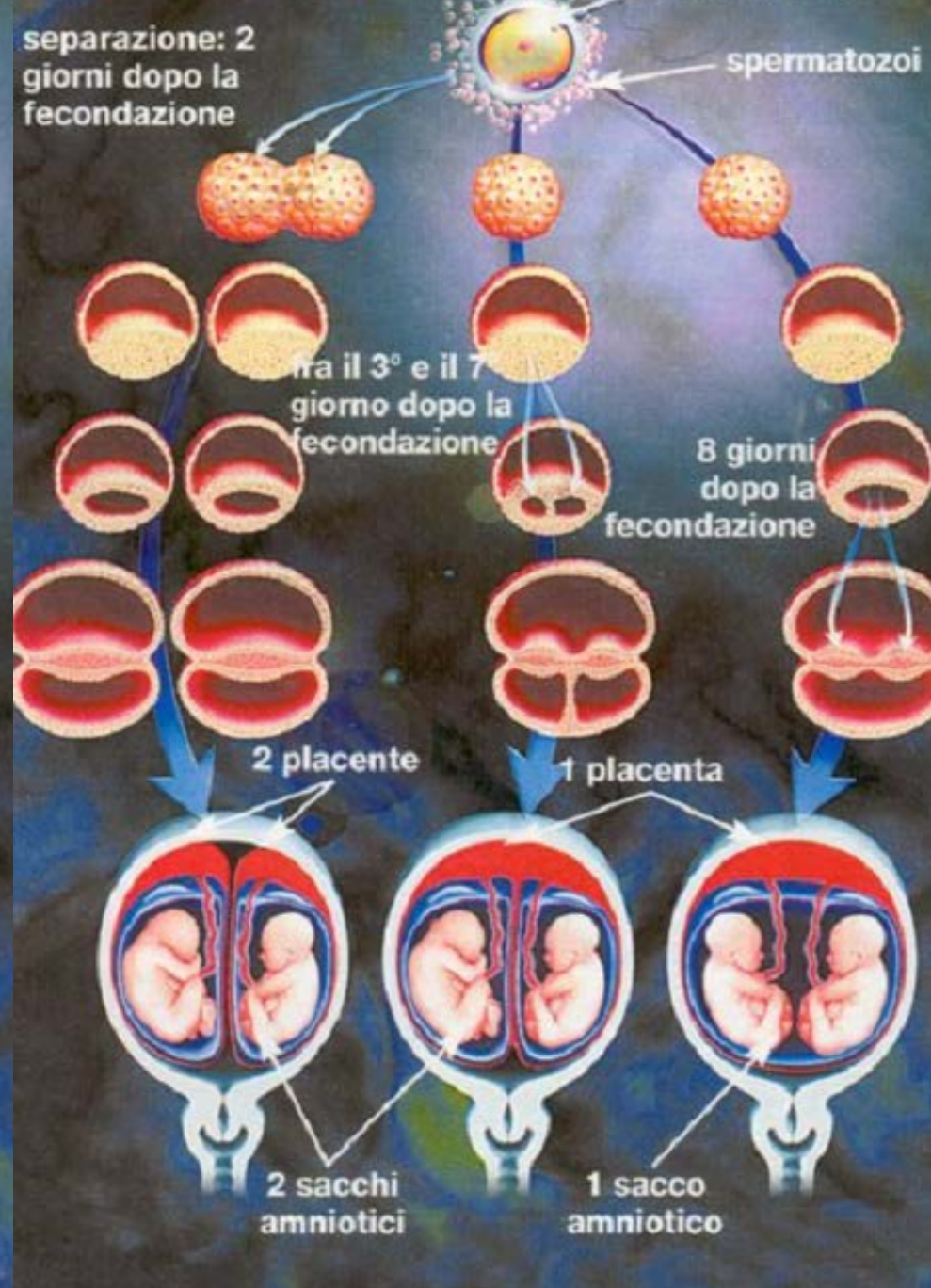
# GEMELLI DIZIGOTI

2 cellule uovo

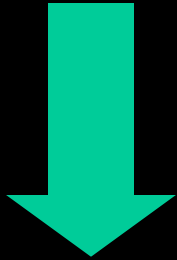


# GEMELLI MONOZIGOTI

1 cellula uovo



# Dizygotic twins



80 %

# Monozygotic twins



20 %

TABLE 7-1. **Types of Monozygotic Twins Related to Time of Division After Ovum Fertilization**

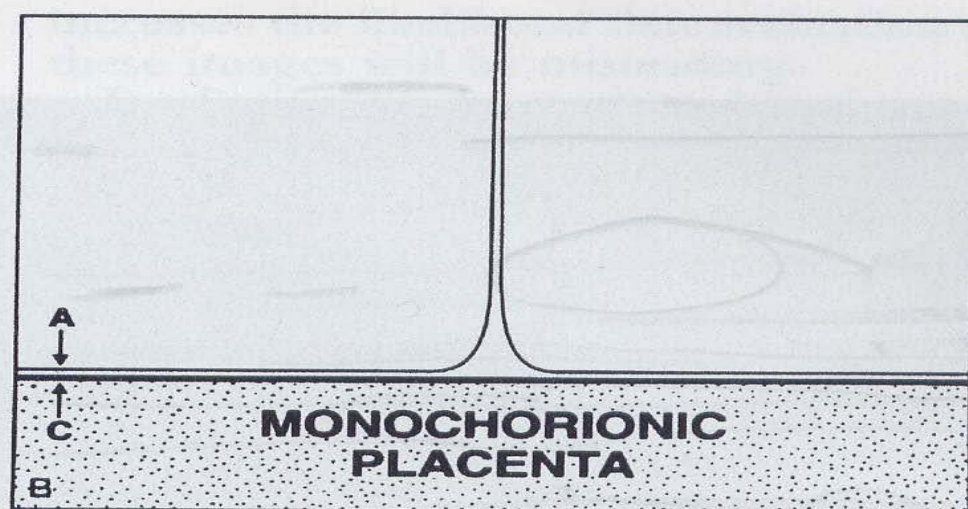
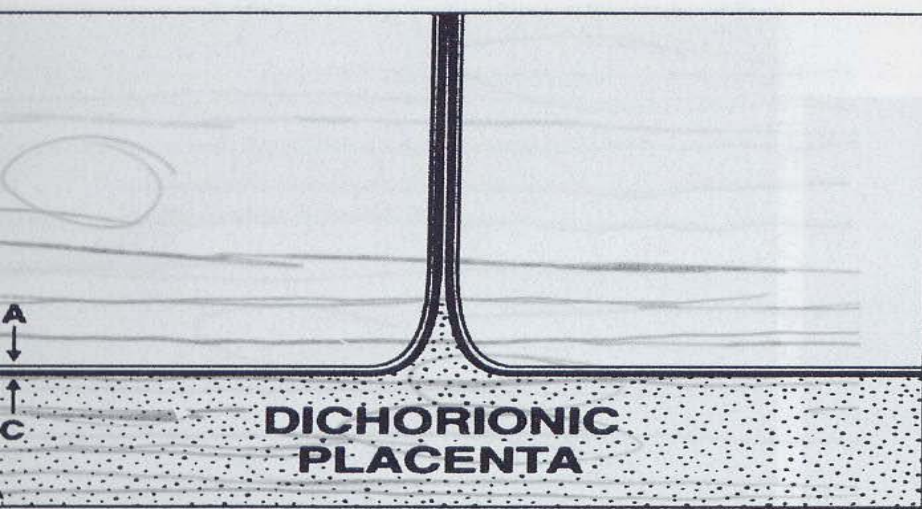
Chorion	Amnion	Time to Division (days)	Frequency
Dichorionic	Diamniotic	0-3	25%
Monochorionic	Diamniotic	4-8	75%
Monochorionic	Monoamniotic	>8	Approx. 1%
Monochorionic	Monoamniotic (conjoined twins)	>13	Rare

TABLE 7-3. **Factors Influencing Dizygotic Twinning Rates**

Factor	Effects on Rate
Maternal ethnicity	Blacks > whites > Asians
Maternal age	Increases with age
Maternal parity	Increases with parity
Maternal genetics	Increases with positive family history
Infertility treatment	Increases with multiovulatory drugs

# Diagnosis of Coryonicity

- Sex/Placentation
- Yolk sac and membranes
- T-sign
- Twin peak or Lambda sign



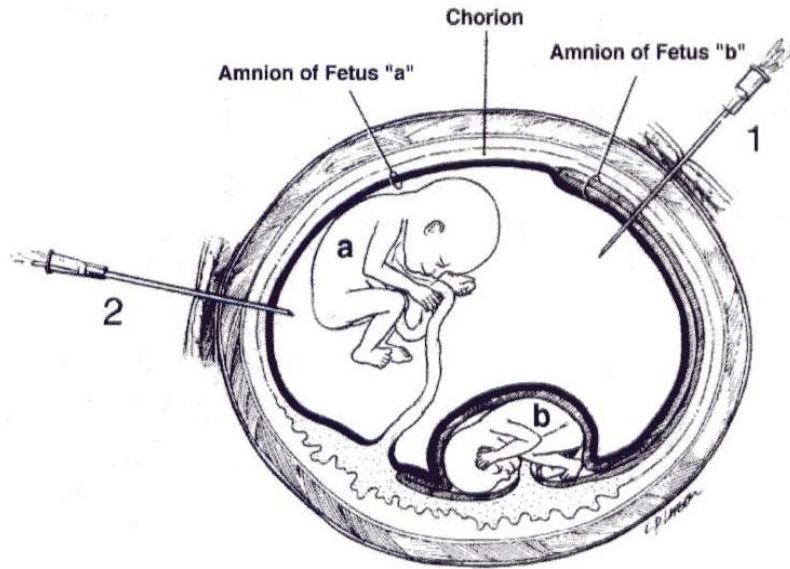
**TABLE 29-4. RISKS OF AT LEAST ONE CHROMOSOMAL ABNORMALITY IN WHITE SINGLETON AND TWIN GESTATIONS BASED ON MATERNAL AGE AT THE TIME OF AMNIOCENTESIS**

Maternal Age (yr)	Singleton Gestation		Twin Gestation	
	Down Syndrome	All Chromosomal Abnormalities	Down Syndrome	All Chromosomal Abnormalities
25	1/885	1/1533	1/481	1/833
26	1/826	1/1202	1/447	1/650
27	1/769	1/943	1/415	1/509
28	1/719	1/740	1/387	1/398
29	1/680	1/580	1/364	1/310
30	1/641	1/455	1/342	1/243
31	1/610	1/357	1/324	1/190
32	1/481	1/280	1/256	1/149
33	1/389	1/219	1/206	1/116
34	1/303	1/172	1/160	1/91
35	1/237	1/135	1/125	1/71
36	1/185	1/106	1/98	1/56
37	1/145	1/83	1/77	1/44
38	1/113	1/65	1/60	1/35
39	1/89	1/51	1/47	1/27
40	1/69	1/40	1/37	1/21
41	1/55	1/31	1/29	1/17
42	1/43	1/25	1/23	1/13
43	1/33	1/19	1/18	1/10
44	1/26	1/15	1/14	1/8
45	1/21	1/12	1/11	1/6

From Meyers C, Adam R, Dungan J, et al: Aneuploidy in twin gestations: When is maternal age advanced? *Obstet Gynecol* 89:248; 1997. Reprinted with permission from the American College of Obstetricians and Gynecologists.



# Twin to twin transfusion syndrome

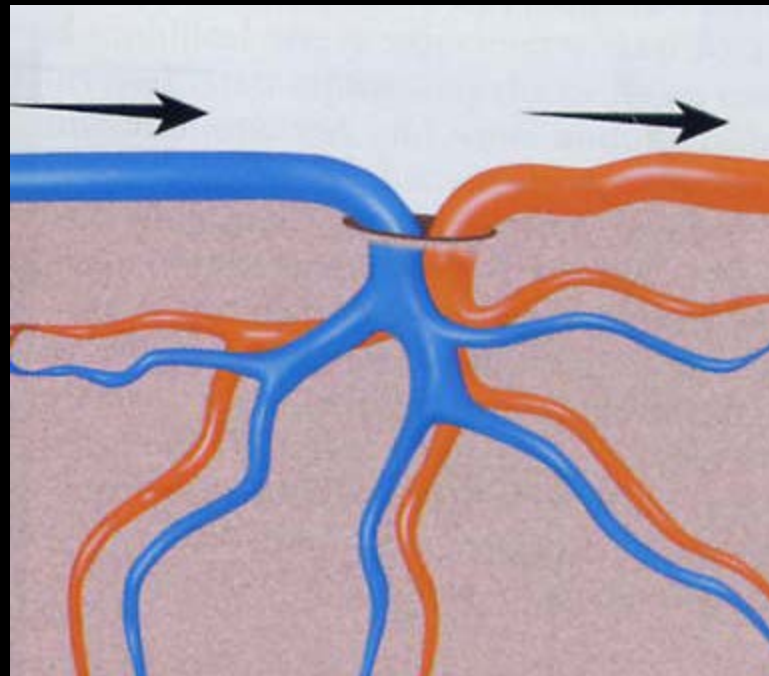


Incidence = from 5 to 15% of MC twin pregnancy

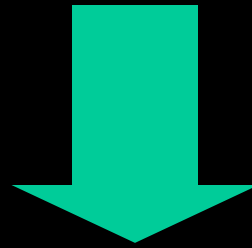
No treatment = 80-90% of fetal death

Possible therapy

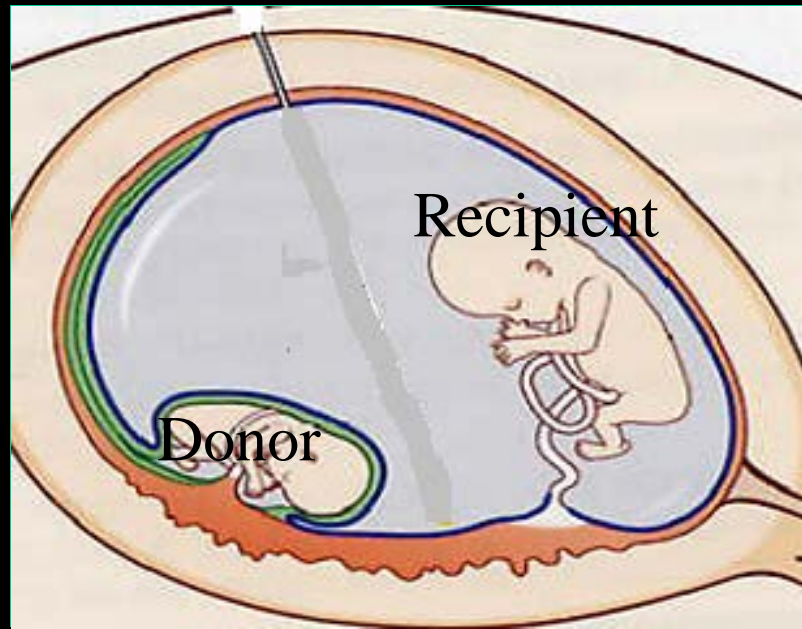
- Septotomy
- Amnioreduction
- Selective laser coagulation



Placental Anastomosis AV; AA; VV=unbalanced



TTTS



- **I Abnormal amniotic fluid level**
  - **II Collapsed bladder in donor**
  - **III Abnormal Doppler flow in either twins**
  - **IV Hydrops in either twin**
  - **V Death of one twin**
- ➡ Amnioreduction
- ➡ SLPC

