The current situation and development points are as follows:

A. Items related to tumor markers

Test items	Determination method	Current state	Problems, trends in development
A-1. KMO-1	EIA RPHA	Washed twice in 2 steps with EIA, micro-plate method	Improved to 1 step method
A-2. CA-50	EIA beads FIA	Cut-off level of 40 U/ml. There are two washing steps that are somewhat complicated. Semi-automated type.	Pharmacia markets on FIA kit
A-3. ST439	EIA	Automation is a problem with EIA bead method.	Nihon Kayaku
A-4. BFP	EIA	Use of serum as the specimen, use of urine as the specimen, or use of both as the target are problems.	Nihon Kayaku '90 sales anticipated
A-5. DUPAN-2	EIA Micro-plates	Cut-off level of 150 U/ml. Corona electrical device has reader with concentration-conversion ROM	Being prepared for expansion of indications and treatment with markers for gall bladder diseases (Kyowa Medex)
A-6. SLX	RIA	RIA bead method	Development of NON-RIA method is a problem.
A-7. TPA	RIA	Cut-off level of 100 U/ml. Improved from conventional devices in terms of ease of use and reproducibility. Determination time is curtailed from 3 days to 1 day.	TPA drafting know-how is difficult and there is little prospect for new entries.
A-8. SCC antigen	RIA beads	Improved control and sensitivity and curtailed determination time with use of monoclonal antibody when compared to conventional double antibody method. Also improved in that there is only one washing.	EIA development (Dainabot)
A-9. NSE	RIA double antibody method EIA Sandwich method	RIA is a double antibody method and therefore, the procedure is somewhat complicated. EIA used polyethylene beads.	Eiken plans to market EIA in June of 1988
A-10 CA19-9	RIA EIA	Mainly RIA. EIA is very difficult to fully automate because it uses the bead method.	Development is necessary for EIA to be the main trend in terms of future popularity.