



Making the WTA Top 100

Transition from
Top 10 ITF Junior to Top 100 WTA Tour
(1996 – 2005)

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Introduction & Background

The study investigated transition from a Top 10 ITF Junior Circuit rank to Top 100 WTA Tour rank for 10 years, between 1996 and 2005. There have been a number of studies that have profiled average age of top-ranked male and female tennis players (Tennis Canada, Treleven & Miley). This study provides an up-to-date profile of players' average age, transition time and years in the Top 100. In addition, the win:loss ratios, number of Junior and Senior events played between 14-18 years of age and ranking in the years prior to entering the Top 100. The intended use of this study was to establish a range of statistical benchmarks coaches and Federations can use for players aspiring at a professional career on the WTA Tour.

Methodology

- The study's data was obtained from the ITF and WTA Tour websites:
 - www.itftennis.com/juniors / www.itftennis.com/womans / www.wtatour.com
- Data was collated on players meeting the criteria of:
 - Top 10 ITF Junior year-end rank between 1996 – 2005. (90 players*)
 - Top 100 WTA Tour Players as at February 2, 2009. (100 players)
- Basic statistical measures of mean, median, standard deviation, minimum, maximum, were used to profile players.

* - Duplicate names were removed as players finished in Top 10 for more than one year in a row.

Glossary

- **Age** – chronological age of player based on date-of-birth (DOB).
- **Rank** – The year-end ranking on ITF Junior Circuit, ITF Pro Circuit and WTA Tour.
- **Age at First Year End Rank** – The chronological age of player at time of ranking.
- **Age at Top 100 Rank** – The chronological age of player when first Top 100 rank achieved.
- **Age at Highest WTA Rank** – The chronological of player at time of highest WTA rank.
- **Years in Top 100** – The number of years a player was ranked inside the Top 100 on WTA Tour.
- **Transition Time** – The number of years taken to achieve Top 100 WTA Tour rank from first year-end rank.
- **Win:Loss (W:L) Ratio (MD)** – Calculation of Career (ITF Pro Circuit & WTA Tour) win / loss ratio in main draw matches. Breakdown of WTA Tour, ITF Pro Circuit and ITF Junior Circuit.
- **ITF Junior Circuit** – The world governing body tournament circuit for age 18/U tennis players
- **ITF Pro Circuit (PC)** - The world governing body tournament circuit for over 18 yrs tennis players
- **WTA Tour** – The Woman's Tennis Association professional tournament circuit.

Discussion:

Top 100 WTA Tour Players

Table 1.0 outlines the profile (mean) of a Top 100 WTA Tour player as of 24.3 years with a minimum (min) and maximum (max) age of 18 and 35 years.

- The first ITF Pro Circuit rank was obtained at 16.8 years (min 14.5 / max 25.3) and a Top 100 WTA Tour rank at 21.6 years (min 16.0 / max 36.3). Players remained in the Top 100 for 3.9 years (min 0.0 / max 11.0).
- The highest average WTA Tour rank was 32.0 (min 1.0 / max 94.0) and obtained at age 22.2 (min 16.6 / max 31.8), with a transition time of 4.9 years (min 1.0 / max 11.0). To achieve this the player initially required a W:L Ratio of 1.6:1 (min 0.8 / max 4.7) on the ITF Pro Circuit, then 1.2:1 (min 0.5 / max 4.7) on WTA Tour. A career W:L Ratio of 1.6:1 (min 0.8 / max 4.7) was required.
- The average year-end rank was calculated for up to 5 years from a Top 100 rank. Results are below with an approximate ranking proposed also.

Years Prior to Top 100 Rank	5	4	3	2	1	(0)
Average Year End Rank	545	482	384	314	182	67
<i>Approx. Year End Rank</i>	<i>550</i>	<i>500</i>	<i>400</i>	<i>300</i>	<i>200</i>	<i>Top 100</i>

Top 10 ITF Junior Circuit Player who achieved Top 100 WTA Tour Rank

Table 2.0 outlines the profile (mean) of a Top 10 ITF Junior Circuit player (1996 – 2005) who achieved a Top 100 WTA Tour rank. Sixty-five (65) players comprised this group after duplicate names were removed as some players finished with Top 10 rank for more than one year in a row.

Senior Profile

- The first ITF Pro Circuit rank was obtained at 16.3 years (min 15.0 / max 19.0) and a Top 100 WTA Tour rank at 19.0 years (min 15.0 / max 27.0). Players remained in the Top 100 for 3.6 years (min 1.2 / max 11.0).
- The highest WTA Tour rank was obtained at age 20.9 (min 16.2 / max 26.8), with a transition time of 3.7 years (min 1.0 / max 9.0). To achieve this the player initially required a W:L Ratio of 2.5:1 (min 0.7 / max 6.5) on the ITF Pro Circuit, then 1.2:1 (min 0.6 / max 4.5) on WTA Tour. A career W:L Ratio of 1.6:1 (min 0.8 / max 4.6) was required.

Junior Profile

- A W:L Ratio of 3.6:1 (min 1.8/ max 7.8) was required in the ITF Junior Circuit to achieve a Top 10 year end rank. Players competed in 35 (min 10 / max 80) ITF Junior Circuit events and participated in 119 (min 32 / max 229) matches during their junior career.
- Players competed in 50 (min 6 / max 77) ITF Pro Circuit events and participated in 125 (min 26 / max 240) matches between 15 – 18 years.
- The average year-end rank was calculated for up to 5 years from a Top 100 rank. Results are below with an approximate ranking proposed also.

Years Prior to Top 100 Rank	5	4	3	2	1	(0)
Average Year End Rank	535	355	196	135	115	90
<i>Approx. Year End Rank</i>	<i>550</i>	<i>350</i>	<i>200</i>	<i>150</i>	<i>125</i>	<i>Top 100</i>

Table 2.1 Illustrates the number of ITF Junior Circuit events players competed in by age. 83% had begun playing by age 14. This peaked to 95% at 15 years and dropped to 84% by year 16. It continued to fall with only 80% at 17 years and 38% by 18 years competing on the ITF Junior Circuit.

Table 2.2 Illustrates the number of WTA Tour and ITF Pro Circuit events players competed in by age. 86% had begun playing by age 15. This rose to 94% at 16 years and peaked at 100% by year 17.

Table 2.3 Illustrates the combined number of ITF Junior Circuit, WTA Tour and ITF Pro Circuit (Senior) events players competed in by age:

- At age 15, a total of 16 events (Junior 11 / Senior 5) were played with a 70/30% proportion to Juniors.
- By age 16 this had increased to 22 events (Junior 12 / Seniors 10) with a 55/45% split to Juniors.
- At age 17 a slight increase saw players competing in 23 events (Junior 9 / Senior 14) with a 40/60% swing towards Senior events.
- By the 18th year, the Top 10 ITF juniors that achieved a Top 100 WTA Tour rank competed in 26 events (Junior 5 / Senior 21) with a further swing toward Senior events of 20/80%

WTA Tour Top 100 Player Profile*

* Week of February 2, 2009

Table 1.0
Senior Profile

	Average	Std. Dev	Min	Max	Median	Count
Age (yrs)	24.3	3.7	18.0	35.0	24.1	100
Age at Highest WTA Rank	22.2	3.0	16.6	31.8	21.8	
Age at First Year End Rank	16.8	1.9	14.5	25.3	16.4	
Age at Top 100 Rank	21.6	3.3	16.0	36.3	21.2	
Years in Top 100	3.9	3.0	0.0	11.0	3.0	
Transition Time Top 100 (yrs)	4.9	2.2	1.0	11.0	4.0	
W:L Ratio (MD)						
- Career	1.6	0.6	0.8	4.7	1.5	
- WTA Tour	1.2	0.7	0.5	4.7	1.0	
- ITF Pro Circuit	1.6	0.6	0.8	4.7	1.5	

WTA Top 100 Player Profile

Table 1.0 – Profiles WTA Tour Top 100 players.*

(MD) – Main Draw

* - February 2, 2009.

	5	4	3	2	1	(0)
Years Prior to Top 100 Rank						
Average Year End Rank	545	482	384	314	182	67
<i>Approx. Year End Rank</i>	<i>550</i>	<i>500</i>	<i>400</i>	<i>300</i>	<i>200</i>	<i>Top 100</i>

ITF Top 10 Junior to Top 100 WTA Tour Player Profile (1996 – 2005)

Table 2.0	Average	Std. Dev	Min	Max	Median	Count
Senior Profile						65* * Duplicate Names removed
Highest WTA Rank	32.0	22.5	1.0	94.0	29.5	
Age at Highest WTA Rank	20.9	2.4	16.2	26.8	20.4	
Age at First Year End Rank	16.3	1.3	15.0	19.0	16.0	
Age at Top 100 Rank	19.0	2.5	15.0	27.0	18.0	
Years in Top 100	3.6	2.5	1.0	11.0	3.0	
Transition Time Top 100 (yrs)	3.7	2.0	1.0	9.0	3.0	
W:L Ratio (MD)						
- Career	1.6	0.7	0.8	4.6	1.5	
- WTA Tour	1.2	0.7	0.2	4.5	1.0	
- ITF Pro Circuit	2.5	1.1	0.7	6.5	2.3	

Top 100 Junior (1996 – 2005) to Top 100 WTA

Table 2.0 – Profiles sixty-five* girls who finished with a Top 10 Junior ITF Year End Rank between 1996 – 2005 who have achieved a Top 100 WTA Senior Rank.

(MD) – Main Draw

* - Duplicate names removed.

Junior Profile						
ITF Junior W:L Ratio	3.6	1.3	1.8	7.8	3.3	
ITF Junior Matches Played	119	32	32	229	111	
ITF Junior Tournaments Played	35	13	10	80	34	
WTA / ITF PC Matches Played	125	33	26	240	116	
WTA / ITF PC Tournaments Played	50	14.5	6	77	51	
<hr/>						
Years Prior to Top 100 Rank	5	4	3	2	1	(0)
Average Year End Rank	535	355	196	135	115	90
<i>Approx. Year End Rank</i>	<i>550</i>	<i>350</i>	<i>200</i>	<i>150</i>	<i>125</i>	<i>Top 100</i>

ITF Top 10 Junior to Top 100 WTA Tour Player Profile (1996 – 2005)

Table 2.1	ITF Junior Profile					
	Age & Number of Events per Year					
Years	13	14	15	16	17	18
Mean	0	7	11	12	9	5
Std Dev	0	6	6	5	5	5
Min	0	1	1	3	1	1
Max	0	21	24	29	19	17
Median	0	6	11	13	8	2
%	0%	83%	95%	84%	80%	38%

Table 2.2	WTA + ITF Pro Circuit Profile					
	Age & Number of Events per Year					
Years	13	14	15	16	17	18
Mean	0	0	5	10	14	21
Std Dev	0	0	4	5	6	6
Min	0	0	0	0	0	6
Max	0	0	13	22	26	34
Median	0	0	5	10	15	22
%	0%	0%	86%	94%	100%	100%

Tournament Profile (ITF Junior & WTA / ITF Pro C)				
Age & Number of Events per Year				
Table 2.3				
Age Profile	15	16	17	18
Total Events	16	22	23	26
Junior	11	12	9	5
Senior	5	10	14	21
Junior %	67%	55%	39%	19%
Senior %	33%	45%	61%	81%
Est. %	70	55	40	20
	30	45	60	80
<i>15% shift to Seniors from Juniors at year 16 & 17. 20% shift to Seniors from Juniors at year 18.</i>				

Top 100 Junior (1996 – 2005) to Top 100 WTA

Table 2.1 – Profiles the number of Junior Events played per year by age.

Table 2.2 – Profiles the number of Senior Events (WTA Tour and ITF Senior Circuit) played per year by age.

Table 2.3 – Profiles the combined number of ITF Junior and Senior Events (WTA Tour and ITF Senior Circuit) played per year by age. Also illustrated is the ratio of Junior and Senior matches between age 15 – 18 yrs.



Findings

Analysis of Top 100 WTA Tour players (Feb 09) and Top 10 ITF Junior Circuit players from 1996 – 2005 who achieved a Top 100 WTA Tour rank in their career, indicated:

- (1) Career W:L Ratio of 1.6:1 on WTA Tour, 2.5:1 on the ITF Pro Circuit and 3.6:1 on the ITF Junior Circuit.
- (2) First ITF Pro Circuit rank achieved at 16.3 years.
- (3) Transition time from first year-end rank to Top 100 WTA Tour of 3.7 years at an age of 19.0 years.
- (4) Highest WTA Tour rank achieved approximately one year after entering WTA Tour Top 100 at 20.9 years with an average of 3.6 years inside Top 100 rank.
- (5) Players competed in an average of 50 ITF Pro Circuit / WTA Tour events and participated in 125 matches between age 15 – 18 years.
- (6) Players competed in an average of 35 ITF Junior Circuit events and participated in 119 matches between age 14-18 years.
- (7) 72% of players who achieved a Top 10 ITF Junior ranking between 1996-2005 achieved a career high WTA ranking of Top 100.
- (8) It is important to remember average age of WTA Top 100 is 24.3 years. This is on average 7.5 years after players achieved their first ITF Pro Circuit year-end ranking.
- (9) The following ranking benchmarks could be used as an indicator prior to a Top 100 WTA Tour ranking:

Years Prior to Top 100 Rank	5	4	3	2	1	(0)
Average Year End Rank	535	355	196	135	115	90
<i>Approx. Year End Rank</i>	<i>550</i>	<i>350</i>	<i>200</i>	<i>150</i>	<i>125</i>	<i>Top 100</i>

Competition Based Development Schedule

It is recommended that athletes follow a long-term Competition Based Development Schedule that is athlete centred, coach driven and sport science validated. The advantages are, athletes reach pinnacle performance at selected times with training arranged to reach a collective peak in technical, tactical, physical, mental and nutritional components. Work/rest ratios established to avoid overtraining, boredom and burnout. Injury prevention programs and sustained rest periods based on athlete growth and development can be administered ensuring the long-term health and wellbeing needs of the athlete are met at all stages of development.

A Development Schedule should contain:

- (1) **Development Blocks:** Clearly defined weeks of development are created within an annual calendar. Blocks may range from 2 to 8 weeks in length and are centred on the acquisition of fundamental tennis and athletic skills. While competition is not discouraged, the aim of each block is refinement of the biomechanics of stroke production and expansion of athletic capabilities.
- (2) **Development Weeks:** A seven-day program that has sufficient rest periods each day and a minimum of 1.5 days rest per week. The foundation of any athletic program is a holistic week that contains:
 - a. Enrolment in an academic environment that compliments athletic development. Participation in ITF Junior Tennis School (www.itfjuniortennisschool.com) and completion of WTA Professional Development programs is highly encouraged also.
 - b. Access to medical screenings and network of primary health care providers.
 - c. Relationships based on professional conduct from qualified and vetted coaches, trainers and support personnel.
 - d. Positive parental environment and extended support network free from dual-role relationships.
 - e. Active interests outside of tennis – friends, hobbies.
- (3) **Pre-Competition Weeks:** The aim of Pre-Competition weeks is to fine-tune the athlete for competition. The emphasis is placed on strategical and tactical development. Athletes learn to identify and understand their style of play by improving shot selection, decision-making and point construction. Training is designed to simulate match conditions and maximise competitive adaptations under pressure. Matchplay is used to evaluate strengths and weaknesses of athletic capabilities.
- (4) **Competition Weeks:** The aim of Competition weeks is to ‘train to win’ with the objective of reaching a maximum level of performance. As athletes approach their athletic and biomechanical limitations, the psychological capacities play an increasingly larger role in performance. Athletes are encouraged to positively review and evaluate competitive performances with trusted stakeholders and continually set long and short-term objectives based on the ‘big picture’ of development.

- (5) **Rest (Active / Total) Weeks:** The aim of Rest weeks is athletic and psychological regeneration. Athletes are provided the necessary time to recover from the physical and mental stresses of competition and training. During active rest weeks, athletes work at an easy pace for 30-90 minutes cross training with other sports in an effort to expand motor coordination. During total rest weeks, athletes are encouraged to cease all athletic activities. Massage, meditation, sleep, a balanced nutritional intake and yoga are all encouraged.

Table 4.0 outlines recommended Development Schedules, total tournaments, W:L ratio and ranking benchmarks for athletes between 14-18 years.

Table 4.0

Circuit (years)	(1)	(2)	(3)	(4)	(5)
Age (years)	14	15	16	17	18
Developmental Blocks	4	4	3	2	2
Developmental Weeks	16	16	14	14	12
Pre-Competition Weeks	10	8	6	6	6
Competition Weeks	16	18	22	24	26
Rest (Active / Total) Weeks	10	10	10	8	8
Ratio Development: Competition	1:1	->	1:1.5	->	1:2
Total Tournaments	15	20	25	25	25
• National / Regional	5	5	5	-	-
• ITF Junior Circuit	10	10	10	10	5
• ITF Pro Circuit / WTA Tour	0	5	10	15	20
Benchmark W:L Ratio:					
• ITF Juniors	1.5	2.0	2.5	3.0	3.0
• ITF PC / WTA Tour	0.5	0.75	1.0	1.25	1.5+
Benchmark Rank:					
• ITF Junior Circuit	200	100	50	Top 20	Top 10
• ITF Pro Circuit / WTA Tour	-	-	500	350	200

The above recommendations are based on the assumption that an athlete is of sufficient standard and physical, psychological, developmental maturity to compete on the ITF Junior Circuit, ITF Pro Circuit and WTA Tour.

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