

XC-SPI Historical Success & Championship Odds Framework

Postmodern Era historical title odds now; full current-model odds only after athlete-simulation calibration

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Abstract

This release adds a historically grounded betting-style layer without reviving the retired Preseason Score-to-lognormal shortcut. The **Preseason Score** remains a lower-is-better current roster-strength index. The new **Historical Success Model** uses Postmodern Era (Super-Shoe Era onward) NCAA team profiles from 2020–2024 and next-season outcomes from 2021–2025 to estimate title, podium, and top-10 success. Raw historical title rates are normalized within the displayed Top 25 to create a coherent **Top-25-conditional Historical Title Market**. These historical odds may differ from the Power Ranking because they answer a different question. They are not yet the final XC-SPI current-athlete championship probabilities.

1. Three Different Objects

1. **Power Ranking / Preseason Score**: who looks strongest on the audited 2026 roster right now.
2. **Historical Success**: what Postmodern Era teams with similar scoring shape tended to become one season later.
3. **Full XC-SPI Championship Odds**: eventually, what the current athlete-level simulator says after availability, selection, race adjustment, exact NCAA scoring, and probability calibration are active.

The first two are public now. The third remains gated. The historical order is explicitly allowed to differ from the Preseason Score order.

2. Historical Title Market

Let r_j be the Historical Success Model's raw title rate for current team j . Those profile probabilities are estimated team by team and need not sum to one across the current field. A mutually exclusive title market must sum to 100%, so the public historical title share is

$$p_j^H = \frac{r_j}{\sum_{\ell=1}^{25} r_\ell}. \quad (1)$$

The resulting market is explicitly **conditional on the displayed Top 25**. It does not allocate a separate reserve to an unranked team. This is a historical benchmark, not a claim that the current NCAA title can only be won by the Top 25.

For a historical title share p^H , fair American odds are

$$O_{US}^H = \begin{cases} +100 \frac{1 - p^H}{p^H}, & p^H < 0.5, \\ -100 \frac{p^H}{1 - p^H}, & p^H \geq 0.5. \end{cases} \quad (2)$$

Public historical prices are rounded to the nearest 25 to avoid fake precision.

3. 2026 Men's Historical Odds

Table 1: Men's Postmodern Era historical benchmark. Title share is Top-25 conditional; podium/top-10 are direct Historical Success rates.

Hist. title	Power	Team	Title share	Fair line	Podium	Top 10
1	1	Iowa State	26.3%	+275	65.9%	84.5%
2	2	New Mexico	18.4%	+450	47.6%	73.3%
3	5	Colorado	8.6%	+1075	30.1%	63.0%
4	3	Alabama	7.8%	+1175	39.1%	68.0%
5	4	Oklahoma State	6.6%	+1425	32.6%	58.3%
6	7	Wake Forest	5.3%	+1800	28.3%	54.5%
7	6	BYU	4.0%	+2375	22.1%	52.1%
8	8	Louisville	3.8%	+2550	19.8%	46.0%
9	9	Oregon	3.5%	+2775	17.9%	43.9%
10	12	Notre Dame	2.8%	+3500	14.9%	40.2%
11	10	Washington State	2.5%	+3925	16.9%	40.4%
12	14	Virginia Tech	2.5%	+3925	11.1%	33.7%
13	13	Michigan State	1.5%	+6725	8.4%	32.6%
14	11	Eastern Kentucky	1.0%	+10350	5.3%	22.7%
15	21	Butler	0.9%	+10775	5.0%	24.3%

Iowa State remains first by both current Power Ranking and historical title share. The first meaningful reordering occurs behind the leaders: Colorado is fifth by Preseason Score but third in the historical title market, while Alabama and Oklahoma State remain ahead of Colorado in the Power Ranking. That difference comes from scoring shape, not a manual override.

4. 2026 Women's Historical Odds

Table 2: Women's Postmodern Era historical benchmark.

Hist. title	Power	Team	Title share	Fair line	Podium	Top 10
1	1	NC State	26.3%	+275	68.6%	88.1%
2	5	West Virginia	10.4%	+850	38.2%	66.5%
3	2	BYU	9.8%	+925	49.7%	79.1%
4	4	New Mexico	7.4%	+1250	29.2%	62.5%
5	6	Oregon	6.1%	+1550	21.7%	47.3%
6	8	Stanford	5.4%	+1750	20.0%	45.4%
7	18	Arkansas	5.3%	+1775	18.6%	41.0%
8	9	Notre Dame	5.2%	+1825	19.9%	45.2%
9	16	Florida	4.3%	+2200	18.2%	43.0%
10	3	Iowa State	2.5%	+3925	15.4%	38.9%
11	12	South Carolina	2.4%	+4150	10.8%	36.0%
12	15	Northwestern	2.2%	+4400	7.7%	29.7%
13	7	Alabama	2.2%	+4525	14.2%	35.6%
14	11	Colorado	2.1%	+4550	7.8%	31.4%
15	13	Utah	1.9%	+5050	7.5%	30.6%

The women's historical layer diverges more strongly from the Power Ranking. NC State remains first. BYU and West Virginia are next in the historical title market. Iowa State is third by Preseason Score but much lower historically because its current audited profile is front-loaded and carries a much weaker fifth adjusted runner. The Power Ranking is not changed by that result: the historical table is a risk/persistence lens, not a replacement ranking.

5. Podium and Top-10 Odds

Podium and top-10 are not mutually exclusive across teams: four teams can podium under the XC-SPI definition used here (1st–4th), and ten teams can finish top 10. Therefore each team's direct Historical Success rate can be translated individually into an illustrative fair price without forcing the probabilities to sum to one. If p_E is a Historical Success rate for event E , then $d_E = 1/p_E$ and the same American-odds formula applies. XC-SPI reports the probabilities in the public tables because they are easier to interpret than five-digit longshot prices.

6. Why Historical Odds Are Not Forced to Match the Power Ranking

Preseason Score summarizes central current roster strength. Historical Success also responds to the **shape** of that strength: front-runner quality, fifth-runner exposure, and depth behind the five. A top-heavy team can have a strong central score but historically convert less reliably to podium/top-10 outcomes. A slightly weaker central team can have a profile that historically produced a higher floor. The disagreement is therefore information, not a defect to be corrected.

7. What Still Does Not Count as Full XC-SPI Odds

Historical Title Odds do not model these particular 2026 athletes race by race. They do not directly incorporate future injuries, actual 2026 form, course/weather response, lineup selection, or simulated NCAA displacement. Full XC-SPI Championship Odds will eventually follow

Runner Strength → Chance to Race/Make the Seven → Race Adjustment → NCAA Simulation → Probability Accu

The full probability layer can use the Historical Success Model as a calibration/benchmark input, but the historical rate is not simply averaged 50/50 with the athlete simulator. Any combination weight must be learned on held-out history.

8. Market Comparison, EV, and Kelly

Once a defensible XC-SPI current probability p exists, market implied probabilities, vig removal, expected value, and Kelly remain:

$$q_{+A} = \frac{100}{A + 100}, \quad q_{-A} = \frac{A}{A + 100}, \quad (3)$$

$$q_k^{novig} = \frac{q_k}{\sum_{\ell} q_{\ell}}, \quad EV = pd - 1, \quad (4)$$

$$f^* = \frac{(d-1)p - (1-p)}{d-1}. \quad (5)$$

These formulas translate probability; they do not validate it. Kelly remains a risk diagnostic, not a staking recommendation.¹

9. Postmodern Era Limits

Under the strict 2020-forward definition there are five next-season outcome years (2021–2025), 250 team-season observations, and only ten title events across men and women. Historical title odds therefore carry much more sampling/model uncertainty than podium or top-10 rates. The disrupted 2020 source season is flagged; excluding it changes the largest current raw title rate by about 2.2 percentage points and the largest podium rate by about 5.5 points, while the broad 2026 ordering remains highly stable. The separate Postmodern Era Historical Success report contains full tables and validation details.

10. Current Release Rule

The site may say “Iowa State is No. 1 in the men’s Power Ranking,” “Colorado is No. 3 in the men’s Historical Title Market,” or “NC State has the largest women’s Historical Title share.” It should **not** yet say that these historical shares are the final XC-SPI probabilities of winning the 2026 NCAA title. Full current-model odds remain gated until the athlete simulator passes its validation requirements.

References

- [1] Kelly JL Jr. A new interpretation of information rate. *Bell Syst Tech J.* 1956;35(4):917–926.
- [2] Brier GW. Verification of forecasts expressed in terms of probability. *Mon Weather Rev.* 1950;78(1):1–3.
- [3] Gneiting T, Raftery AE. Strictly proper scoring rules, prediction, and estimation. *J Am Stat Assoc.* 2007;102(477):359–378.